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PROGRAM ON FORCED MIGRATION AND HEALTH AT THE JOSEPH L. MAILMAN SCHOOL OF PUBLIC HEALTH OF COLUMBIA UNIVERSITY

SUPPORTING LOCAL HEALTH CARE IN A CHRONIC CRISIS

MANAGEMENT AND FINANCING APPROACHES IN THE EASTERN DEMOCRATIC REPUBLIC OF THE CONGO

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Dennis Dijkzeul and Caroline Lynch

Roundtable on the Demography of Forced Migration
Committee on Population

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Preface

In response to the need for more research on displaced persons, the Committee on Population developed the Roundtable on the Demography of Forced Migration in 1999. This activity, which is supported by the Andrew W. Mellon Foundation, provides a forum in which a diverse group of experts can discuss the state of knowledge about demographic structures and processes among people who are displaced by war and political violence, famine, natural disasters, or government projects or programs that destroy their homes and communities. The roundtable includes representatives from operational agencies, with long-standing field and administrative experience. It includes researchers and scientists with both applied and scholarly expertise in medicine, demography, and epidemiology. The group also includes representatives from government, international organizations, donors, universities, and nongovernmental organizations.

The roundtable is organized to be as inclusive as possible of relevant expertise and to provide occasions for substantive sharing to increase knowledge for all participants, with a view toward developing cumulative facts to inform policy and programs in complex humanitarian emergencies. To this aim, the roundtable has held annual workshops on a variety of topics, including mortality patterns in complex emergencies, demographic assessment techniques in emergency settings, and research ethics among conflict-affected and displaced populations.

Another role for the roundtable is to serve as a promoter of the best research in the field. The field is rich in practitioners but is lacking a coher-

ent body of research. Therefore, the roundtable and the Program on Forced Migration and Health at the Mailman School of Public Health of Columbia University have established a monograph series to promote research on various aspects of the demography of forced migration. These occasional monographs are individually authored documents presented to the roundtable and any recommendations or conclusions are solely attributable to the authors. It is hoped these monographs will result in the formulation of newer and more scientifically sound public health practices and policies and will identify areas in which new research is needed to guide the development of forced migration policy.

This monograph has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making the published monograph as accurate and as sound as possible. The review comments and draft manuscript remain confidential.

Ronald J. Waldman of Columbia University served as review coordinator for this report. We wish to thank the following individuals for their participation in the review of this report: Christopher Schwabe, health and public finance economist at Medical Care Development International, and Steven Hansch of the Institute for the Study of International Migration, Georgetown University.

Although the individuals listed above provided constructive comments and suggestions, it must be emphasized that responsibility for this monograph rests entirely with the authors.

This series of monographs is being made possible by a special collaboration between the Roundtable on the Demography of Forced Migration of the National Academies and the Program on Forced Migration and Health at the Mailman School of Public Health of Columbia University. We thank the Andrew W. Mellon Foundation for its continued support of the work of the roundtable and the program at Columbia. A special thanks is due Carolyn Makinson of the Mellon Foundation for her enthusiasm and significant expertise in the field of forced migration, which she has shared with the roundtable, and for her help in facilitating partnerships such as this.

Most of all, we are grateful to the authors of this monograph. We hope that this publication contributes to both better policy and better practice in the field.

Charles B. Keely, *Chair*
Roundtable on the Demography of Forced Migration

Ronald J. Waldman, *Member*
Roundtable on the Demography of Forced Migration
Director, Program on Forced Migration at the Mailman School of Public Health of Columbia University

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1

Introduction

Providing medical support to the local population during a chronic crisis is difficult. The crisis in the Democratic Republic of the Congo (DRC), which is characterized by high excess mortality, ongoing armed violence, mass forced displacement, interference by neighboring countries, resource exploitation, asset stripping, and the virtual absence of the state, has led to great poverty and a dearth of funds for the support of the health system.

International nongovernmental organizations (NGOs) have stepped in to address the dire humanitarian situation. This study looks at four organizations that support local health care in the eastern DRC: the International Rescue Committee (IRC), Malteser, Medical Emergency Relief International (Merlin), and the Association Régionale d'Approvisionnement en Médicaments Essentiels (ASRAMES). The study makes a comparison of the management and financing approaches of these four organizations by collecting and comparing qualitative and quantitative data on their interaction with the (remaining) local health providers and the local population.

In a chronic crisis, knowledge or documentation of management and financing approaches to health care system support is limited. In particular, the topic of cost recovery, or more modestly, cost sharing, in these crises has rarely been studied, and there are no standard responses for simultaneously recovering costs and increasing a population's access to health care in war zones. Higher quality data on the management of cost recovery can lead to a better understanding of the interaction of price, quality, access, and

sustainability in local health systems. In essence, one central question needs to be answered: What management and financing approaches are used by NGOs to raise access to health care, while strengthening the capacity and quality of the local health care system in a situation of chronic crisis in the eastern DRC?

Specific objectives of the study are

1. To identify which management and financing approaches, including the setting of fees, are used by the four NGOs supporting health care in the eastern DRC.
2. To determine how these financing approaches affect utilization rates in the health zones supported by the four NGOs.
3. To assess how these utilization rates compare with donor and humanitarian standards.
4. To determine at what level fees must be set to allow for cost recovery or cost sharing in health facilities.
5. To identify the managerial problems confronting the four NGOs.

Many epidemiological and public health studies focus on the interaction between health providers and target groups. This study concentrates more on how the relationship between the supporting NGOs and the local health system actually develops. In addition, a common aspect of many of the epidemiological and public health studies is the search for an optimal, or at least appropriate, management and financing approach. This comparative organizational analysis shows that these organizations would like to realize such an approach, but that the daily pressures of ongoing insecurity, uncertain financing, lack of scientific data, and a focus on implementation—saving lives takes priority—prevent this to a large extent. The organizations instead attempt to improve their operations gradually over time. As a result, actual implementation of health care support may differ considerably from the recommended approach as detailed in the guidelines of the Sphere Project[1] or standard epidemiological research.

This study shows that three complementary approaches are followed

[1]The Sphere Project is an international program launched in 1997 to develop a set of universal minimum standards in core areas of humanitarian assistance. The standards are contained in a handbook, *Humanitarian Charter and Minimum Standards in Disaster Response* (Sphere Project, 2004).

to ensure maintenance of the local health system in the eastern DRC: (1) bringing in outside (international) funding, (2) using local resources (either financial ones, such as cost sharing, or contributions in kind, such as cooperation from health committees), and (3) lowering or at least controlling costs, while improving the allocation of revenues. Typically, the organizations combine all three approaches. Consequently, no complete cost-recovery system is currently possible; the organizations use different forms of cost sharing.

The key to health care financing is to establish a health management system that provides the right incentives for the staff and organizations involved to improve the quality of health care and keep it cost-efficient. Health facility utilization shows the current level of the population using the health facility, as well as the difference in health facility usage with different payment schemes by different organizations. However, utilization varies with each agency and also depends on factors other than fees and proximity. The actual management of the health system also influences attendance and sustainability. Generally, additional measures, such as free drugs and direct subsidies, are necessary to ensure that revenues are high enough to pay for staff incentives and running costs.

This study found that the management approaches of the four different organizations vary considerably, in particular with regard to indigent treatment and the supervision of the health system. In principle, there are two poles on a continuum of approaches: the "intense supervision" approach, with continuous attention to capacity building and management control with many health supervisors, frequent field visits, and an elaborate system for indigent care, and the "hands-off contract approach," with a contract document that spells out the amount funded by the international organization, the expected results, and the times and methods of evaluation. In the latter approach, the international organization does not interfere in the day-to-day management of the local health system. The first approach may receive the criticism that it leads to a parallel health (control) system. The second may receive criticism for not ensuring sufficient capacity before its hands-off methodology can be successful. Our research did not find any organization that used a complete hands-off contract approach. To differing degrees, they all carry out capacity building and supervisory control. They all rely on cost sharing and the provision of free drugs and other medical supplies. The organizations have improved access with lowered fees and, in two cases, coupons for the indigent. The IRC works with an intense supervision model and a coupon system for the indigent.

ASRAMES has also increased supervision. Merlin has pioneered the contract approach, but in a hands-on manner that emphasizes intense supervision. Malteser works mostly through local health structures but increasingly emphasizes supervision.

Intensive international support will remain necessary as long as there is no well-functioning government that can take over from the international donors. The four organizations work to improve the population's access to health care, while building the capacity of health personnel. Cost sharing creates revenues for health centers, but sometimes to the detriment of population access to health care. Intensive support to health systems is costly, but it results in higher utilization of health facilities. In this way, the organizations can contribute to building capacity and facilitate the transition to a more sustainable system once the war ends. Only then can a higher degree of cost recovery be reintroduced.

BACKGROUND

For more than 30 years, the people of the DRC suffered under President Mobutu's unchecked corruption and mismanagement, which "left public services in disrepair, creating desperate poverty, chronic poor health," and ethnic conflicts (see Van Herp, Parque, Rackley, and Ford, 2003:141; Wrong, 2001). In 1996, a civil war ensued in which neighboring countries interfered. In May 1997, Laurent Kabila's forces overthrew Mobutu with strong support from the Rwandan and Ugandan armies.

A year and a half later, the Rassemblement Congolais pour la Démocratie (RCD) started another war to displace Kabila's regime with support from the Rwandan, Ugandan, and Burundian armies. This "second" war soon reached a stalemate. Kabila received support from Angola, Zimbabwe, Chad, and Namibia, while Uganda and Rwanda grew apart over their differing economic interests and supported different rebel groups. As a result, the country was divided into roughly three parts. The Front de Libération du Congo (FLC), supported by the Ugandans, occupied the northern part of the DRC. The RCD, supported by the Rwandans, maintained control over the eastern part, and the government forces controlled the western and southern parts. In the meantime, the Interahamwe rebels continued to destabilize parts of eastern DRC and various Mai-Mai factions—originally local self-defense groups that fought against foreign occupation, increasingly turned into armed bandits that also raped and looted the local population—were also active in RCD- and FLC-held territory.

The different warring factions and their international supporters are generally more interested in economic exploitation—for example of diamonds and coltan (a metallic ore used in cell phone circuitry)—than in ending the war, so it has become a chronic conflict in which it is often unclear who is fighting whom (see United Nations, 2001). As a result, these Congolese wars have broken down into "dozens of overlapping micro-wars . . . in which almost all the victims are civilians" (The Economist, July 4, 2002). Economic activity has deteriorated rapidly and extreme poverty has increased sharply. The United Nations (UN) estimates that, of an estimated population of 60 million, approximately 3.4 million people have become internally displaced (United Nations Office for the Coordination of Humanitarian Affairs, 2003, 2004) and 31 million people suffer from food insecurity (United Nations Office for the Coordination of Humanitarian Affairs, 2003). The eastern DRC has become an "unchecked incubation zone for diseases," with the highest rates of excess mortality known to have occurred in the world (Roberts, 2000:3). IRC surveys in eastern DRC in 2000, 2001, and 2002 estimated that between August 1998 and November 2002, 3.3 million excess deaths[2] (of a population of approximately 20 million) occurred. The mortality resulted from three related root causes:

1. The violence leads directly to a higher death rate. In addition, gender-based violence is also appallingly common (Human Rights Watch, 2002).
2. People flee their villages when they are attacked or they hide, often in the forest, at night. As a result, their access to health care is hampered, they are exposed to the elements and parasites, they have little food and no clean water, and they suffer from exhaustion and malnutrition. Consequently, epidemics of diseases such as tuberculosis, cholera, meningitis, and malaria exact a heavy toll.

[2]The IRC aimed "to provide a profile of mortality to guide political or humanitarian responses" and to make public "the level of suffering and death" among civilians. It used retrospective, verbal autopsy, household-based two-stage cluster sample surveys. Estimates could vary from 3.0 to 4.7 million depending on assumptions about the population excluded from the survey (Roberts et al., 2003:i). A recent IRC survey estimated that by April 2004 the total excess mortality for the whole country was 3.8 million (with a minimum of 3.5 and a maximum of 4.4 million depending on assumptions about the population excluded from the survey) (Coghan et al., 2004).

3. The health care system has collapsed, and people increasingly lack the economic means to buy its remaining services. Simultaneously, the fees obtained cannot adequately cover all operating costs of the health centers.

At the national political level, the death of President Laurent Kabila in January 2001 and subsequent replacement by his son, Joseph Kabila, led to renewed diplomatic interventions to achieve peace. A UN observer force was placed close to the front line, and the warring factions have withdrawn. The forces from other African countries also started their withdrawal and an often haphazard process of national reunification with a transitional national government was established. Nevertheless, local armed conflicts flare up regularly, and the country may still slide back into full-scale war.

THE HEALTH SYSTEM IN THE DRC

Under pressure from the World Bank and the International Monetary Fund (IMF), the national health budget was cut during the 1980s. As a consequence, the health system increasingly had to become self-reliant and the DRC became a natural experiment in cost recovery. Put differently, health care is based on an "auto-finance system," with each health facility generating its own revenues by charging fees for medical consultations and drugs. These consultation fees are a legal requirement under Congolese law, and their eradication is not accepted by the local health authorities. The health facilities use the revenues to pay staff incentives (instead of salaries officially due by the government, which have not been paid in more than a decade), buy drugs, and pay for maintenance and building repairs.

Despite years of neglect and violence, a decentralized structure of health zones (districts) has been preserved to a large extent. In each province, the provincial health inspection office (Bureau de l'Inspection Provinciale de la Santé) officially supervises its health zones and determines the fee structure. This office is led by a provincial health inspector *(médicin inspecteur provincial)*, who is responsible for the overall health policy in the province. Each health zone is managed and supervised by a chief medical officer *(médicin chef de zone*, or CMO), who is responsible for monitoring the daily activities of all health centers in the health zone and ensuring the quality of services provided to patients. Chief medical officers and their support staff are located at the health zone bureau *(bureau central de zone)*. Since several provinces are not effectively governed by Kinshasa, the national health care system has increasingly become a patchwork of local initiatives, sometimes with international support, and national and provincial policies.

In addition, each health center has, ideally, its own health committee *(comité de santé)*, which consists of members elected by their community. These members often hold positions of respect in their community: church leaders, schoolteachers, retired civil servants, village chiefs, leaders of women's groups, and so on. In a well-functioning health committee, the representatives participate fully in health center management, ensuring financial and material accountability, representing community health needs, and encouraging service uptake by community members, in particular the poorest of the poor. Its members are charged with the responsibility to spread health education messages and other important health information, such as dates for upcoming vaccination campaigns. They are often also responsible for gathering such health statistics from the community as births and deaths that did not occur at the health center or the hospital.

THE PROBLEM

The topic of cost recovery or cost sharing in today's chronic crises has rarely been studied, and cost sharing has become a contentious issue inside and outside war zones and can be a key barrier to overcoming health inequities. In addition, there are no commonly acknowledged standard responses for simultaneously recovering costs and increasing attendance in war zones (Poletti, 2003, 2004). Cost sharing through raising fees from the local population can limit access, especially for the poor, further aggravating the effects of insecurity. For some poor people, who can barely afford health care, a fee may constitute a so-called catastrophic expenditure, which puts them in debt or makes them cut back on such basic necessities as food. The poor who need care but cannot pay may be sent away at the door of the health facility, because they take up time and do not bring any revenues to the health facility or its staff. If their health problems are not treated, they may need more expensive care later on. If the disease is contagious, they may infect other members of their community. In other cases, they may require care from family members who do not have the resources available to provide it. However, at the same time, free health care may cause unnecessary use and thereby unsustainable demand.[3]

The general rationale for cost recovery in health has frequently been

[3]Arhin-Tenkorang (2000:8) disputes this frivolous use argument. "Where cost of travel, waiting, and income loss is high as in the case of most low-income countries, it can be argued that most or all excess utilization will already have been eliminated."

macroeconomic balance as promoted by the World Bank and the IMF. "In situations of chronic and growing trade and domestic budget deficits, cost-recovery for publicly financed goods and services offers one route to deficit reduction" (Creese and Kutzin, 1995:3). More specifically, the "most compelling case for user charges . . . has been their capacity to provide an emergency boost for the recurrent (usually non-salary) costs of health care provision, which have been most depleted by declining real expenditure" (p. 4). If fees are used to improve service quality close to where people live, they can also increase equity. Furthermore, "there may be potential benefits from user charges in both mobilizing additional resources and in setting price signals to encourage more efficient behaviors by purchasers and providers" (p. 4).[4] In sum, raising revenue and increasing efficiency and equity constitute the main arguments in favor of introducing fees.[5]

The assumptions behind the rationale for cost recovery center on the role of the state and its accountability to its population, in particular on the idea that a willing and able government takes the interests of its population seriously, and that despite economic problems sound macroeconomic policy will help improve the lives of its citizens. These assumptions also imply that health care staff will be motivated by the interests of their patients and that these interests dovetail with their own interests.

These assumptions, however, do not apply in cases of chronic civil conflict. In many civil conflicts the state oppresses or marginalizes parts of its population. Often the official government becomes one of the warring factions, refusing or unable to pay for social services, so that access and quality deteriorate further. The economy is generally in steep decline and official macroeconomic policy does not reflect the underlying corruption

[4]Ironically, the traditional arguments against cost recovery/cost sharing thus mirror the arguments in favor of it. They have a possible negative impact on equity (with fees the poor get priced out of the market) and efficiency (preventive and curative care that has wider public health benefits than just individual health care will not be provided because the fees obstruct demand. Alternatively, there can also be supply-induced demand of unnecessary treatment), while not raising enough revenues to improve health care. Hence, the similarity in arguments for and against cost recovery/cost sharing highlights the need for empirical research.

[5]In addition to user fees, insurance schemes, either private (risk-based insurance) or social health insurance, tax-based systems, and foreign aid may provide other resources for improvements in health care (see Arhin-Tenkorang, 2000; Poletti, 2003). Except for foreign aid and fees, these financing methods have broken down in the eastern DRC.

of patronage politics and clientele socioeconomic systems. Insurance schemes increasingly break down, and development-oriented work often comes to a standstill. In many cases, a warlord economy develops, in which a tiny elite uses violence as a way to enrich itself at the expense of the great majority of the population (Reno, 1998). In such a situation, the population is increasingly marginalized, while it still needs to find ways to survive. The health staff often do not earn enough money, and their immediate day-to-day survival needs may take priority over patient interests.

Paradoxically, cost recovery itself will become more important to health facilities and their staff in order to cover recurrent costs, including salary and other financial incentives, while the capacity to pay for these services will be diminishing. A vicious cycle of inability to pay, worsening access, lower quality, and destruction of capacity is thus set into motion. Support by international organizations may then, in principle, help address the suffering by bringing in new resources to break the cycle. For this reason, the interaction between the local population, the local health system, and the international organizations becomes a crucial topic for further study.

Since there are no commonly accepted approaches to health financing in chronic crises in general or to cost recovery in particular, many international organizations—and their donors—promote their own approaches to support health care, and concomitantly, cost recovery. Sometimes, the difference is mainly semantic when a related concept like cost sharing is used. At other times, these approaches imply rather different philosophies about local participation, indigent access, and the sustainability of health systems. Some NGOs and donors do not require the health centers to implement cost-recovery schemes while the war is ongoing. UNICEF and Médecins Sans Frontières (MSF), for example, promote free health care. However, this approach does not ensure sustainability of the local health system once the international organization leaves. Other NGOs require some degree of cost recovery—in other words, cost sharing—partly out of concern for financial sustainability of the local health system and partly to prevent misuse of health care. Some also argue that paying for services, even if it is only a nominal amount, preserves the dignity of the patients. In addition, the NGOs differ in their approaches to such managerial issues as health zone coverage, monitoring, staff training, and indigent support. In general, the appropriate size of the fee, including exemptions and waivers, such as coupons for the indigent, has been difficult to determine. The different approaches by the donors and the NGOs can lead to fragmented and perhaps unsustainable health care systems in different parts of the country, which

can obstruct national rebuilding and perhaps even hamper the postwar viability of the Congolese state.

METHODOLOGY

This research studies the different approaches to health management and cost recovery used by four organizations active in the eastern DRC: the IRC, Merlin, Malteser, and ASRAMES. These NGOs aim to improve the collapsed health care system in the eastern DRC. They also responded to the eruption of the Nyiragongo volcano on January 17, 2002, which destroyed parts of Goma in North Kivu. Except for ensuring the provision of essential drugs, it was initially not clear whether and how much the approaches of the four organizations to care differ.

Field research took place with participant observation during two summer periods, August 4-19, 2001, and July 3-August 16, 2002. Additional quantitative data were collected in 2004 and 2005. Data resources included (1) internal documents of the four organizations with quantitative data on attendance and management of the health care system; (2) a literature study on cost recovery/cost sharing; and (3) open and semistructured interviews and email exchanges with staff members of the four organizations, patients and nonpatients, local health staff, and other local and international organizations. The field visits were followed up with telephone interviews. Finally, staff members of the four organizations double-checked and commented on the drafts of this document.

One of the main problems of this research was that it was complicated to get access to high-quality quantitative material, which was difficult to collect on the organizations, due to insecurity, staff rotation, and sometimes loss of data. In addition, population data are generally extrapolated from the 1984 population census. Given the long time frame, high mortality rates, and internal displacement, such extrapolations can provide only a rough indication of the actual population numbers.

Box 1-1 is a list of acronyms relevant to this paper.

BOX 1-1
Acronyms

ADOSAGO	Association des Donneurs de Sang de Goma
AFDL	Alliance des Forces Démocratiques pour la Libération du Congo
AMI-KIVU	Appui Médical Intégral au Kivu
ASRAMES	Association Régionale d'Approvisionnement en Médicaments Essentiels
BCG	Bacille Calment et Guerrin (Tuberculosis vaccination)
BDOM	Bureau Diocésain des Oeuvres Médicales
CHW	community health worker
CMO	chief medical officer
CMR	crude mortality rate
CEMUBAC	Centre Scientifique et Médical de l'Université Libre de Bruxelles pour ses Activités de Coopération
DFID	Department for International Development
DRC	Democratic Republic of the Congo
DTP3	Diphtheria, Tetanus and Pertussis (vaccination in three doses)
ECC	Église du Christ au Congo
ECHO	Humanitarian Aid Office of the European Union
EPI	Extended Program on Immunization
EU	European Union
FrC	Franc Congolais
FLC	Front de Libération du Congo
FOMULAC	Fondation Médicale de l'Université de Louvain en Afrique Centrale
FSKI	Fondation Sud Kivu
HC	health center
HMIS	health management information system
ID	internal document

continued

BOX 1-1 Continued

IDA	International Dispensary Association
IDP	internally displaced person
IMF	International Monetary Fund
IRC	International Rescue Committee
KAP	knowledge, attitudes, and practices
MDM	Médicins du Monde
Merlin	Medical Emergency Relief International
MONUC	Mission Observatrice des Nations Unies pour le Congo
MOU	memorandum of understanding
MRND	Mouvement Républicain Nationale Démocratique
MSF	Médecins Sans Frontières
MSF-H	Médecins Sans Frontières–Hollande
NGO	nongovernmental organization
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OFDA	Office of U.S. Foreign Disaster Assistance
ORS	oral rehydration salt
PATS	Programme d'Appui Transitoire au Secteur de la Santé
PHC	primary health care
RCD	Rassemblement Congolais pour la Démocratie
RHC	reference health center
SANRU	Projet de Développement de la Santé Rurale
SNIS	Système National d'Information Sanitaire
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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The Organizations

All four organizations, except the Association Régionale d'Approvisionnement en Médicaments Essentiels (ASRAMES), established themselves in the eastern Democratic Republic of the Congo (DRC) during the Rwandan refugee crisis, but they increasingly paid attention to the needs of the local Congolese population. Following up on a drug supply program of Médecins Sans Frontières–Hollande (MSF-H), ASRAMES began drug distribution in support of the Congolese population of North Kivu in 1995. Currently, all organizations provide medications as well as other forms of support to the local health institutions (see Table 2-1). This chapter explains briefly the organizations' history and basic activities.

INTERNATIONAL RESCUE COMMITTEE

The International Rescue Committee (IRC) began to support the population of South Kivu by way of structured health zone programs (instead of Rwandan refugee camps) in 1996 (Table 2-2). The IRC regional office is located in Bukavu. The organization runs health interventions in two zones: Katana and Kabare in South Kivu. In 2002, it also carried out water and sanitation activities in Kalemie and provided emergency aid in Goma after the Nyiragongo eruption.

TABLE 2-1 Population Covered and Health Facilities Supported

NGO	Estimated Population of Health Zones	Total Health Facilities: Hospital	Reference Health Center	Health Center	Total
IRC support	489,000	3	6	43	52
Merlin support	800,000	4	4	132	140
Malteser support	646,000	2	0	55	57
ASRAMES support	3,859,381	22	28	343	393
TOTAL	5,794,381	31	38	573	642

TABLE 2-2 IRC Health Zone Summary, 2001-2002

Health Zone	Estimated Population	Total Health Facilities: Hospital	Reference Health Center	Health Center	Total
Katana	347,000	2	4	28	34
Kabare	142,000	1	2	15[a]	18
TOTAL	489,000	3	6	43	52

[a]Five of these health centers are actually health posts, which is a smaller type of health center, more like a dispensary that does only outpatient care. A health center also has the facility to do minor inpatient care for 24 or 48 hours.

IRC Activities

The IRC strove to strengthen the functioning of the health centers and simultaneously improve access to care. In 2001-2002, its ultimate sector objective was to reduce mortality for the population served by 32 percent by September 30, 2004, in a manner that strengthens local capacity to sustain these results.

Intervention in the Katana health zone began in 1996. The IRC esti-

Health Facilities Supported				
Hospital	Health Center	Reference Health Center	Total	% Original Government Health Facilities (PHC) Supported by NGOs
1	6	43	50	100
5	4	85	94	64
2	0	42	44	76
20	23	272	315	79
28	33	442	503	77

Health Facilities Supported			
Hospital	Reference Health Center	Health Center	Total
0	4	28	32
1	2	15	18
1	6	43	50

mated in August 2002 that about 45 percent of the zone's population was indigent according to its criteria. In the west of this zone, rebels—mainly Interahamwe—regularly committed violence. A Belgian nongovernmental organization (NGO) called Fondation Médicale de l'Université de Louvain en Afrique Centrale (FOMULAC) was also active in Katana. Because the Katana bureau was never fully part of the national health system, this organization had been integrated into the local zone bureau, playing a leading

role. For example, FOMULAC used to sell drugs to the local health centers, but this arrangement was superseded by the IRC's free drug distribution. As a consequence, cooperation between FOMULAC and the IRC was sometimes tense.

The IRC was active in Kabare from October 1999 to April 2000 but had to suspend its activities because the Department for International Development (DFID) refused refunding. The DFID preferred free health care, but the IRC and the local health inspection did not. In July 2001, the IRC restarted its activities in Kabare with support from the Office of U.S. Foreign Disaster Assistance (OFDA) and was fully operational again by the end of August 2001. In addition to health center support, the IRC also supports seven nutrition centers. It estimated that the indigent constitute about 90 percent of the population according to IRC criteria.[1] In 2002, the IRC was the only international organization active in the Kabare zone. Both zones had a sizeable population of displaced people coming from the Bunyakiri health zone.

As a humanitarian organization committed to primary health care and funded by OFDA, the IRC mainly supports health centers and reference health centers (i.e., those to which more serious cases are referred). OFDA usually prefers not to support hospitals, but it is flexible in emergency situations.[2] The IRC has consciously decided to provide assistance to all health centers in its zones, because with partial coverage, unsupported health centers would not be able to compete and would ultimately have to close, further weakening the battered health care system. The main IRC activities in its two zones are

- The provision of essential drugs and supplies to allow health centers to provide comprehensive services to the population.
- The provision of such necessary equipment as cold chain equipment (which protects heat-labile vaccines, sera, and other medicines against high environmental temperatures).
- The development of revenue generation mechanisms for the local

[1]The word "indigent" is commonly used in the eastern DRC to denote extremely poor people.

[2]Since August 2001, the IRC has provided support to the indigent who get referred to the hospital in the Kabare region with funding from OFDA. In Katana, such support started after the signing of a new, delayed memorandum of understanding in August 2002.

health centers. Revenues from patients are used to pay incentives, buy additional drugs, facility maintenance, etc.
- The modification of the fee system to ensure access of the population through lower rates, exemptions (e.g., consultations for children under age 5, tuberculosis), and waivers for the indigent. The fee modifications especially aim to ensure that the most vulnerable population has access to health care.
- The establishment of training through official programs as well as on-the-job training with mobilizers and health supervisors.
- The provision of technical training and logistical support (fuel, office supplies, etc.) to the zone bureau.
- The supervision and monitoring of the health centers and the health care system with its health supervisors.
- The mobilization of communities, in particular of local health committees, in order to promote good health behaviors in the population.
- The promotion of preventive activities, such as a malaria program with bed nets and community education.
- The formation of a community health worker program to improve local health care (community health workers are involved in active case-finding and referral of those cases), to educate and mobilize the community, and to increase the quantity and quality of the epidemiological data collected.
- The IRC also carries out a series of monitoring and evaluation surveys, such as malaria prevalence, nutrition, and notably mortality, throughout the DRC.

Organizational Setup

A memorandum of understanding between the IRC and the zone bureau sets out the basic forms of cooperation between them and the health facilities. In order to ensure a high level of contact regarding IRC activities in health facilities, the IRC employs one health supervisor[3] per four health centers. IRC supervisors visit each health center in their charge at least once

[3]The IRC actually prefers the term "monitor" for supervisor to distinguish the position from health zone office supervisors. These IRC supervisors are skilled medical professionals themselves, who generally have several years of experience in the health system.

a week and work closely with the health staff and the zone bureau. Joint supervisory visits are made with staff from the zone bureau every month. An IRC health supervisor carries out on-the-job training of health facility staff; verifies drug use and stocks; verifies that treatments are in accordance with national guidelines, for example, with routine immunizations; checks the accuracy of health records; conducts home visits to verify indigent status; trains and supports health committees; and collects epidemiological, financial and management data each week. In sum, the IRC uses a rather intensive supervision approach.

MEDICAL EMERGENCY RELIEF INTERNATIONAL

The main DRC office of Medical Emergency Relief International (Merlin) is located in Goma, from where it has been directing its programs for the Maniema province since March 1997. This province has eight health zones: Kindu, Kalima, Punia, Kampene, Lubutu, Lusangi, Kibombo, and Kasongo. Merlin originally operated health programs in the first three zones. In March 2001, it also started health activities in North and South Lodja in eastern Kasai (Table 2-3).

Access to the Punia health zone was irregular due to fighting between

TABLE 2-3 Merlin Health Zone Summary, 2002

Health Zone	Estimated Population[a]	Total Health Facilities			
		Hospital	Reference Health Center	Health Center	Total
Kindu	180,000	1	1	21	23
Kalima	170,000	1	2	23	26
Punia[b]	100,000	1	1	21	24
Lodja North	200,000	1[c]	n/a	32	n/a
Lodja South	150,000	[c]	n/a	35	n/a
TOTAL	800,000	4	n/a	132	n/a

[a]Population figures are estimates based on the 1984 population census. For example, for Kindu, one can only assume that the population number will be between 150,000 and 220,000.

the Rassemblement Congolais pour la Démocratie (RCD) and the Mai-Mai. By August 2001, insecurity had become so severe that Merlin had to end its activities in Punia. In summer 2002, it once again started up its operations in this zone. The Kindu health zone covers both urban and rural areas, but the rural areas have become inaccessible due to the Mai-Mai, who often blocked roads. The Kalima health zone is predominantly rural. Different armed troops were active in its eastern part bordering Pangi (where the Mai-Mai regularly kidnapped women and girls for forced prostitution), as well as in the part close to Shabunda in the South Kivu province. An IRC mortality survey in April 2001 indicated a mortality rate for children under age 5 in Kalima of 17.1/1,000/month and a crude mortality rate of 7.5/1,000/month. In May 2001, the under-5 mortality rate was at a disaster level of 3.6/10,000/day with measles as the leading cause (Merlin, May 2002:6). In both Kalima and Kindu, Merlin has had to evacuate its expatriate staff for several months due to insecurity, while local staff continued its activities. The accessibility of North and South Lodja was better as the Kasai Oriental enjoyed a relative calm. No Mai-Mai and Interahamwe were active in these zones and the government and RCD forces had withdrawn from the front lines.

As a consequence of the insecurity and the long distances involved,

Health Facilities Supported			
Hospital	Reference Health Center	Health Center	Total
1	1	19	21
1	2	21	24
1	1	13	15
1[c]	n/a	17	n/a
[c]	n/a	15	n/a
4	n/a	85	n/a

[b]In September 2002, Merlin expanded its activities in Punia to 14 health areas and also began to support the local hospital.
[c]North Lodja and South Lodja share one hospital.

Merlin could reach its health zones from Goma only by plane, which was costly. It opened small support offices in each of its zones. By strategic choice, Merlin intervened only in isolated health zones, where no other international NGOs were active. The organization made one exception to its strategy, when it began operating a safe motherhood program at 21 health centers in Goma. After the Nyiragongo eruption, it perceived a need for such a program. In addition, it wanted to strengthen its presence in Goma.

Merlin Activities

The overall goal of Merlin in the DRC is to reduce mortality and morbidity rates in its health zones. The Merlin activities in these zones are

- To distribute free essential drugs and renewable medical supplies, so the local population can obtain these at an affordable price and on a regular basis. This also includes the provision of such equipment as delivery kits and weighing scales.
- To provide technical support to the zone bureau, especially in their supervision activities. This supervision includes monitoring and on-the-job training of the Congolese health staff.
- To repair and maintain health centers to defined minimum standards, including minor rehabilitation of water and sanitation facilities at all supported health centers. This rehabilitation involves health committee and other community participation.
- To help reestablish routine immunization services through the provision of vaccines and vaccination supplies (for example, syringes, refrigerators, and cool boxes) from Goma to supported facilities.
- To promote quality care by training staff at both the zone bureau and the health centers. Training already done by Merlin includes usage of treatment guidelines, vaccination training for the vaccinators, management of the cold chain, laboratory training, safe motherhood initiative activities, including refreshment training and training for the health committees.
- To treat the indigent for free.
- To support disease surveillance and data management systems through critical review, training of health staff, and epidemiological assessment of recent disease outbreaks to maintain an emergency response for epidemic outbreaks in all supported facilities.
- To actively encourage community participation and awareness of

disease control and maternal/child health in the supported health zones through appropriate training of identified health providers.

Organizational Setup

Merlin has employed a relatively small number of staff. It has a total of 25 supervisors for a program that is covering 5 zones. These are located in the different health zones as long as the security situation permits this. They usually visit the health centers by motorcycle, although sometimes they need to travel by plane and then by motorcycle or car. On average, they visit each supported health center twice a month.

Merlin consciously decided not to support all health centers in its zone. Its management assumed that the actual number and spread of facilities in the zones was not necessarily optimal. It thus selected a number of facilities in each health zone.[4] In this way, the organization attempted to optimize its expenditures. Merlin supported, or given the insecurity attempted to support, 23 of 25 centers in Kalima, 20 of 22 centers in Kindu, and 14 of 22 centers in Punia.[5] In North Lodja, Merlin supported 17 of 32 centers, in South Lodja 15 of 35 health centers.

Changes in Merlin's Approach

In 2001, a Memorandum of the Cost Sharing Support Mission indicated that the management of the health programs suffered from four prob-

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[4]World Health Organization standards indicate that one health center should serve between 5,000 and 10,000 people after adjusting for geographical spread of the population (Merlin, May 2002:15). Merlin employs six criteria to choose facilities to support: (1) capacity of the health centers to provide basic curative care, immunization, and maternal health services both from the static facility and as an outreach service; (2) presence of an adequate cadre of staff able to provide standard and quality care to the population; (3) evaluated efficiency of functional processes, including transparency of financial management and record-keeping; (4) community acceptance and support of the facility; (5) presence of a vulnerable/displaced population, including geographical location, will also weigh significantly in the choice of a particular facility for support; and (6) the risk of looting by warring groups. It is possible that some of the health facilities serving the most vulnerable may be in this category. Merlin will therefore propose an emergency approach for support to these areas if the current service delivery configuration is unable to provide it.

[5]In summer 2002, Merlin could reach only 20 health centers in Kalima and 18 in Kindu. In Punia, 22 health centers should serve the local health needs; however, only 12 of these health facilities were accessible due to the insecurity.

lems. First, staff motivation remained low. Many health staff members were not able to make a living under war duress despite Merlin support. Zone bureau staff was also unable to make ends meet. Some donors also pressured Merlin to rely on its Congolese staff instead of zone bureau staff, which caused expensive duplication; as a result, the Merlin and zone bureau supervisory teams tended to operate in competition with each other. Second, Merlin operated a community fund that was not working well. In practice, the community fund was labor intensive for Merlin staff, war-induced hyperinflation caused financial risks, and health committee representatives of different health centers could not agree on the allocation of the money. Third, the memorandum authors doubted whether the 25 percent of cost-sharing revenues for the zone bureau was either fair or efficient. It seemed to promote underreporting of revenues. Fourth, Merlin drug prices were judged to be low compared with private pharmacy prices. Some of the drugs were later sold by either patients or health staff to the pharmacies, which created a black market for Merlin drugs. As a result, patients needed to buy more expensive drugs at the pharmacies or drugs were sometimes unnecessarily out of stock. In addition, private pharmacies rarely employed professionals able to prescribe rationally.

In response to these problems, the authors of the memorandum proposed a new cost-sharing system:

1. To start new incentive payments to motivate health staff. Approximately 50 percent of these incentives should be generated from cost-sharing revenues, while the remaining 50 percent should be generated from subsidies by Merlin. The organization would sign performance-based contracts (elaborated MOUs) with the management of the health zones. Merlin would not enter into the internal running of the health facilities, and in particular not in human resource management. It would allow Merlin to make the subsidy dependent on the performance of each health facility. Output measures could include National Health Information System (SNIS) data entry and analysis, regular supervision of health facilities, achievement of immunization standards, transparent management of funds, and so on. More work done would mean a higher subsidy, irrespective of the number of staff, and would create a strong incentive for managers to improve health facility efficiency. In sum, Merlin should institute contract management and leave the essential internal management decisions to health management and staff.
2. To cancel the community fund and replace it by a 20 percent run-

ning cost/community fund run by the health facility management and health committee. User fees could then be spent on the site of collection.

3. To lower the health zone bureau's part of cost-sharing revenues from the health facilities from 25 percent to 10 percent.

4. To fix the price of Merlin drugs at 60 percent of private sector prices to reduce the incentive to sell them to the private pharmacies and to increase cost-sharing revenues.

5. To counterbalance the higher drug prices, Merlin should reduce the fixed prices for consultations, and reduce or waive prices for under-5 consultations, immunization cards and antenatal cards.

6. It also suggested an equity fund to reimburse for bills made by the indigent, both the local poor and internally displaced persons.

In addition, the memorandum proposed several measures to improve statistics collection and analysis, the Health Management Information System, and hospital care. Together, the proposals opened the door for some wide-reaching managerial changes, and Merlin and its operations changed considerably in the course of a year. Merlin support is now based on revocable contractual agreements with zone bureaus, hospitals, and health centers.

1. Merlin established its contracts in a participatory process with the local health facilities and staff members (see the Appendix).

2. It canceled the labor-intensive community fund and created a 15 percent running cost/community fund managed by the health committee. The money earned will now be spent at the health center or on health-related work in the local community.

3. In comparison to its old system of revenue allocation, it increased the percentage for incentives to 65 percent and reduced the percentage to the zone bureau to 20 percent.

4. The pricing policy for its drugs, as well as the treatments, changed considerably.

5. The proposed equity fund was intended as an external subsidy mechanism to stimulate activities with a public benefit, such as family planning and immunizations (Extended Program on Immunization, EPI), and to pay for the costs of indigent care. However, it was not implemented because it would be too complicated to manage for the health committees. Merlin staff felt that the current system of social control functioned generally better than a complex system with funds that could be mismanaged or

misappropriated. In addition, the introduction of monthly support for stationery of $50, as well as an incentive of $100 to the Maniema Health Inspector facilitated follow-up activities to the health center nurses.

6. Regular supervision remained a cornerstone activity to obtain quality care and ensure proper use of resources. Merlin team members (expatriate and local) undertake joint monthly supervisory visits with the zone bureau to supported health centers. The expatriate staff works as supervisors in order to ensure that standards set are reached. Ideally, nurse supervisors provide monthly supervision; the administrator supervises on a bimonthly basis; and the CMO on a quarterly basis.

MALTESER BUKAVU

Malteser has been active in the DRC since 1994. Its Congolese offices are located in Mahagi, Ariwara, and Bukavu. We focus on Malteser Bukavu. In 1994, Malteser supported water and sanitation activities at the Cimanga refugee camp, which was located in the Walungu health zone. Later, it also set up way stations for returning Rwandan and Burundian refugees, helped to rehabilitate health structures, started nutrition programs, and supported local hospitals in Fizi and Bukavu. In 1998, it began to rehabilitate nutrition and health centers in two neighboring health zones: Walungu and Nyangezi. The next year, it continued with further rehabilitation and supplying equipment to health centers. In 2001, Malteser began to support zone bureaus and health centers with the distribution of drugs. The Bukavu

TABLE 2-4 Malteser Health Zone Summary, 2002

		Total Health Facilities			
Health Zone	Estimated Population	Hospital	Reference Health Center	Health Center	Total
Walungu	504,000	1	0	38	39
Nyangezi	142,000	1	0	17	18
TOTAL	646,000	2	0	55	57

[a]The actual number accessed depends on the security situation.

office managed health and nutrition activities in the Walungu and Nyangezi health zones (Table 2-4). The Malteser approach was in many ways a follow-up of its earlier rehabilitation work. It consciously worked through the local health system. Its main objective was to improve the level of health of the populations in these two zones.

Malteser Activities

As a large zone, Walungu was often difficult to travel, which severely hampered operations. The degree of insecurity in the Walungu health zone was high, in particular in the areas bordering Shabunda. From December 2001 to May 2002, Malteser had to cease operating in this zone. Surprisingly, security improved considerably during summer 2002, because the local population did not want to lose its health care support again. If, for example, a Malteser vehicle had been halted by the Mai-Mai, the local population would ask the local Mai-Mai commander to stop such obstruction. Security in Nyangezi, a much smaller zone, was better.

In addition to Malteser, there were two other organizations active in the Walungu and Nyangezi zones, namely Louvain Développement and Fondation Sud Kivu. Both came from Belgium. Louvain Développement focused on supporting hospitals with medicine, improving the functioning of the health committees (including treatment of the indigent), and rehabilitation. Malteser focused on support of the health centers. The cooperation between Malteser and Louvain Développement was quite positive;

Health Facilities Supported			
Hospital	Reference Health Center	Health Center	Total
1	0	25[a]	26
1	0	17	18
2	0	42	44

they regularly exchanged information to harmonize their activities. The relationship between Fondation Sud Kivu and Malteser, however, was more restrained. Fondation Sud Kivu worked with the hospital, but it was not clear to Malteser what this organization supported in the hospital. Nor was it clear how much funding they provided to the zone bureau.

Organizational Setup

Malteser Bukavu operated with a small number of staff. The 2002 office director also carried out the administrative position. For its two health zones, Malteser worked with two supervisors and the medical and nutritional coordinators, who ideally visited each health center once a month. The medical coordinator had three local supervisors, who visited the field four days a week. The zone bureau and Malteser operated under a memorandum of understanding, and Malteser health supervisors generally visited the field together with zone bureau officials.

The health supervisors also provided on-the-job training to the health staff. Formal training took place approximately 10 times a year, with four sessions of 2 or 3 days. The zone bureau and its chief medical officer developed and organized the training. They officially arranged the room and training modules and also made sure that the health center staff attended. Malteser provided only the funding and did not control the substance of the training. In addition, Malteser supported the UNICEF National Immunization Days, which took place in July, August, and September. They provided staff time (supervisors) and free use of Malteser's cars for these days.

ASSOCIATION REGIONALE D'APPROVISIONNEMENT EN MEDICAMENTS ESSENTIELS

In contrast to the other three organizations, the Association Régionale d'Approvisionnement en Médicaments Essentiels (ASRAMES) is a local NGO based in Goma, under the leadership of former MSF-H staff. It was founded in September 1993 as an association with eight members:

1. the Association des Donneurs de Sang de Goma,
2. Appui Médical Intégral au Kivu,
3. Bureau Diocésain des Oeuvres Médicales, Diocèse de Goma,

4. Bureau Diocésain des Oeuvres Médicales Diocèse de Butembo et Beni,
5. Centre Scientifique et Médical de l'Université Libre de Bruxelles,
6. the Eglise du Christ au Congo,
7. Fondation Damien and
8. Médicins Sans Frontières–Hollande.

The office of provincial health inspection of North Kivu is its direct counterpart. Until fall 2002, its main funding organizations were the Humanitarian Aid Office of the European Union and the Dutch government.[6]

ASRAMES played an active part in the relief operations for the Rwandan refugees in 1994-1996. In contrast to the other three organizations that support a limited number of health zones, under its 2002 memorandum of understanding, ASRAMES was active in all 19 health zones in North Kivu, thus covering a whole province (Table 2-5). The insecurity greatly impacted its operations. Several health zones, including Pinga, Mweso, Birambizo, Manguredjipa, Rwanguba, Walikale, and Masisi, have been hard, and sometimes dangerous, to access. By the end of 2000, ASRAMES could reach only 249 health facilities. In May 2002, it was already able to supply 315 facilities, and it hoped to reach 350 health facilities by the end of February 2003. All in all, the security situation has slowly been improving. Pinga remains difficult, but a chief medical officer has recently been installed. Walikale can be reached only by air.

Due to the war, ASRAMES also had to operate two separately located facilities: a head office and distribution center in Goma, which was in the Rwandan-dominated part of the province (the so-called Petit Nord), and a branch office in Musienene in the Ugandan-dominated part (the so-called Grand Nord). Originally, ASRAMES attempted to distribute its supplies from Goma only, but as the war progressed this became almost impossible. The new structure with two locations had the added advantage that the organization could never be fully looted, as once happened in 1996. Nor could it fully be destroyed by the Nyiragongo eruption.

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[6]Novib, a Dutch NGO that is part of the Oxfam family, is the counterpart for this funding since February 2000. It functions as a conduit for providing funding and helps with management and evaluation. UNICEF had played that role since September 1999. The Dutch government covers the operational costs of ASRAMES, which include supervision, training, distribution, and research costs.

TABLE 2-5 ASRAMES Health Zone Summary, 2002

Health Zone	Estimated Population[a]	Total Health Facilities			
		Hospital	Reference Health Center	Health Center	Total
Beni	234,060	1	2	24	27
Birambizo	299,853	1	1	20	22
Butembo	198,616	1	5	18	24
Goma	218,534	2	2	21	25
Katwa	263,585	2	3	22	27
Kayna	201,086	1	4	12	17
Kirotshe	346,665	1	2	23	26
Kyondo	194,929	1	1	19	21
Lubero	208,930	1	1	16	18
Manguredjipa	111,394	1	2	8	11
Masisi	289,477	1	0	23	24
Musienene	155,698	1	1	17	19
Mutwanga	163,113	1	0	14	15
Mweso	158,874	1	0	12	13
Oicha	154,785	1	0	20	21
Pinga	125,325	1	0	23	24
Rutshuru	276,703	2	3	15	20
Rwanguba	166,699	1	1	14	16
Walikale	91,055	1	0	22	23
TOTAL	3,859,381	22	28	343	393

[a]Extrapolation of 1984 population census data. In other words, these numbers are estimates.

ASRAMES Activities

Since ASRAMES is responsible for an entire province, it cooperates with many international organizations, either with specific functional tasks or in health zones:

- UNICEF for the protection of mother and child (immunization program).
- International Committee of the Red Cross, which supports rehabilitation of health structures destroyed by war.

Health Facilities Supported			
Hospital	Reference Health Center	Health Center	Total
1	0	20	21
1	1	16	18
1	5	18	24
2	0	15	17
0	2	20	22
1	3	12	16
1	2	20	23
1	1	18	20
1	1	16	18
1	1	5	7
1	0	19	20
1	1	16	18
1	2	7	10
1	0	7	8
1	0	18	19
1	0	3	4
2	3	13	18
1	1	13	15
1	0	16	17
20	23	272	315

- Save the Children Fund UK, which provides nutrition and logistical support for several health facilities.
- Centre Scientifique et Médical de l'Université Libre de Bruxelles pour ses Activités de Coopération, which carries out institutional support in three health zones (Rutshuru, Kirotshe, and Masisi), as well as to the provincial health inspection.
- OXFAM UK for water and sanitation.
- Projet de Développement de la Santé Rurale, a program for institutional support and drugs supply in five health zones (Goma, Rwanguba, Katwa, Oicha, and Musienene).

- World Vision International for rehabilitation of nutrition centers.
- Bureau Diocésain des Oeuvres Médicales, which provides institutional support to two health zones (Birambizo and Mweso).
- Église du Christ au Congo, an organization for institutional support to Protestant health facilities.
- Fondation Damien with institutional support to two health zones (Lubero and Kayna).

In addition to its regular supply and other activities in its health zones, ASRAMES also delivered drugs to many international organizations active in the eastern DRC. In August 2001 and May 2002, it was invited by the health minister in Kinshasa, who wanted to use the activities of ASRAMES as an example for the DRC (or at least the parts of the country under Kinshasa's control). The overall goal of ASRAMES is to make essential drugs available to the population of North Kivu in line with the principles of the Bamako initiative.[7] The main objectives of ASRAMES are

- To make drugs and essential medical material available and accessible to organizations integrated in the primary health care system and humanitarian actors.
- To promote the rational use of essential drugs.
- To promote coherent management of the available resources to make essential drugs accessible.
- To stimulate the local production of several essential drugs.

[7]In 1978, the Alma Ata Declaration set forth the goal of achieving primary health care for all. During the 1980s, the World Bank began pushing for the inclusion of national cost-sharing mechanisms, often as part of Structural Adjustment Programs. The 1987 Bamako initiative elaborated on the Alma Ata Declaration by asserting that primary health care for all would not be achieved sustainably without some form of cost recovery. The initiative encouraged donors, United Nations agencies, and NGOs to adopt a strategy of sharing recurrent costs through community financing, to generate sufficient income to cover some local operating costs, such as the essential drug supply, the salaries of some support staff, incentives for health workers, and investment of health staff and investment of community health activities. Bamako suggested that community financing should be creative and open to being based on user fees, prepayment for services, local taxes, or various income-generating activities. In addition, communities can help pay health care costs by contributing labor or making direct and in-kind contributions.

Consequently, its main activities are

- The provision of essential drugs and medical equipment to health organizations in North Kivu.
- The organization and execution of training for health professionals in North Kivu.
- The publication of a quarterly review of information, called ASRAMESSAGE, for the general public and health professionals, which covers rational prescription, as well as prevention and treatment of illnesses.
- The installation and rehabilitation of solar energy equipment for electricity generation in health structures.

ASRAMES also carried out studies on the local health situation. Since it is a local NGO, it did not operate emergency programs; instead, its ongoing activities were a humanitarian adaptation of its original, more development-oriented work. Likewise, it will not withdraw after the war has ended. In addition to its local long-term presence, its contacts with all warring parties may make ASRAMES an example, perhaps even a player, for a long-term strategy for Congolese health care.

Organizational Setup

ASRAMES works with its own health supervisors, who are generally recruited when they already have several years of experience in supervising health care at NGOs and the zone bureau. When they go into the field, they always go together with the zone bureau supervisors for the specific health center. In 2001, these ASRAMES supervisors made 70 field visits. Of the 309 health structures that were then included in the program, 236 were visited at least once. In cooperation with zone bureau staff, the supervisors provide on-the-job training as well as supervisory control. In particular, they train the zone bureau staff. The role of the supervisors in monitoring is so strong that they are sometimes nicknamed the *supersuiveurs* (*suivi* is a French term for evaluation/follow-up). In general, ASRAMES works in close consultation with the zone bureaus and organizes quarterly meetings with the chief medical officers to discuss program developments.

Box 2-1 describes a development involving changes in the fee structure used by ASRAMES, which had implications for its operations.

BOX 2-1
Changes in Fee Structure

The support of the Humanitarian Aid Office of the European Union (ECHO) was intended as emergency funding, until more development-oriented funding could commence again (before ASRAMES instituted its humanitarian policy with funding from ECHO, it had already received funding from the Programme d'Appui Transitoire au Secteur de la Santé, PATS). In November 2001, a consultant from the European Union (EU) suggested restarting a development-oriented approach, because of the stabilizing macroeconomy (albeit at a very low level) and improving security situation.

Organizationally, this would mean working with PATS, a different, more developmental EU funding organization, and a higher level of fees in order to gradually go back to the old cost-recovery system. The association would go from *Don des Médicaments* to the new *Bons Médicaments* (good drugs), which would include a 10 FrC raise in fees. This meant that consultation fees rose from $0.50 to $0.55. This raise was meant to sensitize people to the real costs of health care and would also allow health staff to build capacity to manage increased resources from cost recovery.

The ASRAMES management was apprehensive about instituting this new policy. While the macroeconomic situation might have been improving, paying bills was still a problem at the household level. Recent socioeconomic surveys by ASRAMES actually

COMPARISON OF ORGANIZATIONAL APPROACHES

Organizational Setup

In their setup and supply of drugs and other supplies, the organizations reflect the fact that they partially take over or support the traditional role of the state health institutions in supervision and training.

All organizations work with health supervisors, yet the number of visits and the size of the region they cover differ considerably. For example, the IRC has gone furthest with its supervision. Its health supervisors visit "their" health facilities at least once a week. And at least once a month, IRC supervisors visit their health centers together with the zone bureau supervisors, while Malteser operates with only two supervisors for each health

showed a declining ability to pay. Also, it was not clear whether the price increase would lead to more revenues, because attendance could also drop (negative price elasticity). Nor was it clear whether the new system would be efficient in terms of hidden costs for such additional tasks as reporting, administration, and handling cash (transaction costs). The small raise could also open up opportunities for corruption. The biggest risk was a decline in attendance, with its concomitant impact on morbidity and mortality.

In the end, most chief medical officers actually wanted the raise in fees. They argued that any increase in resources would be useful for their functioning. At the same time, some funding organizations that prefer free health care during emergency situations, such as UNICEF, judged the price increase negatively. ASRAMES management went along with the preference of its donor and chief medical officers. It decided to initiate a pilot project with six health centers that would last eight months.

If the cost recovery approach would be instituted further and if there would be funding for improving the functioning of the zone bureau, then ASRAMES would be able to transform itself to a real procurement and distribution agency. The provincial health inspection would then take over the supervisory tasks, training, health information analysis/management, transport of drugs, support to the health facilities and itself, as well as specific studies, such as socioeconomic surveys. However, PATS funding to ASRAMES is only one step in such a direction.

zone. As a result, the control and on-the-job training opportunities also differ. In general, close supervision seems to be necessary to build skills and prevent corruption, but it is also cost-intensive.

The health committees are a crucial participatory mechanism for improving health care. The organizations think that more care should be spent on involving them from the early stages, as well as in ongoing training.

In principle, there are two poles along a continuum of management approaches toward supervision and capacity building: the intense supervision pole, which more closely resembles the IRC program, and the hands-off contract pole, which comes close to the initial 2001 Merlin proposals. The actual operations of Malteser and ASRAMES, as well as the accepted changes by Merlin, fall in between these approaches.

Organizational Strategies

Although the organizations differ in the set-up of their day-to-day work, their background in health care, the conditions of war, and their dependence on donors for funding lead to important strategic similarities. They do not have elaborate strategy formulation processes at the field level; their focus on medical humanitarian tasks is strongly ingrained and does not seem to require more strategic elaboration. Moreover, the daily practice of addressing the needs of the local population and the fact that donors generally provide funding for only six months to a year tend to drive out long-range planning. All four organizations have as their central goal to save lives and relieve suffering, and they do so in quite a dynamic, entrepreneurial fashion.

All four NGOs are continually seeking to expand their activities. They all responded to the Rwandan refugee crisis and increasingly started to support the local population. They also moved into more development-oriented activities. Their main strategies are

- Geographic expansion, as Merlin did with its operations in Lodja North and South and ASRAMES with reaching more health facilities in North Kivu. When a zone becomes more secure, it is highly likely that a humanitarian organization will move in.
- Diversification. While all organizations focus on health and to a lesser extent nutrition, Merlin also looks at reproductive health and the IRC at water and sanitation. Umbrella projects, such as the IRC's Ushirika project for capacity building with local NGOs, good governance and decentralization, and micro-credit are all examples of further diversification.
- Deepening the scope of existing programs. Preventive programs, for example malaria projects with community education and bed nets, are a good example of this.

The organizations are flexible. Due to their work in the chronic emergency of the eastern DRC, the organizations were well placed to react to the sudden, natural emergency of the volcanic eruption that destroyed parts of Goma. In essence, they extended their programs and adapted parts of their regular activities. In general, the organizations can establish themselves fast, grow rapidly and, if necessary, leave quickly. They also change their management, in terms of personnel and methods, continuously. Merlin in 2002 operated differently from Merlin in 2001.

All the organizations are on a slow track toward a higher degree of professionalization and accountability. But none of them has an explicit organizational methodology to get there. Elements of such a methodology include Merlin's contract approach with its local counterparts, the IRC's quantitative goal setting, and ASRAMES's local capacity building. Participatory programming can also be an element of such an approach. Interestingly, this professionalization coincides with the integration of more development-oriented activities into their daily work.

All organizations guard their autonomy. Although they cooperate with other organizations in UN and NGO coordination meetings, they often prefer to work alone—or at least without interference of other organizations—in their health zones. Merlin does this explicitly. But the IRC has a tense relationship with FOMULAC and the same holds true for Malteser and Fondation Sud Kivu.

These four complementary strategies are key aspects of organizational survival. They help the organizations adapt to the difficult operational conditions of humanitarian crises. At the same time, they provide opportunities to obtain new donor funding.

3

Main Findings

In this chapter we describe and analyze qualitative and quantitative data gleaned from records and reports of and interviews with the four nongovernmental organizations (NGOs). The objective of the qualitative analysis is to find possible reasons for the variations in utilization rates with regard to security and the management approaches by the different agencies. Quantitative data have been used when they were available from the NGOs to address the five specific objectives of this study. Table 3-1 presents a comparison of the financing approaches of the four NGOs. Table 3-2 presents a comparison of their management approaches.

Objective 1: To identify which management and financing approaches, including the setting of fees, are used by four NGOs supporting health care in the eastern Democratic Republic of the Congo.

DIFFERENT APPROACHES CONCERNING INDIGENT CARE

All four organizations employ the term "indigent" to define the poorest of the poor, but they do not distinguish indigent status in similar ways. The main problem is that there is no internationally accepted or clear definition of indigence. As a result, the organizations either do not establish criteria or they formulate variations of the basic definition of and criteria for indigent status.

The dilemma facing organizations in defining who are indigent is finding a balance between the people who truly need support for health care and those who can afford the health care costs. Either way, assessing or setting up a well-functioning system that supports indigent care is time- and labor-intensive in a chronic crisis situation.

In the Democratic Republic of the Congo (DRC), each agency has found a different resolution to the indigent dilemma. The International Rescue Committee (IRC) works with coupons and a maximum quota for the indigent for each health zone. This is a system of enfranchisement in which coupons given to the indigent substitute for pay for services, a bit like a ration card in a refugee camp. Using the criteria, local health committees determine the indigent status of those who ask for coupons. The health nurse also checks their status; in this way, the local health committee and the health nurse can control each other's work. *The IRC reimburses the health centers for the coupons that they receive.* While the main disadvantage is that the system takes up considerable time and resources, it has four strong advantages:

- The integrity of the health system is maintained, because health centers continue to generate revenues from indigent treatment.
- The more indigent patients the health staff treats, the more money it earns. In other words, there is no disincentive for treating the indigent.
- There is no pull effect of free health care for the indigent from other zones.
- It allows the health staff and the IRC to monitor the indigent and their (impact on) health care.[1]

Except for the IRC, none of the organizations currently employs an indigent care system with coupons. Merlin reimburses the drugs, but not the consultations, for the indigent. The other two organizations do not employ explicit indigence criteria and do not reimburse indigent treatment. While these organizations maintain that the indigent are treated for free,

[1]Some health staff was concerned about the continuation of the coupon system, if IRC would leave. In this sense, the IRC needs to develop and explain a clear exit strategy. Currently, the part of the revenues allocated for buying medicine is put into a savings account. Using these savings can help ensure continuation of local health care for an extended period of time once the international organizations leaves (see Table 3-1).

TABLE 3-1 Comparison of Financing Approaches

Finance	IRC	Merlin
Drug supply	Free/monthly	Free/monthly (more often with outbreaks)
Savings	Yes	No, revenues spent on incentives for zone bureaus, health centers, and health committee
Support to	Health centers, reference health centers (primary health care) and limited support to hospitals for indigent treatment in Kabare Health Zone. Katana followed with new memorandum of understanding	Health centers, reference health centers, and hospitals (primary and secondary health care)
Type of fee	Bundled fee per episode of illness covering consultation, lab test and drugs (*tarif forfaitaire*)	Stopped nominal fee in 2001 and adopted variable pricing system for all drugs and services based on 60% of market price.
Exemption (no payment for type of service)	• Under age 5 consultation • Tuberculosis • Vaccinations (BCG, tetanus, etc.) • All cholera drugs during outbreaks BDOM also supports chronically ill, such as diabetes and tuberculosis	• Antenatal care • Under age 5 consultation • Fefold • Fansidar (SP) • Vaccinations (BCG, Tetanus, etc.) • All cholera drugs during outbreaks

Malteser	ASRAMES	Conclusions
Free/monthly (but health centers pay 15% of cost price to zone bureau)	Free/monthly	Given the economic situation, free and monthly is the common approach
No (locked BDOM account has been abolished)	Before Sept. 1999, yes. After Sept. 1999 revenues spent on incentives for zone bureau, health centers and health committee	No system of savings has functioned well enough to limit or withdraw international support
Health centers, reference health centers, and hospitals (primary and secondary health care)	Health centers, reference health centers, and hospitals (primary and secondary health care)	Humanitarian organizations traditionally focus on primary health care, more development-oriented work also focuses on hospitals, which reduces the referral problem of the indigent
Bundled fee (consultation, drugs, lab research) per episode of illness	Bundled fee per episode of illness. Before September 1999 fee per service for cost recovery of drugs and medical supplies	Fees are considered important for sustainability, dignity of client, and to prevent unnecessary use of health care. Provincial health inspector/ inspection determines the type of fee
• Vitamin and iron supplements • Antitetanus injection • Antenatal care • Under age 5 consultation	No exemptions, but low fees (see fees height and reductions)	Common attempt to either abolish or diminish fees for children. Regular adjustment necessary for optimization of use due to insecurity and economic decline (e.g., 4 times a year).

continued

TABLE 3-1 Continued

Finance	IRC	Merlin
Waiver (no payment for population group)	Coupons for the indigent. Reimbursement to health centers by IRC	List of the local indigent by health committee and health staff. Indigent are treated for free, no reimbursement to health centers by Merlin. Social control by local representatives (e.g., from health committee)
Fee height and reductions	Before August 1998: Adult $3.00 Child $2.00 After August 1998: Adult $2.00 Child $1.00 December 2000 Adult $1.00 Child $0.50 Sept 2002 Adult $0.80 Child $0.40 Sept 2001, health centers have child rate for under age 15, but no uniformity in child age before this date. Antenatal care $0.40 bundled fee	No fixed charge, but variable pricing of drugs and services over time and in different zones. Nominal (symbolic) pricing replaced in 2001 by 60% of local pharmacy prices. Plan to adjust prices 4 times a year, but in practice this happens less often

Malteser	ASRAMES	Conclusions
Health committees and health centers arrange this on their own initiative.	The indigent are treated for free. No coupon system. Nurse decides on indigent status together with health committee, but no reimbursement to health centers by ASRAMES	Regular adjustment necessary for optimization of use due to insecurity and economic decline. Important to provide incentives to health center staff in order to promote treatment of the indigent. Claims of free indigent treatment hard to verify without control and indigent care system
Before January 2001 $2.00 $1.00 After $1.00 $0.50 It is not clear how much patients really pay In hospital after reference: reduction of $3.00 for adult $2.00 for a child	Since September 1999 Urban/rural maximum Adult $1.0/$0.5 Child $1.0/$0.5 May 2000 increase in fees urban/rural: Adult $1.5/1 Child $1.5/1 Oct 2000 decrease in fees: Adult $1.0/$0.5 Child $1.0/$0.5 Antenatal care $1.0/$0.5 (first time) Under age 5 consultation $1.0/$0.5 (first time) Delivery $7.0/$5.0 Observation $1.0/$0.4 Small surgery $2.5/$2.0 August 2002 urban rates discontinued If antenatal care/under age 5 consultation material provided by UNICEF or ASRAMES maximum fee is $0.20	Regular adjustment necessary for optimization of use due to insecurity and economic decline. Whether the different zones need different fee structures, exemption and waiver systems should be studied further

continued

TABLE 3-1 Continued

Finance	IRC	Merlin
Allocation of revenues	30% drugs and supplies (to savings account) 40% incentives 30% running cost	Old 45% incentives 10% running costs 25% zone bureau subsidy 20% community fund Proposed 70% incentives 20% running cost/community fund 10% zone bureau subsidy Adopted 65% incentives 20% running cost/community fund 15% zone bureau subsidy
Debt of health center	Growing, especially at reference health centers with more complex treatments	No information
Utilization rates	Strong growth, especially of indigent attendance	Strong growth

Malteser	ASRAMES	Conclusions
Old system changed in September 2001. New Health center pays 15% of the costs of the drugs to the zone bureau. Of the remaining revenues: 40% running costs 60% incentives	60% incentives 30% health center running costs 10% zone bureau running costs	Incentives and high enough revenues are crucial for staff motivation and preventing the sale of drugs to the private market. If revenues are not high enough the 4 organizations attempt to provide direct subsidies, e.g., for preventive services
No information	Growing debt led to humanitarian cost-sharing policy. Currently, drugs are free, so no debt. No data on new system yet, but may become a problem	Important topic requires further research in terms of both debts of patients to HC and debts of HCs to zone bureau
Little information, BDOM report inconclusive. Later study showed underreported attendance	Strong growth after lowering of fees Raising fees led to immediate decline Monitoring new raise	Lower fees matter, but so do supervision, reclassification of < 15s, and reimbursement of indigent treatments

TABLE 3-2 Comparison of Management Approaches

Management	IRC	Merlin
Supervision/monitoring by health supervisors	At least once a week, 1 health supervisor for 4 health centers, with joint visit for supervision with zone bureau staff member once a month	1 or more supervisors per health zone, visits twice a month on average
Number of health committees	One for each health center. Depending on health center, participation varied and could be strengthened further	One for each health center
Health committee tasks	Manage administration of health center, including finances, indigent status and guarding drugs and supplies	Participates in health management. President signs the contracts.

Malteser	ASRAMES	Conclusions
Two health supervisors per health zone. Visits once a month for each health center. Security problems may obstruct visits	6 health supervisors for 19 health zones. 17 health zones (2 inaccessible) = 17 health zone visited every 2 months (in 2002 every month	Two poles: hands-off "contract" or "strong supervision" models. An adaptable middle ground would be either a decentralized supervision system or a shadowing exercise in which health authorities are required to undertake a certain amount of supervisory visits in order to receive continued support
Does not cooperate closely with health committees yet, but will do so in the future. Louvain Développement takes initiatives for improvement, mainly training	One for each health center. 100% operational (checked on the basis of health committee minutes, reporting forms on number of meetings, decisions and actual execution, as well as supervisory visits)	Well-functioning health committee that participates in local health management is a useful condition for free drug supply. Important participatory mechanism that requires continuous care
Limited cooperation with health committee training and the indigent. Health staff and health committee sometimes have tense relations	Manage administration of health center, including finances, indigent status, and guarding drugs and supplies. Minutes of health committee meetings are a condition for ASRAMES support.	Functioning health committee that participates in health management is a condition for free drug supply and improving management, prevention and local involvement

continued

TABLE 3-2 Continued

Management	IRC	Merlin
Criteria for indigence	The poor without possessions Widows and widowers without other support The severely malnourished Orphans without other support Mentally and physically handicapped without possessions People without work or land Malnourished children and adults with associated pathologies The chronically ill	Person with mental or physical disabilities Orphan abandoned by other family members Older person living alone Unaccompanied child Widow/widower without income Internally displaced people Undernourished people (temporary coupon system in Kalima)
Zone bureau	Especially health supervisors work closely together. Questions about parallel structure, in particular in reporting. Direct financial support to zone bureau for supplies, stationery, etc.	Small supervisory staff, sometimes leads to delay in control. Problem of parallel reporting systems
Support to zone bureaus	Katana bureau salaries: Of 30% running costs, 44% goes to the zone bureau. And 250 liters of petrol, 5 liters of motor oil a month for supervisory visits and field trips Kabare bureau zone salaries: Of 30% running costs, 60% goes to the zone bureau. And 50 liters of petrol,	Zone bureau subsidy (see Table 3-1) plus $100 a month as incentive for medical doctors and $150 as incentive for other zone bureau staff

Malteser	ASRAMES	Conclusions
No criteria. Health committee and health center staff determine indigent status together. People who cannot pay either receive credit or are not treated.	No written criteria. 10-20% of patient cannot pay. Nurse at health center decides in cooperation with health committee. As drugs are free, ASRAMES does not reimburse.	Approaches to the indigent differ from organization to organization, although they all attempt to let the indigent receive free treatment. Insufficient data on nontreatment of indigent, which can be a hidden problem. Organizations should discuss (common?) indigent criteria
Strong delegation to zone bureau, supervision of zone bureau in close cooperation with Malteser	Very close cooperation, continuous communication. ASRAMES partly fulfills role similar to government control	Improving management skills of zone bureau crucial for sustainability, but difficult. Organizations take over traditional government control role. Problem of parallel reporting systems. Doubts of capacity and corruption linger
Health center pays 15% of the costs of the drugs to the zone bureau (see Table 3-1) of which $75 a month goes to the provincial health inspection. And an additional $5 for each supervisory visit to a health center	10% zone bureau running costs (see Table 3-1). The reference health center and hospitals contribute $100 and $150 per month to the zone bureaus. ASRAMES contributes $550 a month to zone bureaus that do not receive support from other NGOs ($200 for	The four NGOs support the zone bureaus in very different ways. They all support their supervisory visits. At the same time, the NGOs prefer that the zone bureaus do not take to much money from the health facilities

continued

TABLE 3-2 Continued

Management	IRC	Merlin
	150 liters of diesel, 10 liters of motor oil Both zone bureaus also receive 2 reams of printer paper a month	
Training	No official training program, but health supervisors carry out in-house training with health staff at each facility in collaboration with zone bureau. Health staff receives refresher training in treatment protocols, vaccination techniques, epidemiological surveillance, cholera treatment and other topics as deemed necessary. Occasional finance training for health center	Regular financial training of health committee members and health staff.
Donor	OFDA, perhaps USAID in the future	ECHO
Utilization	Access has improved, but more work to increase attendance necessary. Uses standard of 3 to 4 visits a year	Access has improved, but analysis needs to be carried out. More work to increase attendance necessary. Standard of 1 visit a year

Malteser	ASRAMES	Conclusions
	supervision, $150 for fuel, $100 for office supplies, and $100 for equipment maintenance	
Financial support for training by zone bureau.	Training of health committee Rational prescription Management of primary health care Financial management and accountancy Training in drugs management Training on the spot of BCZ supervisors Health information systems and management models Training for supervisors and trainers Consulting techniques	Only information on type of training was collected. Judgment on quality of training is not possible
ECHO	ECHO for several years, and now PATS	OFDA and ECHO have different policies for cost sharing and hospital support. This contributes indirectly to fragmentation of health system
Unclear whether access has improved, probably underreported. Insecurity is a problem. Standard of 1 visit a year	Access has improved, but more work to increase attendance necessary. Standard of 1 visit a year	Access has improved. The organizations play a useful role, but employ different goals and standards. Health system would fall apart without support

continued

TABLE 3-2 Continued

Management	IRC	Merlin
Sustainability	Depends on internal management, donor support, economic and war conditions	Depends on internal management, donor support, economic and war conditions

there are no quantitative data to back this claim. More data from regular reporting as well as special research on morbidity and mortality are necessary to convince donors on the merits (or just efficiency) of the different approaches. At the very least, the organizations should compare their approaches and decide on common indigent criteria.

SUPPLY

In early 2000, utilization rates for the IRC were equivalent to those of ASRAMES, but their fee structures differed. One possible cause of this difference in utilization may be the continuous availability of drugs. Lawson (2004) and Burnham, Pariyo, Galiwango, and Wabwire-Mangen (2004) have shown that utilization at health facilities drops when there are stock ruptures for the clinic. Patients, knowing there are no drugs at a clinic, prefer to pay for transport to an area where they are sure to receive treatment rather than one where they will be referred elsewhere, with added transport costs. With heavy supervision and regular stock-ups, the presence of drugs in a health facility boosts patient confidence.

IRC-supported clinics are in a single health zone. The furthest clinic is reachable via road in six hours, and supervisors visiting there can stay overnight and return the next day. In this way, clinics are well stocked most of the time. Looting of clinics occurs, but again, the proximity and accessibility of the IRC to those clinics (and the health teams in Bukavu should the IRC be unable to reach health facilities because of insecurity) allow for restocking to occur regularly. The contrary is true of ASRAMES-supported

Malteser	ASRAMES	Conclusions
Depends on internal management, donor support, economic and war conditions	Depends on internal management, donor support, economic and war conditions	Management setup of organizations differs in terms of supervision, indigent care, and zone bureau support. ECHO and OFDA differences also important. Economy and war are crucial extraneous factors

areas. Frequent insecurity as well as the movement of the front line through the ASRAMES health zone in 2000 may have meant that drugs stocks were ruptured (or looted) frequently.

The four organizations display great similarities in the processes they have developed to supply drugs and medical supplies. They differ, however, in the actual goods that they supply.

- All organizations provide essential drugs once a month, either for free or for nominal prices, as Merlin used to do. Merlin is the only organization that allows special orders during the month. It also has special provisions to respond to epidemic outbreaks.
- Supervisors and zone bureau staff generally examine the orders for medicines for correctness.
- The IRC, Malteser, Merlin, and ASRAMES all have conditions that the health centers must fulfill in order to ensure delivery. These conditions differ but generally include a functioning health committee, supervisory visits, and respect for the fee system (see Tables 3-1 and 3-2 for more information on the supervision system).
- Some drugs turn up on the black market, which indicates that either health staff are augmenting their wages through the resale of drugs or patients are selling drugs. The former is more likely; studies have shown that households that receive drugs in health facilities usually use some of the drugs and distribute the rest to household members (see Ferrinho et al., 2004). Such resale may indicate that the revenues from cost sharing are insufficient for ensuring staff motivation.

SUPERVISION: CAPACITY BUILDING, MONITORING, AND EVALUATION

As mentioned earlier, there are two poles along a continuum of management approaches toward supervision: the intense supervision pole and the hands-off contract pole. A higher degree of supervision would in theory lead to less stock depletion at a health facility as frequency of contact between health facilities and people with access to drug stocks is increased. The relatively small area covered by the IRC in comparison with ASRAMES may also have increased the likelihood of drugs supplies getting to health facilities without, or soon after, any interruption of stocks. While Malteser also covered a relatively small area (comparable to the IRC-supported zones), it faced more issues of security regarding accessibility to health facilities in the zones it supported. More rebel factions were present in the Walungu health zone, meaning that health teams frequently had to negotiate with fighting factions to get to health facilities or areas in the zone.[2]

In practice, a hands-off approach does not suffice for the organizations in this study. Due to the years of neglect, the degraded education system, the wars, the economic crisis, and suspicions of corruption, they all need to focus on capacity building, supervisory support, and control. Merlin's current approach emphasizes intensive supervision, and Malteser also would like to strengthen its supervision further. In this sense, the organizations take over some roles that the state often fulfils in more stable societies. The promise of a less labor-intensive contract approach cannot be realized in the dilapidated health structure of the war-torn eastern DRC.

Although the labor-intensive approach is less favored by some national and international agencies, its benefits include the ability to aggregate health data more easily and provide on-the-spot training. Also, supervisory influence on the drug supply is direct, in that health facilities stocks are monitored and stocked accordingly. In addition, supervision can help prevent health staff from raising prices, increase respect for opening hours, and contribute to more professional and efficient, even friendlier, care.

[2]In 2001, survey teams working in the Walungu health zone had to gain consent from both rebel factions in Walungu, while trying to avoid letting either side know that they had had contact with the other. Permission was granted from higher authorities in the rebel groups. Once negotiations had taken place teams could travel in the various areas with a stamped and signed letter from the higher authorities of the rebel groups.

The exact effects of supervision in the eastern DRC, however, are difficult to quantify.

Objective 2: To determine how these management and financing approaches affect utilization rates in the health zones supported by the four NGOs.

For the purposes of comparison, utilization rates for the four NGOs between the time periods January 1999 and December 2001 are described if a time series of a year or more is available. Detailed data for over a year were available for ASRAMES and the IRC, as such much of the analysis focuses on these two organizations. The health zone with the highest average utilization rates between 1999 and 2001 is Katana (average 42 percent), supported by the IRC. Both ASRAMES and the IRC had rising trends in utilization for the entire period described (Figure 3-1). The Kabare health zone had the highest recorded averages (87 percent) for the time period for which data were available (September 2001 to July 2002).

Comparing the data for the IRC and ASRAMES, differences in utilization rates emerged in September 1999 when ASRAMES changed user fee schemes. From September 1999 to May 2000, ASRAMES fees dropped in rural health facilities to $0.5 ($1 in urban areas), while IRC fees remained unchanged. Average utilization rates during this period for ASRAMES and the IRC were 33 and 28 percent, respectively. However, the overall trend for utilization in ASRAMES-supported areas during this period was negatively correlated with time (Figure 3-2). *What are the possible reasons for the negative trend in ASRAMES utilization, even with a drop in user fees?*

Between May and October 2000, ASRAMES fees rose to their previous rates, and IRC fees remained unchanged (Figure 3-1). Average utilization rates for ASRAMES and the IRC were 28 and 40 percent, respectively, yet both organizations' fees were the same as the first period in 1999 (January to September) when average consultations were equivalent. In the case of ASRAMES, rates had stabilized at those seen during the first period before fees were changed. However, for IRC, while fees remained unchanged, utilization rates rose steeply (Figure 3-3). *What is the difference between the periods January to September 1999 and May to October 2000 when each organization's fee schemes remained the same for both periods, yet utilization rates differed for the IRC?*

In addition to supervision and ruptures in stock, we first have to look at seasonal trends in the DRC. From both ASRAMES and the IRC data of

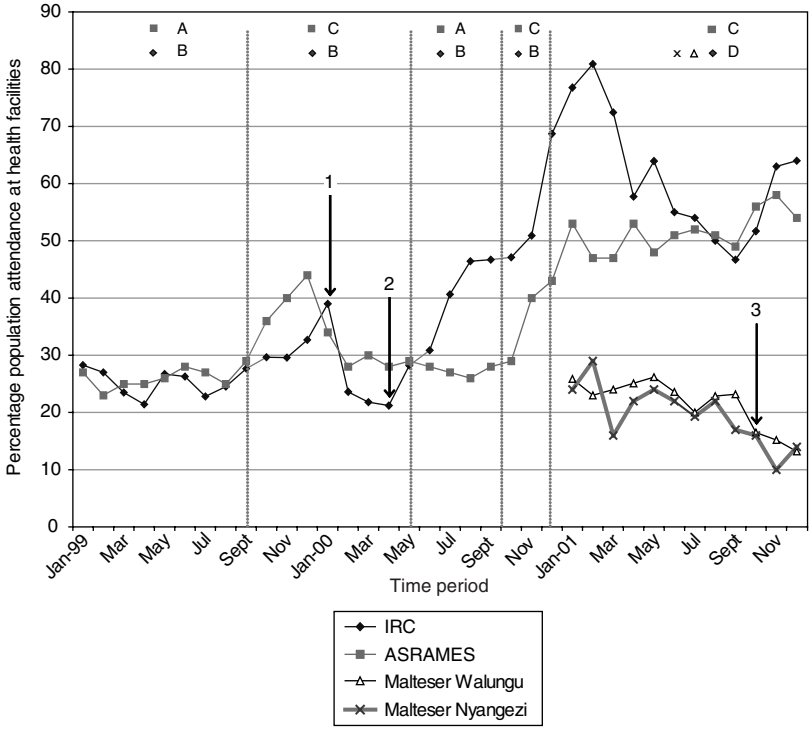

FIGURE 3-1 Utilization of health facilities supported by NGOs in eastern DRC.
NOTE:
Fee A: $1.5 urban; $1 rural
Fee B: $2 Adults; $1 children
Fee C: $1 urban; 0.5 rural
Fee D: $1 adults; $0.5 children
Arrow 1: Start of IRC indigent coupon scheme
Arrow 2: Reported influx of IDPs into Katana Health zone
Arrow 3: Closure of several health facilities in Walungu and Nyangezi due to insecurity

1999, a peak in utilization is evident late in each year. This coincides with the rainy season in the South Kivu province, when malaria transmission increases. Thus a seasonal rise of some sort should be expected around October of each year. This peak is smaller in North Kivu, where the rainy seasons are less pronounced.

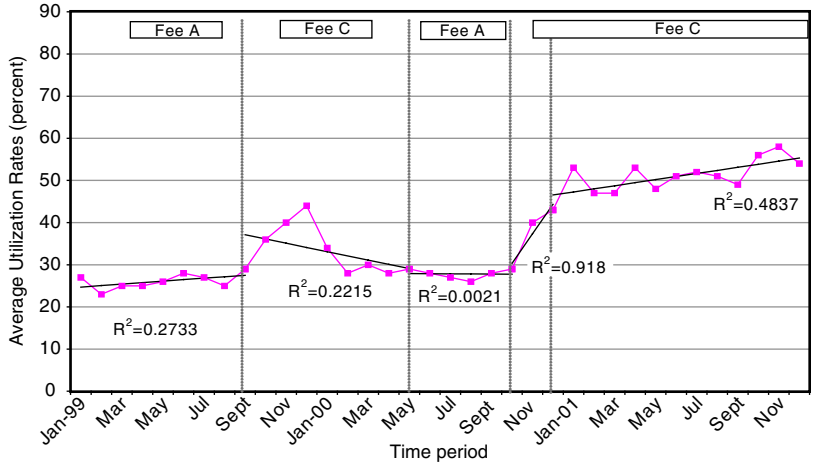

FIGURE 3-2 ASRAMES trends in utilization over time.

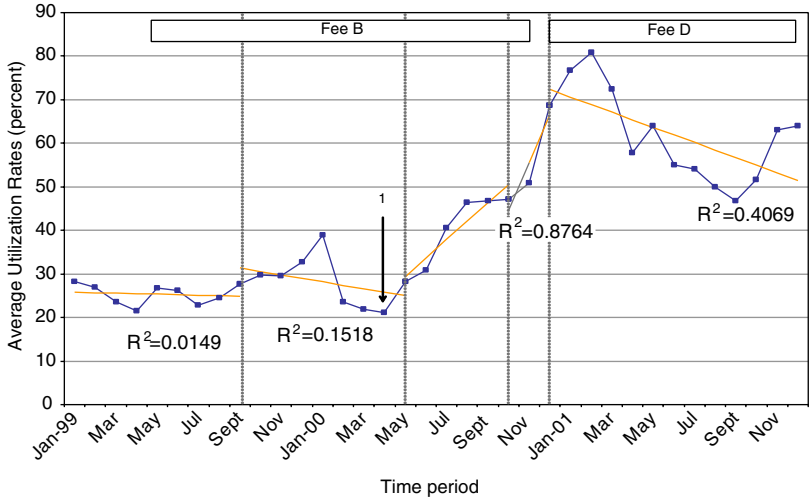

FIGURE 3-3 IRC trends in utilization over time.
NOTE: Arrow 1: Reported influx of IDPs into Katana health zone

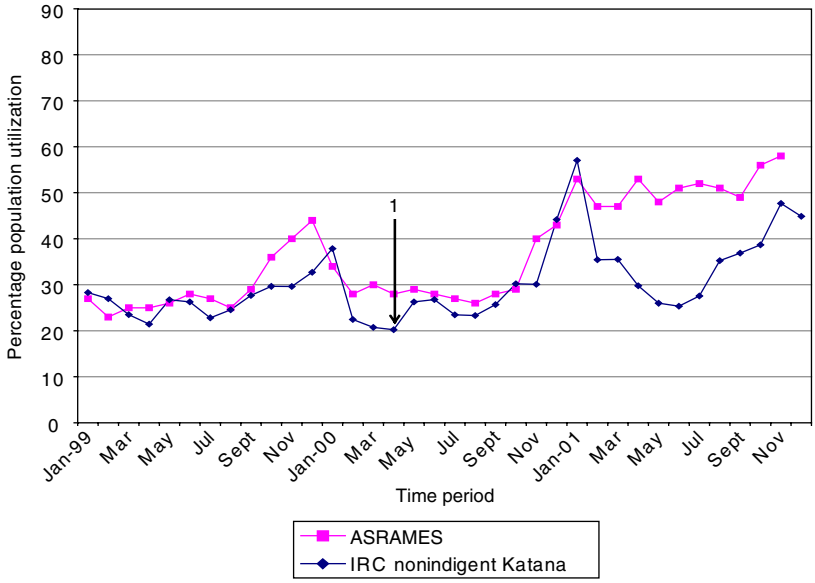

FIGURE 3-4 Utilization rates in ASRAMES clinics compared with rates of nonindigent utilization in IRC clinics.
NOTE: Arrow 1: Start of IDP coupon system in Katana health zone.

Second, utilization rates for ASRAMES and the IRC in late 2000 were 10 percent and 40 percent above those of the previous year, respectively. Thus seasonal variation in utilization does not explain the steep increase in IRC utilization from March 2000 onward. Looking back on reports from that period, IDP influxes were occurring from March, into and around the Katana area. The increase in utilization during the period from March-August 2000 could thus be a result of these influxes into the health zone. No simultaneous rise or security reports are recorded from the ASRAMES health zones. We can suggest that the first steep rise in utilization rates was a result of internally displaced persons moving into the Katana health zone.

This conclusion is supported by results, described in Figure 3-4, in which the nonindigent use of IRC-supported facilities is described in comparison with ASRAMES utilization rates for the same period. The figure shows comparable rates for both ASRAMES and the IRC when only the nonindigents in IRC health zones are taken into account. The IRC classification of indigent would include internally displaced people, and thus their

influx into the health zone and use of health facilities at no cost could result in the numbers graphed in Figure 3-1 from March 2000 to October 2000.[3]

The second and larger peak in rates for both the IRC and ASRAMES from October to December 2000 is more difficult to interpret. Both organizations report large rises compared with the previous year's figures for the same period. Yet for the IRC there is a decline in indigent utilization from August 2000 onward, indicating that many internally displaced persons were leaving the area and nonindigent groups were using health facilities. The trend in ASRAMES utilization rates around this time is similar to those of the IRC, with a peak in November and December 2000 in the utilization of health facilities. In fact, once indigent use of health facilities is factored out of the IRC figures, the IRC utilization rates are closely associated with ASRAMES rates (Figure 3-4).

Again, we have to remember that the IRC and the zonal health bureau had still not dropped fees at health facilities in Katana to the levels found in ASRAMES health facilities. *What are the possible explanations for the large rises in both the IRC and ASRAMES utilization rates?*

For the IRC, a possible explanation is the reclassification of everyone under age 15 as children and eligible for lower rates at health facilities (at this stage, $1). This reclassification occurred in September 2001, prior to the massive peak in rates.

For ASRAMES, the trend in consultation rates was positive between October 2000 and November 2001. The user fee decrease in October 2000 seems to have influenced the trend in consultations.

What is the difference between the time periods September 1999 to April 2000 and October 2000 to November 2001? An epidemic (possibly malaria, as seen in Burundi during the same period) may have resulted in high usage for both agencies, perhaps more so for the IRC facilities as they are based in more highland areas. However, ASRAMES utilization rates were sustained at high levels throughout 2001, whereas the IRC rates decreased dramati-

[3]Attendance data available from the organizations was plotted on a line graph and descriptive analysis undertaken. Data on the change of fees by each organization, if any, are marked on each graph to denote the month that fees changes were implemented. Attendance at health facilities was calculated in the same manner for each NGO whose data were plotted. Estimated populations were taken from NGO data and divided by 12 months to give an estimated population in a health zone per month. Total attendance at health facilities aggregated to health zone was used as the numerator and the estimated population divided by 12 as the denominator. All figures were converted to percentages for comparability.

cally, to an approximate equivalent with ASRAMES—further suggesting an epidemic of some sort, which was more pronounced in the Katana health zone.

The conclusions that we can draw from the data are

1. Providing free treatment support to indigent patients increases attendance only if health facilities have a defined set of criteria for indigence and, more critically, that health facilities are reimbursed for indigent fees.
2. Factors other than the cost of care and reimbursement for indigent groups contribute to higher utilizations rates, as seen when comparing figures between ASRAMES and the IRC in the early part of 2000.
3. There are crucial differences in the management of the organizations that could be contributing to the higher utilization rates at IRC-supported health facilities. Notably, these differences relate to the IRC's intensive system of supervision to improve health care quality and local capacities, including the classification of indigent, the reclassification of those under age 15 as children, and the accessibility of the agency to the health zones it supports.

From the data under Objective 1, it seems that indigent support as well as intensive supervision and regular drug supplies lead to higher utilization rates. However, are those utilization rates high enough to create revenues that will allow health facilities some independence from external funding? When, in a chronic crisis, is external funding most needed?

Objective 3: To assess how these utilization rates compare with donor and humanitarian standards.

Utilization rates in an area of conflict such as the DRC are expected to be as much as three or four times per year per person as recommended in the Sphere guidelines (Sphere Project, 2004). The highest utilization rates of 1.15 per person per year were in Kabare health zone, where more than 80 percent of the population were classified as indigent (data not shown).

The organizations use different standards for measuring normal attendance. The IRC refers to the Sphere standard of four visits a year per person. Merlin, Malteser, and ASRAMES refer to the World Health Organization norm for situations comparable to the eastern DRC of one visit a year. This difference in baseline data is important for evaluation judgments as

well as goal-orientated action. The prospect of increasing attendance to an expected three or four times per year in a conflict area may drive an agency to push to reduce fees in order to increase utilization to this expected goal.

Objective 4: To determine at what level fees must be to allow for adequate cost-recovery/sharing in health facilities.

Cost sharing is defined as a system in which users pay a proportion of the costs relating to health care service delivery. The World Bank had predicted that user fees would generate 15-20 percent of health expenditures before administrative costs were included (Creese and Kutzin, 1995).

None of the local health system staff were in favor of providing health care for free, however, for reasons other than those given by the World Bank. They argued that it could lead to abuse of the health system, take away patients' dignity and would not be sustainable in the long run (especially not when the international organizations leave). In fact, most health staff strongly prefer to charge clients. Professional considerations for either improving or discontinuing the fee system, such as price elasticity and transaction costs, do not figure prominently in the decisions to adopt cost sharing. The immediate need for cash of the health staff and facilities routinely overrides other concerns. In addition, some donor organizations, such as the Programme d'Appui Transitoire au Secteur de la Santé, want to show that others, in particular the local population, also provide financial inputs.

The provincial health inspector officially determines the fee system, but in practice the NGOs influence the inspector's decisions. Different provincial health inspections, and moreover, different agencies, work with different fee systems, causing fragmentation of the overall health system in the eastern DRC. The IRC, Malteser, and ASRAMES work with a bundled fee per illness episode that includes the consultation, drugs, and laboratory costs. Merlin works with variable rates that can differ by health zone based on (60 percent of) local private pharmacy prices. The patient pays for all services and drugs separately.

Setting up a well-functioning fee system is difficult for all the organizations involved. Choices that determine the type and size of the fees are

1. Bundled fee or fee per service?
2. Nominal (symbolic) fee or fee based on costs?
3. Adult or child?

TABLE 3-3 Potential Revenues When Populations Attend Facilities 0.5, 1, and 3 Times Per Year

Agency and Zone/Province	Estimated Population	Consultation Fees ($) as of December 2000	Under Age 5 Attendance	Adult Attendance
IRC—Katana	347,000	Under 15 = 1 Adults = 2	(under 15) 173,500	173,500
IRC—Kabare	142,000	Under 15 = 0.5 Over 15 = 1	(under 15) 71,000	71,000
Merlin—Kindu	180,000	Unknown but estimated at 0.98[a]	36,000	144,000
Malteser—Walungu	504,000	Under 5 = 1 Over 5 = 2	100,800	403,200
ASRAMES—N. Kivu	3,859,381	Under 5 = 0.5 Over 5 = 1	771,876.2	3,087,505

[a]User fees for Kindu assumed to be the same as those for Maniema as cited in Poletti (2004).

4. Urban and rural areas?
5. Specific service exemptions: antenatal care, under 5 consultation, delivery, observation, surgery, etc.?
6. Waivers, for example for specific age groups, displaced people, or the indigent?
7. Reduction because of funding by other donors, for example, UNICEF? Some of the waivers include free drugs; for example, Merlin provides folic acid for pregnant women.

Table 3-3 shows revenues that would be gained as a result of utilization rates of half, 1.0, and 3.0 times per year and the percentage of all operational costs of the health facility that these revenues would make up.

Total Revenue 0.5 Times a Year	Total Annual Revenue 1 Time a Year	Total Revenue 3 Times a Year	% Running Costs Only
$260,250 average 32% indigent = 176,970	$520,500 average 32% Indigent = 353,940	$1,561,500 average 32% indigent = 1,061,820	(0.5/yr) 62% (1/yr) 124% (3/yr) 372%
53,275[a] average 87% indigent = 5,860	106,550[a] average 87%indigent = 11,721	319,650[a] average 87% indigent = 35,162	(0.5/yr) 3.8% (1/yr) 7.6% (3/yr) 22.8%
88,200	176,400	529,200	(0.5/yr) 24.2% (1/yr) 48.4% (3/yr) 145%
453,600	907,200	2,721,600	Not calculable; no data on operational costs
1,563,049	3,126,099	9,378,296	(0.5/yr) 25% (1/yr) 50.6% (3/yr) 150%

REVENUES

IRC-Supported Health Facilities

According to the IRC, health facilities cost, on average, $850 per month. Applying this figure to Katana data means that health facility running costs would total $326,400 per year for all health facilities. Based on the ideal minimum standard goal of three visits per person per year, IRC revenues would result in revenues amounting to $1,061,820, taking into account free health care for indigent populations. Subtracting operational costs from total revenues would leave $735,420 for costs outside health facilities. This seems an enormous amount; however, we cannot estimate how much of the total cost of support, including IRC internal costs, of the

TABLE 3-4 Estimated Revenues from Nonindigent Use of Health Facilities and Reimbursements for Indigent Utilization June 2000-2001

Time Period	Revenues Raised from Nonindigent Utilization of Health Facilities ($)	Reimbursement Due for Indigent Use of Health Facilities ($)
June-September 2000	$51,397.20	$33,994.80
October-December 2000	43,105.00	28,545.00
January-June 2001	53,966.00	35,232.00
TOTAL REVENUE 2000-2001	148,468.20	97,771.80

health system is covered on the basis of available information. Beyond this, the utilization at health facilities is not currently three times a year or even twice a year. Utilization, at its highest in Kabare health zone, is 1.15 per year, and in Katana, at its highest point, 0.8 per year—leading to the revenues described in Table 3-4.

The revenues gained through the IRC system would make up 46 percent of those needed to run health facilities alone on a month to month basis. However, this figure drops to 16 percent when the reimbursement for indigent populations is taken into account.

According to the allocation of resources at the IRC health facilities, spending on staff incentives would be 40 percent of revenues—that is, $59,387 ($20,278 without reimbursement) would be allocated to health staff. Estimating that an average health facility maintains at least 5 staff members, this would leave incentives of approximately $371 per year ($127 without reimbursement) per staff member per year. Written another way, one staff member's incentive for one month's work would be $31 (or $11 without reimbursement).

ASRAMES-Supported Health Facilities

Using the ASRAMES estimate, facilities require on average $1,400/month to function. Calculating for the ASRAMES clinics, this would require $4,569,600. Thus the actual estimated revenues raised comprise 46 percent of those required to run health facilities alone without any other operational costs included (Table 3-5).

TABLE 3-5 Estimated Revenues from Health Facilities in June 2000-2001

Time Period	Estimated Attendance	Revenue ($) Raised from June 2000-2001[a]
June-September 2000	1,053,611	$790,208
October 2000-June 2001	1,752,159	1,314,119
TOTAL		2,104,327

[a]Figures were taken as an average between rural and urban fees ($0.75).

Staff incentives would be made up of 60 percent of revenues, in this case $1,262,596. Again estimating an average of 5 staff members per clinic, $956.50 per year would be available for each staff member. In reality, there are probably more staff being supported by incentives, and $956.50 is an overestimation.

Merlin-Supported Health Facilities

We were unable to calculate per capita expenditure in one year on the basis of available data.

Malteser-Supported Health Facilities

Based on IRC calculations for a similar area, the cost of health facility support per month is estimated at $850. Yearly costs for support to 25 health facilities would therefore require a total of $255,000. Based on the calculations for 2001, Malteser would raise 38.8 percent of required funds for health facility support alone from patient revenues. Staff incentives (again using an average of 5 staff per center) would be approximately $528 per person per year (Table 3-6).

TABLE 3-6 Estimated Revenues from Health Facilities in January-December 2001

Under Age 5 Attendance	Over Age 5 Attendance	Total Estimated Revenues Raised ($) from Jan 2001-December 2001
$21,731	$86,923	$97,789

Objective 5: To identify the managerial problems that confront the four NGOs.

REVENUES AND THEIR CONTRIBUTION TO THE HEALTH SYSTEM

No organization has made progress with cost sharing to the extent that local health centers can gradually assume responsibility for purchasing essential drugs and equipment. In other words, due to the war, the health system cannot go back to full cost recovery.

- High enough revenues are important to ensure staff motivation. Cost sharing generally does not generate sufficient resources to do so. If the Sphere standard were reached, however, such a level of revenues could be achieved. But paradoxically, the fee would need to be lowered to increase utilization, which means lower revenues per patient.
- Deciding where to allocate revenues (see Table 3-1 for actual revenue allocation):
  - Incentives take between 40 and 70 percent. It is safe to assume that incentives should be at least 40 percent.
  - Running costs vary from 10 to 30 percent for health centers and from 10 to 25 percent for zone bureaus.
  - Savings should contribute to running costs or buying medicine once the NGO terminates its support.
  - The direct subsidies, especially to zone bureaus, require more attention, in particular such issues as transparency and interplay with cost sharing.

ECONOMIC AND SECURITY SITUATION

Organizations can provide free health care after a natural disaster, such as after the Nyiragongo eruption that destroyed large parts of Goma. Free health care during an acute stage can be available for a small period of time and, hence, uses a limited amount of resources. With chronic emergencies, free health care becomes more difficult. In these situations, health care is often caught in a vicious cycle of the local population's inability to pay, worsening access, lower quality, and destruction of capacity. Can partial cost recovery—in other words, cost sharing—help to break this cycle? And together with international support can it put a more progressive cycle into motion?

The contribution of cost recovery/cost sharing is limited to covering only a part of the total operational costs, mainly drugs and supplies. International support thus remains necessary. Yet the organizations cannot create peace or a well-functioning state that is able to stop warlord politics in order to support health and other social services. Nor can they ensure a resumption of economic growth. As the World Health Organization/UNICEF Joint Mission (18-29 June 2001:2) argued, without opportunities for the households to increase income and reduce barriers to essential social services, "the [health] situation will continue to spiral down rapidly." In this sense, the organizations face a sustainability dilemma (see MacRae, 2001). It also shows the limits of cost recovery/cost sharing: if a large part of the population becomes indigent, as in the Kabare health zone, does it make sense to continue cost recovery? The international organizations are divided on this, but most local health staff do not want to lose these resources. They will promote cost recovery as long as there is no functioning state.

ROLE OF THE DONORS

Current cost-sharing revenues are not high enough to ensure autofinancing of the health system. As a result, donors need to find better ways to fund continuing programs in chronic crises, because neither a traditional relief nor a developmental approach sufficiently addresses these long-lasting emergencies.

The different approaches of donors, for example with funding for hospital care, do have a strong impact. Nowadays, the Office of U.S. Foreign Disaster Assistance helps the IRC with funding for indigent referral to the hospitals. The Humanitarian Aid Office of the European Union more strongly incorporates hospital support. The Department for International Development, advocating free health care, did not want to fund IRC's cost-sharing program in Kabare, which led to a 16-month interruption of program activities until OFDA took over funding. Nor will UNICEF, which also prefers free care, appreciate the 10 percent fee raise of ASRAMES.

Funding in chronic emergencies is normally given for 6-month periods. Rarely are projects funded for more than one year. Thus, the issue of long-term planning and strategy formulation becomes difficult for agencies when funding is so short term. In addition, writing proposals and reports for the donors is labor-intensive. The organizations spend considerable time and resources to get the proposals accepted.

LOCAL MANAGEMENT

The main direct impact of the provincial health inspection is its determination of the fee structure, which differs from province to province. For the local health staff, varying from health center to provincial health inspection, the lack of revenues is a continuous concern that negatively impacts motivation. Local staff strongly feels the dilemma between lowering fees to raise access and increasing fees in the hope of a higher degree of financial sustainability. They tend to prefer to raise fees in order to make a decent living or at least to survive. In the DRC, the bad economic situation and insecurity create an incentive for short-term economic gain; the health system is no different in this respect.

The provincial health inspection and health zone management officials often worry that the international organizations and donors do not work sufficiently with them and bypass them when making important decisions or getting information out to the public, locally as well as internationally. At the same time, local health staff and management acknowledge that they do lack capacity. This brings up the question whether international support should focus on control and supervision, or whether these resources could be used directly to ensure motivation. Except for Malteser, the organizations in this study made the trade-off by emphasizing supervision, control, and capacity building.

Finding a balance between the hands-off contract approach and the intensive supervision approach ultimately depends on the managerial and professional skills of the zone bureau, provincial health inspection, and other health service staff. It is clear that the zone bureaus and local health staff require technical and management support. The control mechanisms for the contract approach should be established clearly in advance (goals, reporting procedures, supervision, evaluation, and so on). For the organizations in this study, the crucial question will be whether the zone bureau and other health staff have the capacity to operate well with minimal supervision. A related question concerns whether they can be trusted to operate well with minimal supervision. Currently, the organizations prefer capacity building and control. In this sense, they have moved away from traditional relief and rehabilitation, to a long-term presence that stresses intensive support and control. A hands-off contract approach is not feasible; the intensive contract approach with a relatively high degree of supervision is more likely. Still, the zone bureaus and provincial health inspection would prefer a stronger reliance on their own structures.

4

Discussion

The results of this research provide a multifaceted picture. Under some circumstances, cost recovery can raise more than a third of operational costs, but other factors, sometimes counterintuitive ones, are also important, especially when it comes to increasing utilization. As seen in Figures 3-1, 3-2, and 3-3, lower fees can lead to higher utilization, but not in all cases and not necessarily at rates that are put forward as minimum standards.

Regarding revenues from cost sharing, an increase in utilization because of quality of care and availability of drugs does not sufficiently raise revenues to cover all operational costs at health facilities. In fact, the measures taken by nongovernmental organizations (NGOs) to ensure adequate drug supplies and supervision of those supplies contribute to higher utilization, but they also lead to a higher overall financial burden on the health system. The NGO costs, however, are rarely taken into account, and information on this remains sketchy.

One conclusion of this study is that, in a chronic crisis, in some circumstances no user fee should be implemented in order to remove financial barriers (for example, during epidemics or large population displacements) or there should be a reimbursement system.

The problem facing NGOs is defining when and where a policy of no fees should be applied in a situation that is constantly changing. For example, the security and economic conditions, the role of donors, and the

quality of the local counterparts influence utilization and the quality of local health care, but these issues have been difficult to improve by the four NGOs alone. From the results presented, we draw the following conclusions:

1. Access is increased by lowering fees, especially by reclassifying children between ages 5 and 15 in a lower category for fees. The jump in utilization rates in facilities of the International Rescue Committee (IRC) closely followed the reclassification of age groups, meaning that fees were lowered for 5-15 year olds. Studies have shown that while utilization rates for children under age 5 increased when fees were dropped, the rates increased even more for those over age 5—suggesting that health care for young children is the priority in a household even when there are fees to pay (Burnham et al., 2004). When fees are reduced or dropped for older groups, this increases their access to care. Data suggest that this has happened in IRC-supported zones.

2. Reimbursement to health facilities by NGOs for services rendered to indigent patients sustains the ability of health facilities to serve indigent populations. Formal schemes in which the indigent are identified, classified, and recorded as patients ensure that those who cannot pay for health care are covered by the health system. These schemes allow staff to treat indigent in the health system knowing that their services will be reimbursed by the NGO. ASRAMES and Malteser, while recognizing the existence of the indigent, left it to the health facilities to deal with these populations. The results of this policy are unknown. However, one could imagine that without a safety net of reimbursement, the health facility staff were more stringent in their criteria for indigence and who would receive treatment depending on their condition.

3. In cases of an indigent system with reimbursement, cost recovery contributes between 30 and 45 percent to the operational costs of a health facility. Within IRC-supported health facilities, the cost of indigent reimbursements is almost two-thirds that of revenues received from nonindigent utilization. In effect, if the health system were to provide treatment for indigent populations at cost to the health facility, the cost-sharing revenues provided would drop by approximately 30 percent (from 46 to 16 percent—IRC figures).

Beyond the operational costs at health facilities, the chronic situation in the DRC requires that emphasis is placed on training and capacity build-

ing. To this end, heavy external support is required to ensure that the utilization, which ensures revenue, is sustained.

In health facilities without a defined indigent system, cost-recovery rates are above 30 percent, thus above the standards set by the World Bank for revenues to offset operational costs. However, utilization rates remain well below standards set by both the Sphere guidelines (3-4 visits per person per year) and donors (1 visit per person per year). Facilities that support indigent care and gain reimbursements will have the highest utilization, but possibly the lowest overall cost recovery if the costs of the supporting NGO are taken into account. This is a crucial consideration, and the NGOs should decide whether they prioritize access to health care for all or cost recovery to sustain the health system in an ongoing crisis. All four NGOs should prioritize access according to their mandates in the eastern DRC.

The potential impact of cost sharing following Sphere guidelines would result in 100 percent recovery of health facility operational costs, with remaining monies to support supervision, administration, and transport. However, the feasibility of increasing utilization to these levels is unlikely.

4. Intensive external support in the form of NGO presence and ongoing operation is required in chronic crises to ensure continued access. All organizations consider supervision and concurrent capacity building important; the highest utilization was recorded in zones with the most intensive supervision, the lowest in zones with only little or virtually no supervision. As stated, finding a balance between the hands-off contract approach and the intensive supervision approach ultimately depends on the managerial and professional skills of the local health system staff. In chronic crises, knowledge of recent developments in health care is minimal, meaning that health personnel usually lack skills and capacity. Any program with an aim to decrease morbidity and mortality must, as a prerequisite, ensure that health teams are capable of delivering the care required. Our qualitative research suggests that over time, intensive supervision contributes to:

- Quality of interaction with patients.
- Prevention of ruptures in stock.
- Professionalization.
- Rational prescription.
- Improved health care information and accounting systems.
- Improved health infrastructure (e.g., cleaner or better maintained buildings and equipment).
- Better interaction with health committees.

• Accountability at health facility level to ensure that fee prices are enforced and higher fees are not requested of patients by health staff.

External support through intense supervision thus plays an important role in the utilization of health facilities, but this role is difficult to quantify with the data currently available.

5. Continued support by donors will remain necessary in the near future. Additional measures, such as free drugs and direct subsidies, are necessary to ensure that revenues are high enough to pay for staff incentives and running costs.

6. Management approaches that balance the requirements of the donor organizations and the needs of the local health management are successful in ensuring that both parties are pressured into reducing fees and supporting these fees. Careful negotiations are needed with both sides. Bearing in mind that NGO funding is normally for 6-month periods, convincing local health authorities to reduce fees in facilities in which external support could be withdrawn within months is daunting. Similar sensitivities can be found with donors who are reluctant to fully or partially fund health programs without seeing some transfer of responsibility (i.e., user fees) to the host population over a short period of time.

7. Size and security of the health zone(s) served matter. The IRC has safer and more frequent access to the population because it serves two zones close by, whereas ASRAMES serves an entire province divided by a front line. Even in zones rather similar to IRC zones, Malteser still faced a more stringent security curfew, which meant that health staff going to the field had to leave the office later and also leave the health facilities earlier and could carry out fewer supervisory tasks.

8. Fees should be adapted regularly on the basis of changes in household income due to security and economic changes. Fees should also be advertised to ensure that the population knows what it can expect at a health facility and also to ensure that staff do not try to impose additional or increased costs. Poor knowledge of the health center fees along with weaker supervision can lead to under-the-counter takings by health staff.

9. While utilization has increased for all agencies but one, it is not clear how the access of the total population changes over time. In other words, what exactly is the capacity of the population to continue to pay for health services, and how fast is this capacity changing (deteriorating)? Which groups currently do not attend? A well-functioning indigent system partly addresses these questions, but more research is necessary.

IMPLICATIONS AND PRACTICAL CONSIDERATIONS

The four organizations can take several steps improve the overall health system. Essentially, they need to combine some of their approaches to ensure sustainability.

Donor Management:

- Improve coordination among donors, based on better quantitative and qualitative data of the organizations (including goal setting and impact measurement), which could facilitate field-level operations considerably. Better quantitative studies on the results of the organizations and the local situation could also contribute to a higher degree of accountability. Finally, longer funding periods would reduce paperwork, in particular for proposal writing, and facilitate the interaction of the four NGOs with the local health care system, as well as (joint) strategic planning.

Local Management:

- Use the contract approach to foster local ownership of targets and procedures, to delineate responsibilities and mutual expectations, and to reward performance and to punish malfunctioning (either malfeasance or poor performance). This will facilitate a move from the current hands-on contract and intense supervision approaches to a later hands-off contract approach.
- Train staff (zone bureau, reference health centers, health centers, or hospitals) and health committees to build capacity through local participation and the promotion of preventive health care.[1]
- Subsidize preventive services and provincial health inspection and zone bureaus to help build capacity.
- Decentralize NGO operations in order to improve supervision and reduce costs. A supervisor traveling from a central office to field sites may have limited access to those health facilities and spend limited time with health staff. A decentralized system of supervisors could provide greater coverage at reduced cost.

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[1]One project official remarked that training of health committee members improved their status in the community and also contributed to a more positive attitude toward helping their communities.

• Work through local structures (provincial health inspection, zone bureau, health committees) and discuss ways of phasing out support depending on their capacity and financial position. The hard part is determining which structures are appropriate and capable enough to work with. Although working through local structures ensures some cohesion and prevents parallel networks from being set up, the problem of how to hold local management accountable requires ongoing attention.[2] This research suggests such accountability can be enhanced by intensive supervision, as a form of evaluation with capacity building, and a participatory contract approach. Moreover, the organizations also need to establish clear, long-term strategies, including hand-over and exit strategies. For example, Médecins Sans Frontières-Hollande's support in creating ASRAMES had important long-term benefits for the whole North Kivu province that continued after its partial withdrawal. Clear long-term strategies will facilitate a move from the current hands-on contract and intense supervision approaches to a later hands-off contract approach.

Monitoring and Evaluation:

• Set more ambitious goals. Currently, the NGOs set safe goals that they will be able to reach, for example with utilization. As with Merlin's contracts in the field, setting the right targets for the organizations and the donors is important for the functioning of the health system. If intelligently combined with regular impact measurement, such goals could be an important steering mechanism for both donors and the local supervisory system.

• Compare NGOs more often through benchmarking on standards, goals, and impact. Common measurement, evaluation, and analysis methods can be introduced. To this end, the organizations should have utilization and cost data available. Utilization rates between organizations should also be compared more often, in the case of NGOs supporting nearby or neighboring health zones where displacement from one to the other may

[2]For example, despite its high level of support and concomitant supervision, IRC is not perceived as a local authority. Most people view the organization as an outside supplier. As a result, IRC staff members sometimes struggle to hold the zone bureau and other health staff accountable. One nutritional survey could not be carried out, because the health zone bureau asked for a very high daily allowance for its staff.

be occurring. Currently, the organizations employ different standards of utilization. Coordination among NGOs on cost-sharing schemes, as well as benchmarks, will reduce the "pull effect" created by having a lower fee in one area and a higher one in another.

- Discuss the dubious nature of population figures as an issue that confronts the NGOs in terms of measuring the impact of their programs. Measuring utilization, for example, or incidence of disease is difficult when the population figures are unknown and changing.

Revenues:

- Develop a mechanism with local management and donors whereby health care is declared free during epidemic outbreaks.
- Provide an indigent care system with reimbursement for services rendered (and provide free health care when the number of indigent becomes too large). In normal situations, the constant displacement of communities causes a problem in defining who can and cannot pay for health care. The issue of indigence (within which displaced persons are defined) needs to be addressed explicitly, as the IRC and, to a lesser extent, Merlin have done.
- Spend revenues as much as possible at the location where they have been generated (see Merlin's experience with revenue allocation). Health staff are reluctant to transfer revenues to zone bureau and provincial health inspection. Direct quality improvements (e.g., better infrastructure, continuous drug supply) can lead to higher attendance.

Supplies:

- Develop and formalize ways of ensuring drug stocks at health facilities in a situation of ongoing insecurity. In some areas, the health committees bring drugs back to their houses at night in order to safeguard them. In other areas, the pharmacy was disguised as the staff toilet so when looting occurred rebels found only a limited stock of medications at the dispensary. While this leads to questions of accountability at the health facility and committee levels, it is an area worth investigating to ensure continued stocks.
- Establish more preventive approaches, as for example has been done with bed nets and community education to prevent malaria.

FURTHER RESEARCH

This research provides a comparison on the operations of four organizations. Follow-up research should pay more attention to the actual experiences and opinions of the local populations, whether they attend health centers or not. Ideally, such a follow-up public health study would include checking health records and quantitative questionnaires, such as patient exit and household surveys, to study in depth the local health needs, actual activities in the health centers, and the local management structures. A number of research topics could thus be elucidated:

Donor Management:

- The impact of the different donors, in particular the Humanitarian Aid Office of the European Union and the Office of U.S. Foreign Disaster Assistance, at the field level could be studied more, for example in terms of effectiveness and downward accountability.

Internal Management:

- The optimal fee system requires exemptions for specific services and waivers for specific groups as well as regularly adjusting fees. Identifying better ways for adjustment with regard to the changing (diminishing) capacity to pay for services remains a useful topic for further study. For example, this study did unearth some data on the debts of the health centers, as well as on the debts of the patients (Table 3-1); the use of these as indicators of ability to pay could be studied further.
- The impact of different cost-sharing schemes on treatment-seeking behavior is also an important topic that requires more detailed attention.
- The microeconomics of health facilities requires further study, especially in terms of revenues and the distribution of those revenues among the operational costs of health facilities.
- A more in-depth assessment of revenues provided from cost recovery as a part of overall costs of international and local NGO support would enable a greater overview as to how much cost-recovery revenues contribute to overall support of a health system in chronic crises. Ideally, the NGOs could do more to compare their total costs, as well as their results in terms of geographical and social balance (ethnic groups, gender, income class, and so on). The latter may also be important for gaining a better under-

standing of the local conflict context. In reality, the likelihood of this occurring is minimal while NGOs compete for donor funding.

Local Management:

- Cooperation with the private sector, for example with private pharmacies or traditional healers, merits more attention. Similarly, a better understanding of local coping mechanisms, for both patients and health staff, may provide interesting opportunities for providing health care, for example, to extended families or with accepting payments in kind.
- The quality of the provincial health inspections, zone bureaus, and health committees differs. Their organization and management requires further comparative research. Such a study would also facilitate making choices or finding combinations between the hands-off contract and intensive supervision approaches.
- In a similar vein, cooperation with the health committees differs among the organizations, which should be studied because local participation also offers opportunities for rebuilding in other sectors.
- Rumors of corruption continuously circulate around the (local) management of the health systems. Sometimes, it seems this corruption is just a matter of everyday survival in a tough situation, but at other times it may be linked to exploitative violence. Understanding and dealing with corruption requires far more attention.

In the final analysis, there is much that the international nongovernmental organizations can do and are doing to improve health care and raise utilization in the eastern Democratic Republic of the Congo. The organizations are implementing and developing useful management and finance approaches that join relief and developmental aspects. Further research should combine the study of these approaches with more attention to the experiences and opinions of the local population.

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APPENDIX
Merlin Standard Health Contract Agreement (Memorandum of Understanding)

AGREEMENT PROTOCOL WITH ……. HEALTH CENTER
Within the OFDA funded project logical framework

Health support to war affected…….. population

This protocol is concluded this first day of March 2002 between Merlin represented by the Medical Coordinator referred as "contractor" and the …….. Health Center represented by the Head Nurse, referred as "subcontractor," with the aim to provide basic health care to the …… Health Area population.
Targets enumerated for the provision of health care to the population by the subcontractor will be reached by ensuring the following:

1. MAJOR ACTIVITIES

- The provision to outpatients and those in observation of health care and annex services for the main causes of morbidity and mortality, and the monthly recording of consultations, describing suitable diagnosis and drugs prescriptions carried out (in accordance with established health protocols).
- The provision of community based health services and preventive services, especially routine vaccination, ante-natal consultations, and eutocic deliveries will be carried out as agreed.
- The management of community based services of active track-

ing of vulnerable/at risk groups with limited access to …….. health structure.
- The management of the exemption system for financially disabled groups (as defined with the Community Health Committee) in a responsible and transparent fashion.
- The prompt and complete organization of epidemiological surveillance, monthly data collection, of reports, and finally the immediate notification of epidemics in order to facilitate emergency response as appropriate.
- The adhesion to universal transfusion security standards including skin piercing, aseptic practice, and blood transfusion (single use of syringes and needles, 0% of blood transfusion without HIV screening).
- The setting up by Health Centers of protocols and directions implemented and agreed upon by both Merlin and health zone bureaus.

2. HYPOTHESIS AND TARGETS TO MEET
- The provision of basic health care requires the presence of qualified staff and staff continuity in the Health Centers, and requires that the necessary tools are available and used in optimal fashion. Drugs, materials, and equipment will be co-managed by the Health Centers and Health Committee.
- Fees in health centers for drugs and medical acts will be charged as agreed between Merlin, the health zone bureau, and the HC.
- A quarterly evaluation by the health zone bureau and Merlin will be organized in order to evaluate objective completion, to decide on the continuation of project implementation and eventually to revise objectives if necessary.
- Speedy and appropriate referral of patients to specialized wards by the Health Center will take place as necessary.

3. THE AGREEMENT PRINCIPLES
- Merlin and Health Center ……., agree to meet the objectives as defined in accordance with the health zone bureau.
- The services that the Health Center will have to provide will be constant, regular, and based on an updated populations number (resident or displaced) of the health area.
- The Health Center will have to abide by the contract, recognize, and accept the irrevocable nature of the health zone bureau adviser role and Merlin throughout the implementation of the project.

4. HEALTH CENTER MEASURABLE AND EXPECTED OUTCOMES (population: …….)

	INDICATORS	MONTHLY TARGET	IMMEDIATE TARGET
1	Number of out patient consultations carried out	_____	> 0.6 consultations/ person/year
2	Vaccination BCG, DTP3, Polio3 and measles carried out	_____	Coverage ≥ 50%
3	Number of new cases to ante-natal & pre-school clinics	_____	≥ 70% of pregnant women attending
4	Total number of women attending 4 ante-natal visits	_____	≥ 70% of pregnant women attending
5	Anti-tetanus vaccinations for pregnant women	_____	≥ 70% of pregnant women attending
6	% of pregnant women who received prophylaxis for malaria/anemia	_____	≥ 70% of pregnant women attending
7	Number of deliveries conducted by HC trained staff	_____	≥ 60% of expected deliveries
8	% of patients cared for according to treatment protocols	_____	≥ 80% of consultations
9	% of indigents treated at health facilities and verified by Merlin/health zone supervisors	_____	100% of indigents declared by health structure
10	Epidemiological reports, drugs consumption and financial reports submitted monthly in a timely and complete fashion	_____	By the 2nd of the following month to health zone bureau, by the 5th of the following month to Merlin
11	Presence of an operational health committee	_____	All population “stratums” represented including women

12	Number of meetings held with the health committee	_____	≥ 1 meeting/month
13	Potential new epidemics identified by the health center and immediately reported to Merlin/health zone office	_____	Within 48 hours to Merlin/health zone bureau
14	Vaccines, drugs, and medical equipment stock maintained at health structure level		No rupture at health structure level
15	% of safe blood transfusions performed in accordance	_____	100 % of donated blood tested for HIV, Hep B and Syphilis
16	Provision of out-patient curative services, vaccination, ante-natal care, supervision of traditional midwives and health education to identified village populations within the health area	_____	Out-patient service organized twice a month
17	Number of mass health education sessions in HC	_____	4/month minimum
18	Number of visits to community for information and education	_____	4/month minimum

5. RESPONSIBILITIES OF THE HEAD NURSE

- The Head Nurse is responsible for the daily management of the health center and meeting agreed objectives from available resources provided by Merlin and health zone bureau.
- The Head Nurse, in collaboration with the community, is responsible for the maintenance of the structure.
- The Head Nurse must ensure the security of medical equipment, materials, and other valuable items at the Health Center in collaboration with the Health Committee President.
- The Head Nurse must strictly apply the drugs and medical service fees as defined by Merlin and the health zone bureau.
- The Head Nurse must manage the finances of the Health Centers in a transparent fashion and present a monthly financial re-

port to health committee, health zone bureau, and Merlin. He/she will use 65% of income for staff incentives and 15% (managed with health committee) for the running of the center and community projects (10% maximum for the running).

- The Head Nurse must ensure a rational use of supplied drugs, provide monthly requests at the agreed date using health zone bureau standard forms.
- In the case of exceptional drug shortages, the Head Nurse will be entitled to prepare and send Merlin an extra request, duly justified, and in a timely manner before rupture occurs.
- The Head Nurse is not allowed, under any circumstances, other health zone bureau partners; this in order to avoid use of low quality drugs or high charges.
- The Head Nurse must involve the community in the management of the Health Center to include finances, and the operational decision making process through the use of the health committee and other possible volunteers.
- The Head Nurse with his/her team shall carry out self-evaluation of all activities (without forgetting health education and team meetings) undertaken during the course of the month.
- The Head Nurse will analyze problems, propose solutions, and use to the maximum local initiatives and resources to solve them.

6. MERLIN'S RESPONSIBILITIES

- Merlin will supply the Health Center with basic equipment, essential drugs on the agreed list and will organize necessary training for the health staff.
- Merlin will provide a bonus for preventive activities as agreed. The payment of any bonus will be carried out following evaluation by health zone bureau and Merlin and in the 10 days after the end of the month.
- Merlin shall carry out regular supervision of the Health Center in order to help the team achieve its objectives and improve the quality of services provided.
- Merlin shall provide supervision calendars at the beginning of each month.
- In consultation with the health zone bureau, Merlin shall ensure that all recruited staff have adequate knowledge and resources for the completion of activities.
- Merlin will make sure that job descriptions for all health center staff have been produced by the health zone bureau, and presented to each individual.

7. RESPONSIBILITIES OF HEALTH ZONE BUREAU/IPS

- The health zone bureau and IPS will provide qualified and competent staff to the Health Center. They will ensure the continuity of the staff working in the Health Center.
- Staff distribution shall be done according to the needs of each center by the health zone bureau.
- The health zone bureau will ensure that protocols, directions, and fees are strictly applied.
- The health zone bureau will impartially apply disciplinary measures under local law.
- The health zone bureau shall carry out regular supervision of the Health Center in order to help the team achieve its objectives as well as to improve the quality of services provided.
- The health zone bureau will prepare supervision reports and will provide them to Health Center staff and to Merlin not later than 7 days after the end of the month.
- It will be the responsibility of the health zone bureau to prepare and submit job descriptions to all Health Center staff in collaboration with Merlin.
- The health zone bureau will ensure the health committee is effectively associated to the management of Health Center as well as to operational decision making.
- The health zone bureau must audit the financial management of the Health Center on a monthly basis, report any irregularities to Merlin and the health committee, and take the appropriate disciplinary measures.
- The health zone bureau is responsible for calling and holding meetings to organize schedules.

8. DATES, TIME FRAME, AND CONTRACTS FOLLOW-UP

- The initial contract is agreed upon for a period of 6 months taking effect the day of signature.
- Meeting the objectives will lead to the tacit renewal of the contract for a further 6 months period.
- Should the objectives not be met, the contract will only be renewed following a tripartite evaluation (Health Centers, health zone bureau, Merlin) and consequent justification, in agreement with donor strategy.
- The community shall be constantly informed and consulted about the follow-up and evaluation of the contract through the Health Committee.

9. MUTUAL RELATIONSHIPS

- The Health Center having signed the contract with Merlin will send its reports directly to Merlin and to health zone bureau.
- The health zone bureau will act according to the contract it has signed with Merlin.

You can confirm your approval to the terms and conditions of this agreement protocol by signing below.

[PLACE] the ……./……./2002

_____	_____
For Merlin (Medical Coordinator)	For the Health Center (Headnurse)
_____	_____
For the Health Zone Bureau (Chief Medical Officer)	For the Health Committee (President)

About the Authors

Dennis Dijkzeul is professor in the management of humanitarian crises at the Institute for International Law of Peace and Armed Conflict at Ruhr University in Bochum, Germany. From 2000 to 2002 he directed the Program for Humanitarian Affairs at Columbia University's School for International and Public Affairs. He regularly consults for international organizations in Africa, Central America, Europe, and the United States. His main interests concern the management of international organizations and the (non)participation of local populations in development and humanitarian programs. He is the author of *Between Force and Mercy: Military Action and Humanitarian Aid* (Berliner Wissenschaftsverlag, 2004) and, together with Yves Beigbeder, *Rethinking International Organizations: Pathology and Promise* (Berghahn Books, 2003).

Caroline Lynch is an epidemiologist focusing mainly on malaria. She is currently a doctoral student at the London School of Hygiene and Tropical Medicine, working on the epidemiology of malaria in highland areas. She has worked for the past five years in various complex emergency situations, the most recent of which were in Somalia, Liberia, and the Democratic Republic of the Congo. She also consults for international organizations, mainly in emergency or refugee situations in Africa.

The **Committee on Population** was established by the National Academy of Sciences (NAS) in 1983 to bring the knowledge and methods of the population sciences to bear on major issues of science and public policy. The committee's work includes both basic studies of fertility, health and mortality, and migration and applied studies aimed at improving programs for the public health and welfare in the United States and in developing countries. The committee also fosters communication among researchers in different disciplines and countries and policy makers in government and international agencies.

The **Roundtable on the Demography of Forced Migration** was established by the Committee on Population of the National Academy of Sciences in 1999. The Roundtable's purpose is to serve as an interdisciplinary, nonpartisan focal point for taking stock of what is known about demographic patterns in refugee situations, applying this knowledge base to assist both policy makers and relief workers, and stimulating new directions for innovation and scientific inquiry in this growing field of study. The Roundtable meets yearly and has also organized a series of workshops (held concurrently with Roundtable meetings) on some of the specific aspects of the demography of refugee and refugee-like situations, including mortality patterns, demographic assessment techniques, and research ethics in complex humanitarian emergencies. The Roundtable is composed of experts from academia, government, philanthropy, and international organizations.

Other Publications of the Roundtable on the Demography of Forced Migration

Child Health in Complex Emergencies (2006)
Fertility of Malian Tamasheq Repatriated Refugees: The Impact of Forced Migration (2004)
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