

PD-ABQ-089

 **BASICS**
TRIP REPORT

**Central African Republic
Sustainable Child Survival Project
Mid-Term Evaluation**



*BASICS is a USAID-Financed Project Administered by
The Partnership for Child Health Care, Inc.*

Academy for Educational Development (AED)

John Snow, Inc. (JSI)

Management Sciences for Health (MSH)

1600 Wilson Boulevard, Suite 300; Arlington, VA, 22209; USA

**CENTRAL AFRICAN REPUBLIC
SUSTAINABLE CHILD SURVIVAL PROJECT
MID-TERM EVALUATION**

Project Number 676-0024

November 1995

Dr. Antoine Augustin

BASICS Technical Directive: 000 CA 00 011
USAID Contract Number: HRN-6006-C-00-3031-00

TABLE OF CONTENTS

ACKNOWLEDGMENTS	v
ACRONYMS	vii
I. EXECUTIVE SUMMARY	1
II. BACKGROUND	5
III. EVALUATION OBJECTIVES	6
IV. EVALUATION METHODS	7
V. RESULTS	8
VI. FACTORS AFFECTING PROJECT IMPLEMENTATION	40
VII. PROJECT SUSTAINABILITY	43
VIII. CONCLUSIONS	46
APPENDICES	
APPENDIX A: SURVEY INSTRUMENTS	51
APPENDIX B: BANGUI PATIENT EXPENDITURE SURVEY INSTRUMENT	65
APPENDIX C: EVALUATION TEAM MEMBERS	69

ACKNOWLEDGMENTS

The evaluation team extends its grateful thanks to the many individuals whose help was invaluable in carrying out its mission, in particular, Dr. Gabriel Fio Ngaindro, the Minister of Health of the CAR; Dr. Justin Ndoyo, Director of the Department of Preventive Medicine, and his staff; Robert E. Gribbin, US Ambassador to the CAR; Sam Laeuchli, USAID Liaison Officer; Mrs. Rowena Cross-Najafi, the Embassy Administrative Officer; Mrs. Jacqueline Lawrence, Community Liaison Officer, and the US Embassy staff; Mrs. Maria Teresa Hevia, the United Nations Children's Fund (UNICEF) Representative; and Dr. Solange Kouo Epa, World Health Organization (WHO) Representative.

The evaluation team is particularly indebted to the following individuals: Ms. Kathleen Robinson who made all the necessary arrangements in terms of housing, logistics and administration to facilitate the team's work; Mr. Phillipe Makendebou; CDC Technical Officers Reginald Hawkins and Karen Hawkins Reed; Michael Hainsworth, AFRICARE Project Coordinator; Andrew Boner, PSI Country Director; and Mr. Ndamo-Bissi, DHS Officer. These individuals were kind enough to take the time to answer the team's questions and, in some instances, accompanied the team to the project sites.

Special thanks to Mrs. Mahdea Belleka and Mrs. Cecile Madouzoum for their secretarial and interpretation support; the team of medical students who helped the evaluation team collect field data; and the many Central African mothers and fathers, students, and patients who responded willingly to the survey questions.

ACRONYMS

AID	Agency for International Development
AIDS	Acquired Immune Deficiency Syndrome
ALO	AID Liaison Officer
ARI	Acute Respiratory Infections
BCG	Bacillus of Calmette and Guerin Vaccine
CAR	Central African Republic
CCCD	Combating Childhood Communicable Diseases (USAID project)
CDC	Centers for Disease Control and Prevention
CDD	Control of Diarrheal Diseases
CLO	Community Liaison Officer
DHS	Demographic and Health Survey
DPT	Diphtheria, Pertussis, Tetanus vaccine
EPI	Expanded Program on Immunization
FCFA	Francs CFA
FNEC	Fédération Nationale des Eleveurs Centre-Africains
HIS	Health Information System
HIV	Human Immune Deficiency Virus
HMO	Health Maintenance Organization
IEC	Information, Education, and Communication
IMR	Infant Mortality Rate
LOP	Life of Project

MIS	Management Information Systems
NGO	Non-governmental Organization
OPV	Oral Poliovirus vaccine
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
MOH	Ministry of Health
PACD	Project Activities Completion Date
PASA	Participating Agency Service Agreement
PHC	Primary Health Care
PSC	Personal Services Contract(or)
PSI	Professional Services International
SCS	Sustainable Child Survival project
SNIS	Service Nationale d'Information en Santé
STD	Sexually Transmitted Diseases
TT	Tetanus Toxoid Vaccine
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

I. EXECUTIVE SUMMARY

Introduction

The Central African Republic is a Texas-size landlocked country of 242,000 square miles with a population of three million people, 20 percent of whom live in its capital, Bangui. The USAID **Sustainable Child Survival project** (676-0024) in the CAR began on August 6, 1992, and was obligated for a LOP funding level of US\$12.543 million. Its ending date (PACD) is 6/30/97. Project activities are implemented through:

- a PASA with the Centers for Disease Control and Prevention (CDC) for technical assistance in the areas of child survival, reproductive health, HIV prevention, and cost recovery;
- grants to PSI for condom social marketing and a pilot Impregnated Mosquito-Net project;
- grants to AFRICARE for a village-based community health project; and
- a contract with Macro International for a Demographic and Health Survey.

The objective of the mid-term evaluation was to assess the progress and overall impact of all project components according to the indicators developed.

Findings

1. Overall Project Performance

The CAR is making demonstrable progress in ensuring that its children have a greater chance of survival. The Infant Mortality Rate (IMR) has declined from 111/1000 to 97/1000 in 20 years, while the probability of a newborn dying by age five has declined from 161/1000 to 157/1000. However, infants who survive their first birthday have a slightly increased probability of dying by age five, from 62/1000 to 67/1000. The most recent mortality data can serve as a useful baseline to assess SCS project impact.

The Sustainable Child Survival (SCS) project has adopted ambitious and broad objectives, and the CDC Technical Advisor has had to deal with a very broad mandate. Her technical assistance portfolio includes EPI, CDD, ARI, malaria, training, health information systems, cost recovery, and institution-building activities. She is also responsible for day-to-day project management tasks including logistics support for short-term consultants. CDC technical assistance has helped the CAR recover lost ground from a period of civil disorder that included a prolonged general strike which paralyzed health activities at the public sector level. Progress has been most notable in the areas of HIV/STD prevention and cost recovery. A degree of ambivalence permeates the implementation of health services as the MOH tries to shift progressively from a vertical system to a more integrated service delivery mode. Attaining increased coverage for child survival interventions is hampered by the low utilization level of health facilities where the interventions

are offered. Rebuilding the child survival service delivery capabilities of health institutions remains a major program challenge.

2. Specific project components

EPI: Coverage levels have declined for all major antigens due primarily to the decreased effectiveness of the outreach component of service delivery (mobile and advance teams). Current levels are: 77 percent for BCG; 48 percent for DPT3; 46 percent for OPV3; and 52 percent for measles vaccine. Thirty-seven percent of children 12 to 23 months of age are completely vaccinated (i.e., they received one dose of BCG, three doses of DPT, three doses of oral polio, and one dose of measles vaccines). To reverse the trend, the logistics system is currently being strengthened through the procurement of additional motorcycles, vehicles and spare parts. There is also a shift in emphasis toward fixed posts; these are being increased by about 40 percent, thus making services more accessible.

Other child survival interventions: DHS data suggest an increase in ORT use by mothers when compared to 1988 levels (34 percent versus five percent). Malaria treatment capabilities have increased from the improved availability of chloroquine at health institutions, and through training and supervision of health personnel. However, the use of other anti-malarials persists as front line drugs. Preliminary ethnographic and antibiotic studies have been completed to introduce ARI diagnosis and treatment at peripheral units. Birth spacing activities are hampered by the lack of a population policy and the non-availability of contraceptives. Safe motherhood practices are hard to initiate in facilities that are devoid of essential materials and supplies. Services are still being provided in a vertical mode, even at peripheral institutions, (i.e., there is little integration).

HIV/AIDS: A sentinel system is in place to assess the disease's progression. The MOH successfully introduced a standardized protocol for the diagnosis and treatment of STD cases and contacts at selected health facilities on a pilot basis, but the number of institutions involved is quite limited. Referral slips ("bons") are given to index patients so that they can refer their sex partners for treatment. Data on 10,000 cases and contacts are now being analyzed. The work of STD clinics is not well understood, even among other hospital employees, leading to negative perceptions. The partner notification system ("bons") seems to function with an efficiency of 52 percent, (i.e., 52 percent of referral coupons provided to index patients are returned to the STD clinic). IEC and counseling efforts need to be strengthened.

Condom Social Marketing: The PSI program has already met LOP objectives in terms of condom distribution (3.5 million units) and is rapidly expanding its distribution network to accommodate six million additional condoms. PSI is exploring the feasibility of using this successful approach for the social marketing of other products such as ORS and iodized salt.

Mosquito-net project: This operations research project is just beginning. It appears to be underfunded and, at the same time, needs a more rigorous formulation of the research protocol.

AFRICARE Child Survival program: AFRICARE is making a valuable contribution in the introduction of the concept of village-based community ownership of health services. Nine villages are active project partners. The project's major foci have been community participation and health promotion. An increased emphasis on the provision of services is needed.

Cost recovery: Significant progress is being made in this area. The legislative underpinning of the cost recovery effort is in place and fees are being charged at most facilities. The linchpin of the program is an *essential drugs procurement system* controlled by a newly-created central drug authority. The monopolistic aspects of this arrangement create a potential threat to the system's long-term operations. Most health institutions are currently out of drugs because the prerequisite training for the management of the new system is lagging. The proposed training inadequately addresses the complexities of micro-management systems at health facilities, particularly in the areas of proper financial controls, and internal and external auditing.

3. Project management issues

The CDC Technical Advisors as well as the AID Liaison Officer (ALO) are not fully cognizant of the extent of the ALO's responsibilities and authority. The Small Country Strategy as applied to the CAR implies a more distant oversight process by USAID/W which underestimates the amount of work required by the ALO to support a project of this size. Thus, questions have been raised about the ALO's decision-making authority and the inadequacy of mechanisms for the ALO to assess how project funds are being spent.

Project stakeholders have also raised the issue of project coordination:

- within the various services of the Directorate of Preventive Medicine;
- between the Directorate and the other Directorates of the Ministry;
- between the principal USAID fund recipients; and
- between the various donors.

At no level is this coordination felt to be satisfactory, although steps have recently been taken at the MOH level to remedy the situation.

4. Key recommendations

1. The current portfolio of the Child Survival Technical Officer is very broad. It is suggested that a **narrower focus** be adopted. Efforts over the two remaining project years could be directed at helping the MOH answer this fundamental question: How can each primary health care facility be structured to provide key child survival interventions in a sustainable and integrated manner? To help answer this question, the Child Survival Technical Officer could help coordinate short-term technical assistance focusing on micro-management institutional issues in cost recovery, supervision, and facility-level

data collection systems. Once these issues are explored more fully, the new approaches should then be introduced in a limited number of facilities on a trial basis.

2. The Child Survival Technical Officer has already developed a plan to **rechannel funds** to the training component of the cost recovery efforts. These already-identified funds could be used to finance the activities outlined above.
3. In view of the success of the HIV/AIDS pilot project and its positive implication for STD control as a key strategy of HIV/AIDS prevention in the CAR and elsewhere in Africa, the CDC Technical Officer could, over the remaining two project years, assist the MOH in **developing a nationwide plan** in this area. The plan could then form the basis of another CDC-assisted USAID-funded project after 1997, should Congress make funds available to the CAR after this date. The tenure of the CDC Technical Officer should be extended from September 1996, to EOP September 1997.
4. A major component of a new project to combat HIV/AIDS would incorporate a massive **condom social marketing** program. In the meantime, it is suggested that, over the last two project years, PSI look more closely at marketing and pricing mechanisms that would make their activities more sustainable.
5. AFRICARE should build on its efforts to improve access by villagers to services. The aim should be a **basic package of services accessible at the village level**. The specific package contents should be developed jointly with villagers with a view to ensuring sustainability when AFRICARE leaves.
6. **Training:** Plans to train hundreds of health workers in a vertical mode for specific interventions (CDD, malaria and ARI) should be downsized in favor of a more modest effort directed at a limited number of health facilities where problems are approached in an **integrated manner and where training is organized accordingly**. In addition to technical issues, training should encompass face-to-face communication techniques, inventory control, basic cash management, and personnel performance evaluation for supervisors.
7. **Health Information Systems:** Similarly, a **simplified one page reporting form** that provides information on facility utilization and cash generated by type of service could be developed and pre-tested on a pilot basis in a limited number of facilities before its widespread use is adopted.
8. **Health sector financing and cost recovery:** The project should continue to introduce cost recovery in a limited number of pilot institutions. The experience of the PROSALUD project in Bolivia suggests that it is easy to underestimate the difficulties and complexities entailed in managing even a small health center, while ensuring the quality of services. Therefore, it is suggested that the project request short-term

technical assistance from senior PROSALUD staff to help them identify appropriate operational issues, and devise and test potential solutions at a few primary health care facilities.

9. **Project management:** The ALO system is basically sound. For the remaining two project years, a **Personal Services Contract (PSC)** might be issued to assist the ALO with routine administrative chores. Should a new project be envisioned, the ALO's role will depend on the grant management venue: if the new project consists of grants such as those awarded to AFRICARE or PSI, the oversight now being used by BHR/PVC could be employed and the ALO's role would become less critical. If the new activity is basically a government-to-government technical assistance effort, it is then recommended that a strong chief of party be identified and the role clearly defined vis-a-vis the ALO and official USAID representation.
10. Improved coordination should occur if the planned staff meetings at the Ministry take place in a manner conducive to problem-solving, and if the various donors agree on a forum to discuss various strategic options. The management section of this report discusses this recommendation in more detail.

II. BACKGROUND

The goal of the USAID Sustainable Child Survival project is to: **“provide adequate, affordable health care to the CAR population.”** The project's purpose is to: **“reduce infant mortality and HIV transmission in all five health regions, while increasing accessibility to health services.”**

The project seeks to attain its goal by:

- extending and expanding Combating Childhood Communicable Diseases (CCCD) project activities to include three other major threats to child survival: acute respiratory infections (ARI), HIV/AIDS, and inadequate birth spacing; and
- strengthening the MOH's capacity to implement health services. Project support is to be used to train Ministry staff, develop a health/management information system, and develop cost recovery mechanisms for the health care system.

As described below, there are four project components.

1. Child Survival Interventions

A PASA was signed with the Centers for Disease Control and Prevention (CDC) for technical assistance to the CAR in the areas of child survival, reproductive health, HIV prevention, and

cost recovery. CDC assistance was to focus on the technical interventions and support strategies of those previously developed by the CCCD project, i.e., the Expanded Program for Immunization (EPI), control of diarrheal diseases (CDD), and malaria control, as well as support activities in training, health education, operational research, and health information systems. Three additional threats to child survival are to be addressed by the SCS project: ARI; HIV/AIDS; and high risk births.

2. Child Survival Initiative

Through a USAID-funded grant, AFRICARE was to implement this initiative and provide services to 15 villages in the Berberati area.

3. Condom Social Marketing project and Operations project

Through a USAID-funded grant, PSI was to implement the Condom Social Marketing project, and an Operations project to test community acceptance of impregnated mosquito nets.

4. Demographic and Health Survey

MACRO was to implement the DHS survey.

III. EVALUATION OBJECTIVES

As outlined in the Project Paper, the mid-term evaluation was to focus on program outputs and address three issues:

1. Have the programs been implemented according to plan?
2. How can the implementation problems be overcome?
3. What mid-program decisions and changes need to be made?

The evaluation was also to address the issue of continuing to fund primarily vertical interventions on a national basis versus funding integrated primary health care on a limited geographic basis. The review could consider recommending the expansion of the geographically-oriented PHC initiative into one or more additional prefecture once:

1. the approach was adopted by the Government of the CAR;
2. the approach was initiated in at least one prefecture;
3. the initial experience was evaluated for lessons learned; and
4. the MOH had determined that further expansion of the initiative was justified in the time frame proposed.

In addition, the evaluation team was asked to address the following key project management issues:

- What is the form, quality and timeliness of reporting to USAID/Washington about SCS project activities?
- Does USAID/AFR/WA provide effective oversight of the SCS project in the CAR through the Small Country Strategy Program?
- What are the roles of the US Embassy and the ALO?
- What are the technical and managerial lessons learned from the project which can be applied to the US?

IV. EVALUATION METHODS

The evaluation team used the following methods:

- a review of pertinent documents;
- a questionnaire on various aspects of project implementation that was distributed to the MOH program managers who are in charge of various project components;
- key informant interviews of MOH staff, program managers, community leaders, and service providers;
- focus group interviews using convenience samples of users of health services;
- a structured questionnaire given to users of health facilities in Bangui, including a special questionnaire for STD clinic users in Bangui and Bambarei;
- a structured questionnaire to assess patient expenditures that was applied to hospitalized and ambulatory care patients at Bangui hospitals and health centers;
- site visits and observational tours to project locations and health facilities in various parts of the country; and
- a review of periodic reports submitted by the implementing agencies.

Principal findings, without specific recommendations, were presented first to the Minister of Health and his senior staff, and then at a workshop attended by senior cadres of the MOH, the CDC technical officers, the ALO, and the field managers of the AFRICARE and PSI components. Recommendations were derived at the workshop using a nominal group process approach, then priority-ranked using the Multiple Criteria Utility Assessment methodology.

Details of the various methods are provided in the Appendices.

V. RESULTS

Overall project performance

The CAR is making demonstrable progress in ensuring that its children have a greater chance of survival. The SCS project is helping the CAR to recover ground lost over a three year paralysis of the entire public health system and push ahead in other areas where little activity has been noted in the past.

Overall objectives

Progress toward attainment of project objectives was generally to be measured via an increase in access, and utilization of key child survival interventions, namely immunization, oral rehydration, malaria treatment, treatment of acute respiratory infections, and adequate management of high risk births. In addition, since the best mechanisms for delivering other interventions were not well defined at project start-up, pilot activities were to be implemented in the areas of:

- HIV/STD control;
- delivery mechanisms for village-based services (AFRICARE); and
- malaria control through the use of impregnated mosquito-nets.

To contribute to the sustainability of interventions, the project was to assist the MOH in its cost-recovery efforts. Finally, a national Demographic and Health Survey would provide useful baseline data to gauge the project's overall impact. More specifically, the project had adopted the ambitious impact/outcome indicators (PACD 1997) stated below.

The expected impact/outcomes were reductions of:

- 50 percent in the IMR by the PACD;
- 50 percent in measles morbidity;
- 50 percent in poliomyelitis disability;
- 50 percent in neonatal tetanus;
- 30 percent in diarrhea mortality;
- 25 percent in in-patient malaria mortality;
- 25 percent in ARI mortality in children less than five years of age; and
- the incidence and prevalence of HIV/AIDS, and the incidence and prevalence of STDs.

The strategic approach was to be achieved by continuing to support CCCD activities and extending these activities to three major threats to child survival: ARI, HIV/AIDS, and inadequate birth spacing. In addition, the project sought to reinforce the MOH's implementation capacity by training key ministry staff and developing a health management information system.

Finally, the project sought to support the MOH's efforts to develop cost recovery mechanisms for the health care system.

Overall results

The Directorate of Preventive Medicine is the major actor in implementing child survival activities. This Directorate received extensive assistance from the CDC Technical Advisor who has been deeply involved in planning all project activities and preparing the scopes of work for numerous short-term consultations. In addition, the technical officer has been responsible for reviewing expenditures and performance outputs, and conducting financial analyses. More recently, direct financial management of the local currency account was added to the CDC technical officer's responsibilities. In addition, the Technical Advisor must conduct routine management tasks and provide technical reporting to USAID. This assistance has resulted in noteworthy progress being made in the accomplishment of child survival project objectives. The progress to date is reviewed in specific sections below.

Progress can be seen in the increase in ORT use (from estimated levels of five percent in 1988 to 34.1 percent in 1995), and the increased use of prenatal services by pregnant women (67 percent). Progress in other areas has been slower, particularly in vaccination, birth spacing, the integration of health services, and the development of a functioning health information system. Vaccination coverage has declined from levels of around 80 percent for BCG, DPT3, OPV3 and measles, to 77.2 percent, 47.5 percent, 45.7 percent and 52.4 percent, respectively, with 36.6 percent of children 12-23 months old being completely vaccinated (DHS). A minor polio epidemic occurred in 1993 (31 cases). Use of modern contraceptive methods remains very low (three percent of women in union) and efforts have not yet begun to introduce an integrated approach to the care of the sick child. Routine national service statistics are not available. The operation of a sentinel post surveillance system resumed only recently.

As for the pilot activities, the project has successfully introduced a facility-based approach for the management of sexually transmitted diseases in a limited number of health institutions in the Bambari area of the CAR. Enough lessons have been learned and data accumulated and analyzed to suggest that this project component can be used by the MOH to establish a national program of STD control as part of Primary Health Care. This is also true of the related condom social marketing activity.

A review (below) of the constraints faced in implementing some of the child survival interventions highlights the importance of the work of AFRICARE, namely, developing a model for the effective delivery of village-based child survival services using participatory and sustainable methods. In view of the country's huge size and dispersion of its population, this model of an effective, decentralized, and somewhat autonomous approach is clearly needed and its capacity for replication nationwide must be clearly documented. It may provide answers on how the ambitious coverage levels envisioned by the project are to be attained in a sustainable manner, particularly in view of the potential termination of USAID assistance after 1997.

Through the AFRICARE project, answers are beginning to emerge, but several key components of the full model remain to be developed.

In the cost recovery area, major progress has been made, particularly in policy reform. There are many players in the field. The project played a significant role in getting the players to reach consensus on the resolution of key policy issues. This is a significant accomplishment that was attained through painstaking analyses, discussions and negotiations. The legislative underpinning for increased participation of the population in health services financing is near completion and cost recovery activities have been implemented at many institutions.

Finally, the DHS component was successfully conducted and preliminary results were available slightly ahead of schedule. Preliminary DHS data document a reduction in the IMR to 96.7/1000 for the period of 1990 to 1994, down from levels of 110.8/1000 in the 1970s, and 105.4/1000 in the 1980s. The probability of dying by age five is now estimated at 157.4/1000. Additional data suggest a drop in the neonatal mortality rate by 5/1000 over the last decade to current levels of 42.1/1000, and a drop in the post-neonatal mortality rate of 8/1000. At the same time, the probability that a child who has survived its first birthday will die by its fifth birthday (5q1) increased from 61.7/1000 to 67.2/1000 over the last decade, so that the overall chances of a newborn surviving to its fifth birthday has increased only modestly. The current IMR level of 96.7/1000 may be a useful baseline to assess overall project impact.

Problems and constraints

A major constraint relates to the underlying premise of the project, that of building on the CCCD project's successes. In fact, the public health system was paralyzed at the beginning of the project, a result of a general strike of all public employees at a time of political instability and the painful transition to a democratic regime. Strikes occurred intermittently between 1991 and 1993 and effectively shut down many health institutions. During the strike period, equipment and supplies vanished from many facilities and a lack of plant maintenance led to further degradation of antiquated medical buildings. In addition, freelance private practice by health workers led to a pattern of fee collection by these employees outside of the regular system, a pattern that continued to a certain degree after they returned to work. While this situation could be viewed as a major setback for the MOH, it afforded an opportunity and challenge to rebuild the entire system, introduce new policies and practices, and launch major initiatives in areas such as AIDS prevention and the implementation of a national cost-recovery program. Thus, it might be more appropriate to speak of a rebuilding process.

One problem area pertains to the scope of work and responsibilities of the Child Survival Technical Officer. There is some ambiguity in this role in terms of USAID representation, in terms of work responsibility and coordination between the technical officer on the one hand, and the head of the Directorate of Preventive Medicine on the other, and in overall day-to-day project management.

Because the Directorate of Preventive Medicine is the key implementor of various project activities, the National Coordinator must have a high level of involvement. The Coordinator has elected to delegate many of the project management responsibilities to various program managers. This has complicated the process of joint coordinated planning between the technical officer and the National Coordinator for SCS activities, and the frequent bypassing by the National Coordinator of the SCS Technical Officer in non-SCS funded activities. There is a clear sense of overburdening of the CDC Technical Officer, particularly in view of the fact that the Officer is also responsible for much of the administrative work involved in project management.

On a more fundamental basis, the overall orientation of the CDC technical assistance has been to take each intervention separately and for each intervention, to conduct the standard basic assessments, develop objectives and outputs, devise implementation plans, and develop a health information system (HIS) for monitoring and evaluation. This approach tends to contribute to perpetuating the vertical nature and functioning of the Directorate of Preventive Medicine as a mini-Ministry of Health with little integration to the other Directorates. It also contributes to separate channels for supervision and the inefficient use of supervisory resources. It seems appropriate at this time to question whether the overall technical assistance scheme, as described in the Project Paper and implemented by CDC, addresses the major issues pertaining to individual institutional viability such as institutional and management capacity, and policies and strategies for service delivery that take into account available resources, micro-management of health facilities, etc. For the most part, these issues seem to have been considered beyond the purview of the SCS project.

Recommendations

Mortality data: The Demographic and Health Survey staff needs to reexamine previously released infant and child mortality data (particularly data stemming from the 1988 census) to reconcile recorded discrepancies. The IMR was previously estimated at 143/1000 for the 1980s, while current DHS-derived levels are at 105/1000 for that period. Assuming the accuracy of the most recent IMR (97/1000), it is recommended that the project revise its LOP objective of reducing the IMR by 50 percent downward, perhaps to 20 percent nationwide.

Overall Project Performance: The pilot phase of the various project components should end, particularly the HIV/STD component, and replication activities be implemented vigorously to ensure that a greater segment of the population enjoys access to health services. Over the remaining two project years, resources should be used on a priority basis for cost recovery/financial management, training and supervision, and developing a functioning management information system. The MOH will continue to require a significant amount of CDC technical assistance to conduct these activities.

The CDC and MOH might consider reexamining the basic premises underlying the types of child survival technical assistance being provided. The principal options follow:

1. Option one is to continue as is, i.e., consider each intervention separately and implement the various activities as described in the project paper.

If this option is selected, the principal implementor will continue to be the Directorate of Preventive Medicine, and areas to be improved will concern mainly management styles and better coordination between the Child Survival Technical Officer and the National Coordinator. Some measures have already been taken in this regard: for example, a decision was made to hold regular bi-weekly staff meetings at the Department of Preventive Medicine. The SCS Technical Officer should be made cognizant of activities and child survival-related consultations not funded by the SCS project; activity budgets prepared by program managers should have a greater input from the Child Survival Technical Officer, etc. Furthermore, the Technical Officer should hire either a project manager to handle administrative chores or some of these chores should be handled through a PSC with the Embassy under the supervision of the ALO (this point is explained in a later section). Under this option, it is clear that the role of a Child Survival Technical Officer will continue to be pivotal.

2. Option two would also require the presence of a CDC Technical Officer. **The orientation of the technical assistance would be more focused, and would deal principally with issues of cost recovery, integrated supervision, and implementing a functioning management information system.**

In fact, all three areas merge when they are considered within the purview of a functioning health facility. The PROSALUD project in Bolivia model is suggested; here the effort is spent less on defining and resolving macro issues, and more on resolving the day-to-day problems to make a small network of primary care institutions function efficiently. If this option is adopted, the remaining two project years could be devoted to overall planning for the resolution of the following issues:

- What basic package of services should be provided at a primary health care center?
- How should these centers be managed?
- What type of information should be collected at these centers for technical purposes and for management/financial purposes?
- What type of supervisory channels should be put in place?
- What type of training should be provided to ensure that center personnel benefit from the necessary technical expertise to provide services and management expertise, collect and account for fees, and collect data and use some of the data for their own decision-making?

Even for a small facility with up to 10 employees (including cleaners), it has been shown that these are quite complex issues that need to be addressed first at a limited number of facilities on a pilot basis to iron out difficulties, before they can be implemented on a larger scale. USAID worldwide project experience in this area, particularly when it comes to the sustainability component, is quite limited, thus the reference to the PROSALUD project. Should the Ministry

and CDC decide to explore this option, it is suggested that a limited number of institutions, most likely in the Bambari area, be selected over the last two project years for this purpose.

Once a model of facility management emerges, the CDC might consider providing assistance to develop a plan on a national basis to strengthen the capacity of health facilities to provide a minimum package of services, depending on the level of complexity. The plan would need to focus on the following:

- (a) defining the health system's various theoretical levels of complexity (health post, health center, district hospital, regional hospital, tertiary hospital) and the services that should be available at each level;
- (b) documenting the current real complexity level of each facility;
- (c) assigning a new functional level for each facility, based on need and facility distribution;
- (d) assessing training and capital assets needs;
- (e) addressing how to implement a competency-based integrated training program on a facility-by-facility basis, beginning with the health post level, with the emphasis placed on staff competencies in vaccination, ORT, ARI diagnosis and treatment, malaria diagnosis and treatment, STD treatment, HIV counseling, condom distribution, birth spacing, nutrition surveillance and counseling, basic curative care, a simplified epidemiologic/service statistics reporting system, basic drug procurement, and financial management systems;
- (f) the requisite capital asset investments; and
- (g) addressing how to implement an integrated system of supervision.

Specific Project Components

1. Child Survival: The Expanded Program of Immunization

By 1995, the following objectives/outputs were to be accomplished:

- an uninterrupted supply of vaccines to all vaccination centers;
- increased coverage in rural areas;
- added VAT vaccination programs for females;
- improved quality of vaccination services;
- strategies developed to increase vaccination coverage in the first year of life;
- support for polio pre-eradication and neonatal tetanus elimination strategies; and
- programs evaluated in conjunction with the HIS program.

CDC's specific contribution was to provide long-term and short-term technical assistance, a vehicle for use by regional teams, and commodities, such as syringes and cold chain equipment.

Accomplishments

The CDC Child Survival Advisor has helped the MOH devise a new, more sustainable, strategy which relies more on fixed vaccination posts and judicious use of campaigns to achieve coverage objectives.

The evaluation team visited a number of health facilities and documented that in all facilities visited, there was a functioning, well-maintained cold chain and vaccines were available. It therefore appears that the first item in the action plan is being met satisfactorily. The team was unable to assess the quality of vaccination services but noted that vaccination records were well maintained at facilities, thus suggesting that a valid database exists in this area in conjunction with the establishment of a national health information system. At the time of the evaluation, the data were not compiled nationwide on an up-to-date basis to provide a running estimate of coverage rates. The rates used in this report come from the recently-concluded DHS survey and show the following rates:

- DPT3 48 percent
- OPV3 46 percent
- Measles 52 percent
- BCG 77 percent

Constraints: As for increasing coverage in rural areas, the following issue emerged concerning the EPI's reliance on three basic strategies: vaccination at fixed centers; mobile vaccination teams using all-terrain vehicles; and outreach services ("strategie avancee") using vaccinators on motorcycles. Over the last two years, the mobile and outreach components were seriously compromised by the breakdown of most of the vehicles assigned to the EPI. The program has had to rely primarily on fixed posts (264 out of 444 health facilities) which, given the huge size of the country and its scattered population, are insufficient to meet demand. The problem is compounded by the fact that the CAR has not as yet assumed the cost of maintaining EPI vehicles and paying for mobile vaccinators and not developed a specific plan to do so. These costs are currently met by UNICEF (with central USAID funding). UNICEF has announced to the MOH that, while it is willing to replace the necessary hardware, it will no longer support these costs beyond 1996.

The MOH recently concluded that the approach of using fixed facilities ("strategie fixe") is more likely to be sustainable because it is less costly than mobile teams. As a result, with assistance from the CDC adviser and technicians from other donor agencies, the MOH has decided to revamp its entire EPI strategy to:

- increase the number of fixed vaccination centers;
- provide fixed centers in high population density areas with motorcycles to be used to cover a 20 km axis around the center;
- redistribute existing mobile teams and reduce the total number of mobile teams; henceforth, the teams will be used to cover thinly populated areas. (The MOH is in the process of purchasing five new vehicles with its own funds to replace 12 existing ones);
- consider hiring 52 vaccinators whose salaries are currently being paid by UNICEF. This aspect is problematic as the MOH must follow a government-wide hiring freeze, despite a calculated need for 1,600 additional employees (MOH estimates); and
- maintain some degree of flexibility in the judicious use of occasional vaccination campaigns (for measles and polio).

While one may anticipate that this new orientation will increase coverage, it is not certain that these measures will be sufficient to reach the levels envisioned in the SCS project, namely 90 percent for measles, DPT3 and OPV3 immunization, and 80 percent coverage for TT coverage (women of childbearing age). The following issues need to be considered:

- Less than 40 percent of the population lives within easy access of a fixed vaccination post and many health facilities will still be left without vaccination capabilities.
- The evaluation team noted that, in the absence of special massive motivational efforts, only a small number of children come to health centers for vaccination on a routine basis even though the centers visited had functioning, well-maintained cold chain equipment, as well as vaccines. In the past, volunteer community "mobilizers" were used to encourage mothers to have their children vaccinated. Close to 2,000 such "mobilizers" were recruited and most are inactive at present.
- Other community mobilization channels are limited. There is one national (public) radio station, one television station and one rural radio network. One Catholic station began limited operations recently. Their audience appears to be limited as well. The MOH has made some effort to enlist the support of journalists. Training sessions were held on their behalf as recently as April 1995. However, practically all journalists are government employees and private remuneration issues have not been resolved.

Recommendations

The MOH plans to increase the number of fixed vaccination posts should incorporate all 444 health institutions. Because of the country's size and scattered population, outreach strategies will need to be used in the foreseeable future. The evaluation team concurs with the new

approach that the MOH developed as an effective means of raising coverage on a short-term basis. To reach the levels attained in 1990 to 1991, however, the use of campaigns should not be completely precluded.

To make these strategies more sustainable, particular attention should be paid to the AFRICARE Child Survival project currently underway in Berberati. Since this project is seeking to identify ways to provide services in the village, any lessons learned will have specific implications on a nationwide basis. It should be noted at the outset that replication of the AFRICARE project nationwide would most likely imply the training of more than 3,000 village-based workers. This number is derived from the assumption that each mother has, on average, less than seven kilometers to walk to get her child vaccinated (a seven km axis, each of four ways, gives a catchment area of 14 km x 14 km or 196 square km for each vaccinator, thus the 3,000 needed to cover the more than 600,000 square kilometers of the country). Village vaccinators may be supplied once a month via a vaccination "postal" system relying on contract motorcyclists (who own their motorcycles) working one day a week (one axis per week). Hospital and health center revenues may be used to fund a community health division at each hospital which could provide integrated services on an outreach basis to hard-to-reach populations via mobile teams.

Therefore, for the remaining two project years, the CDC Technical Advisor should work more closely with the AFRICARE counterpart to help identify constraints to village-based services that have ramifications to the national program. Using this process, the final evaluation team would be in a better position to conclude if the approach to village-based services was feasible and realistic.

CDD

The maintenance of high breastfeeding levels is heartening, but the practice of exclusive breastfeeding is low (four percent) under the age of four months. Plans are underway to correct weaknesses in health worker practices in diarrhea management through retraining and through a better, more integrated approach to supervision.

The CDC was to provide assistance to the Department of Preventive Medicine so that it could reach the following objectives/outputs:

- make ORS available at 95 percent of health centers;
- increase ORS use to 95 percent of urban centers and 60 percent of rural facilities;
- increase case management capacity of health workers through better training and supervision;
- increase community knowledge of diarrhea case management through IEC and health education in schools;
- conduct operations research on effective case management; and
- implement an HIS to facilitate program evaluation.

Accomplishments

The project logframe lists a number of objectives pertaining to: ORS access and use in hospitals and health centers; training of health personnel in case management; supervising trained personnel; developing an IEC plan; developing materials for social mobilization; promoting breastfeeding; and monitoring/evaluation activities.

The major accomplishment has been a significant increase in ORT use from a measured five percent in 1989, to 34 percent in 1994. This result has been obtained despite several constraints to program implementation (see below). An adequate needs assessment of the CDD situation was conducted which has served as a basis for an action plan. In addition, a training guide was completed and more than 300 health workers trained. However, a 1994 post-training evaluation revealed problems pertaining to the disappearance of training materials and inadequate supervision of health personnel.

Problems/constraints

The Head of Preventive Medicine believes that the MOH's social problems (strikes, etc.) had a particularly negative impact on the CDD program. In his view, ORT use has regressed in most health facilities. In addition, the impact of the IEC program for caretakers is not felt and efforts to introduce CDD education in schools have not fully been implemented. In the past, facilities depended on UNICEF for the procurement of ORS packets. The transition has not been made as yet to transfer this responsibility to the newly-created Central Drug Authority ("Unité de Cession de Medicaments"). As with EPI, the CDD program suffers from a lack of venue for its IEC components (this was confirmed by the Head of IEC and Training Unit of the Department of Preventive Medicine who seems to have difficulty in eliciting the active participation of the government radio and television stations to disseminate messages). In addition, the weakening of the MOH's supervisory capabilities has led to a number of problems noted in the field (see the May 1994 internal evaluation) such as inadequate counseling of mothers and the absence of previously available training materials such as drinking utensils and measuring bottles. Planned research on cereal-based solutions seems to have been stalled.

In the area of breastfeeding, the MOH issued a directive to restrict the promotion of milk formulas in the country.

Recommendations

The evaluation team's recommendation for all four components, (i.e., CDD, malaria, ARI and birth spacing) is linked to the overall recommendation (see above). It is recommended that these interventions be introduced concurrently at a small number of primary health care facilities where the issue of providing a limited number of quality services will be addressed in an integrated manner.

Malaria

To reduce malaria mortality and provide effective malaria case management and reduce transmission, CDC was to provide technical assistance as well as malaria drugs during the first two project years. The objectives/outputs of this assistance were for the MOH to:

- promote the availability of chloroquine and second line drugs at all fixed facilities;
- continue monitoring chloroquine resistance;
- raise to 80 percent the number of homes with immediate access to chloroquine/appropriate referrals;
- provide training and supervision to health workers;
- correctly treat 95 percent of febrile pregnant women at health facilities and provide prophylaxis; and
- accelerate IEC.

Accomplishments

The CDC has trained 520 health agents in malaria management. Health personnel appear to understand and apply the concepts of malaria prophylaxis during pregnancy. Efforts to reduce the incidence of the disease have been made more difficult by the emergence of chloroquine-resistant plasmodium falciparum, with available data suggesting more than 10 percent resistance (Faculté des Sciences de la Santé). Efforts at promoting chloroquine availability at all fixed health facilities appear to have been successful. Chloroquine was available at most of the facilities that the team visited and the facility staff was knowledgeable in its use.

Problems/constraints

As with other interventions, IEC remains a weak point. In addition, patient surveys by evaluation team members suggest that drugs other than chloroquine are the drug of choice at many facilities.

The team was unable to document what proportion of homes had immediate access to chloroquine. However, it appears that routine prophylaxis is common for pregnant women seen at health facilities.

Personal protection efforts are focused on the introduction of impregnated mosquito nets. This component will be discussed below.

Recommendations

Malaria prophylaxis and treatment should be part of the basic services package being offered at all health facilities including primary care centers. The integrated training being proposed could be introduced at a small number of primary care institutions to assess how to avoid having health workers become overloaded by the amount of didactic material they are expected to digest.

ARI

The CDC was to assist in establishing an ARI program to insure an adequate supply of appropriate drugs in health facilities, provide training and supervision in case management for health workers, and provide health education for caretakers. In addition, an IEC plan was to be developed and a KAP study conducted.

Accomplishments

A draft policy document is now available. Ethnographic and antibiotic resistance data were collected and will be useful in devising a training plan for health personnel. At the same time, ambivalence concerning a more integrated approach to the delivery of services persists. Some progress is being made in adapting WHO algorithms for the management of sick children to the CAR setting.

The SCS project seeks to reduce ARI mortality by 25 percent in children less than five years of age and provide correct treatment for 50 percent of lower respiratory tract illnesses treated at health facilities. Initial steps have been taken to establish a national ARI program: policy development; establishing guidelines for training and case management; and access to drugs via the National Essentials Drug Program. At the same time, the team noted some timidity on the part of MOH decision-makers and their advisers in relation to a "full speed ahead" approach to implement this component. This is related to some concern of over-saturation on the part of lower echelon health personnel who might have difficulty in absorbing a large quantity of new material.

Recommendations

As with malaria prophylaxis and treatment, ARI management should also be part of the basic services package available at health centers. Experience elsewhere has shown that it is a difficult component of the package to institute successfully. Nevertheless, the health worker at any facility who is confronted by a sick child must be able to apply an integrated decision tree (algorithm) in order to decide on the appropriate treatment for the case. Establishing how this will work in practice at a small number of institutions should precede massive efforts that call for the wholesale training of hundreds of individuals from little-used health centers.

Birth spacing

One objective of this component was to increase the percentage of women who obtain prenatal services from 48 percent to 60 percent. In addition, the CDC Technical Advisor was to assist the MCH Directorate in fostering improved coordination between this Directorate and the Directorate of Preventive Medicine and Endemic Diseases. The project was also to procure a vehicle and computers for the MCH Directorate.

Accomplishments

The SCS project funded a short-term consultancy in 1994 to review the status of this project component. The recommendations of this consultancy are summarized below (Riley and Qualls, CDC):

- for the CAR to develop a comprehensive population strategy that contains a specific policy related to the provision of reproductive health services including family planning;
- to provide the CAR with technical assistance in contraceptive logistics;
- to include contraceptives in the national cost-recovery program;
- to improve the supply situation at all health facilities;
- to integrate maternity and family planning programs into the proposed supervisory system;
- to use NGO groups such as the "Service de la Santé des Adolescents et de l'Education Sexuelle" and "ACABEF" to implement IEC and other service delivery support activities; and
- to conduct operations research on integrating family planning services.

Another consultancy was conducted in March 1995 on the contraceptive logistics system of the Family Planning Program in the Directorate of Family Planning. The consultants made specific recommendations pertaining to training, monitoring, data collection, and contraceptive procurement.

The evaluation team noted in its site visits that only small quantities of contraceptives, if any, were available at the facilities visited. (The CDC Technical Officer noted in her April 1995 quarterly report that for all practical purposes the country was out of contraceptives.)

The team was apprised of the efforts of an NGO, ACABEF, in promoting contraception and trying to make family planning services available in the country. (A number of other countries,

particularly in Latin America, have signed contracts with private organizations, usually affiliates of IPPF (PROFAMILIA/PROFAMIL, etc.) to make family planning services available to their respective populations.)

Recommendations

Aside from that pertaining to the overall child survival program, the CDC Technical Officer, along with her MOH counterparts, might consider an approach whereby ACABEF and other organizations are given contractual responsibilities to take charge of the family planning effort in the country.

HIV/AIDS

The CDC was to assist in setting up a mechanism for evaluating the progress of the HIV/AIDS epidemic and increase access to condoms, develop a pilot project for STD control, develop and provide health education, and improve early detection.

Accomplishments

The project has successfully met its objective of developing a pilot STD control activity in one region, to the point that it can be used by the MOH to establish a national STD control program integrated into PHC. The project is helping to document the progress of the HIV/AIDS epidemic through the operation of a functioning sentinel post network. In addition, the project has helped the MOH define and implement a viable approach to the effective standardized treatment of STDs and increased condom use (see below). IEC efforts have encountered a number of constraints that are discussed below.

Activities in this area fall under four major components:

1. evaluation of the progress of the AIDS epidemic;
2. increased access to condoms;
3. treatment of STDs; and
4. behavioral modification.

Access to condoms is discussed in another section of the report.

Currently, the progress of the AIDS epidemic is being monitored through data gathered at 16 sites, with fixed data gathering periods (late September/early October) and target populations (pregnant women, STD patients and laborers). The data suggest a progression of HIV infection as evidenced by an increased seropositivity rate among pregnant women from 6.88 percent in 1990 to 9.32 percent in 1994, and among STD patients (20.2 percent in 1990 versus 25.3 percent in 1994).

The project is providing a CDC long-term advisor to the CAR to help develop an effective approach to reduce sexual transmission through STD control. With his assistance, the MOH has been able to:

- develop diagnosis and treatment protocols for the treatment of STDs using the WHO-recommended syndrome approach; and
- establish a pilot project in Region 4 of the country where the protocols have been successfully introduced. At present, STD clinics using a standardized protocol are functioning in six health facilities in Region 4; more than 10,000 cases have been treated since the project began. Drugs have been provided through the project. Of particular importance has been the introduction of specific methods to ensure notification and treatment of partners of STD patients. (Of female partners referred by male index patients, 70 percent were asymptomatic.) Treatment of asymptomatic female partners has a potential for making significant inroads into the reservoir of infection at the community level.

HIV/AIDS/STD project-supported activities have been initiated in principal population centers (Bambari, Bria). These include but are not limited to: patient management for the treatment of HIV and other STDs; a tracking system for the utilization, monitoring and reordering of medicines; and standardized supervisory procedures to ensure that the above occurs. In addition, consultants have advised the project on the use of observation lists for both the clinical encounter and the counseling session. The project has concentrated its efforts in Bambari with replicating activities including information, education and communication (IEC), counseling, the HIV sentinel surveillance system, and partner notification in other sites in Region 4. STD/HIV services were expanded on a limited basis to other sites (Bria and Grimari), and plans have been made to develop these services further through training, supervision and implementation of the cost recovery system.

Community understanding, acceptance and satisfaction

Based on interviews conducted in Bangui and Bambari, more than 90 percent of the individuals interviewed are aware of AIDS, how it spreads and its serious consequences. People are most fearful of death and the slow process of dying. They recognize AIDS as a fatal disease. Some call it a "shameful disease" because of its association with promiscuous behavior. Others call it an "honorable disease," because those who are able to deal with it die the death of "the conquering hero."

Some people interviewed felt that individuals put themselves at risk because of a "pressing need for immediate sexual relations." It was felt that alcohol consumption limits the regular use of condoms especially during occasional sexual encounters. Most people interviewed at clinic sites were told about coming to the clinic by a partner, however, they did not readily admit that they wanted to be evaluated for a STD, but instead claimed they were at the clinic for a checkup.

Being at the STD clinic seemed to bring a great deal of embarrassment to the young women interviewed. Those who became infected as a result of sexual relations with a casual partner were more readily able to agree to use condoms. Those with husbands were uncertain about condom use.

Patients treated at an STD/HIV unit are in general satisfied with the quality of services provided at the center and are willing to refer their friends and partners. Patients feel comfortable with the fees they have to pay for the services they receive. However, when there is a lack of medicines, the patients are required to pay more to cover the cost of the medicines that the medical staff makes available to them. Patients resent this practice.

Important developments in the sustainability process are the computers that were installed in key centers, the computer training, and the availability of analysis programs for tracking trends as well as drug usage information. Through technical assistance, a database has been established and modified to accommodate the new STD management algorithms and provide information on patient flow and management issues. There remains some question as to the extent to which data are being utilized to increase service utilization through improved partner notification and IEC activities. The evaluation team was not able to ascertain the use of the data to determine the trends in service activity; however, since this information is available, it should be used continuously by the project team to plan and manage STD/HIV unit operations more effectively. The next step is to exploit the vast amount of collected data to extend services to the other health facilities in the region and the CAR.

As for other transmission modes, the MOH and CDC have expressed an interest in exploring the clinical importance of HIV type O infections which cannot currently be diagnosed via the standard methods. This has serious implications for the safety of blood transfusions.

Problems and constraints

Information from staff interviewed at one of the STD service units indicates that single dose treatments are used. Staff interviewed who are not involved in the delivery of STD services have negative views of this treatment protocol, and often share these views of what they feel is inappropriate treatment with patients.

Patients coming for treatment as well as staff working in the STD/HIV section have complained about occasional drug stock-outs and the lack of condoms for use in demonstrations.

With limited staffing, trained personnel in counseling are often unavailable at key periods because they are busy elsewhere. The configuration of the consultation and counseling rooms (at a distance from one another) often makes it difficult to follow-through with patients.

The counseling observed was appropriate and educational materials were given to patients on condom use. The high patient load on the day observed put an extra burden on the available

counselors and, as the morning progressed, sessions became shorter. There were no condoms being given to those who came to the clinic during this observation period.

The number of patients seeking STD/HIV services in Bambari and Bria has increased dramatically. In the past four months, more women (2,139) than men (1,527) have come for treatment. The numbers of partners returning for care have also increased, some without symptoms. This seems to indicate an effective partner referral system, and perhaps increased awareness by the community of service availability and the need to seek timely treatment. The increase in the service utilization, however, has led to increased burdens on the staff and a reduction in their ability to offer effective consistent counseling.

The IEC component of the MOH strategy includes the following elements:

- secondary prevention through STD patient information and counseling; and
- primary prevention activities including the use of various community channels as venues for messages such as: churches; women's groups; the health infrastructure; schools; the military; and businesses. The overall assessment is that IEC efforts are not currently commensurate with information dissemination needs.

Recommendations

Several tasks have been accomplished through the technical support provided to the Department of Preventive Medicine and Disease Control, National AIDS/STD Control Program. These are important accomplishments in the attainment of objectives addressing sustainability.

Counselors have been trained and protocol and procedures have been developed to assure appropriate counseling. Although this is sometimes compromised by patient load and the availability of counseling space, **additional refresher training**, which includes supervisors, should be continued. Trained counselors can assist in the training since the counselors observed performed in the sessions systematically and effectively. **Additional training should be staggered throughout the year to help staff upgrade and maintain their skills as well as to provide training for new staff. All staff should be included in the training since they provide key contacts for patients (e.g., intake staff), particularly during peak periods. This would lend support and reinforce the counseling that patients receive.**

On-going supervision should be done by supervisors who also attend training so that they are knowledgeable about the content, procedures and methods used in the training sessions. Although there may be difficulty in continuing supervision because of patient load and staffing constraints, a concerted effort must be made for this type of on-going supervision.

Similarly, through the technical assistance provided by the advisor, **threshold reorder levels have been established and reorder forms are in place. The system needs to be revisited to**

ensure appropriate and consistent use of these innovations so there will be fewer complaints about the rupture of stock by staff and lack of patient medications. Although this remains a paradox as there seems to be an ample supply of drugs in the country to meet the needs of the clinics.

Another major step in the sustainability process is the use of systematic approaches for dealing with the management of clinical services. In this regard, several measures have been taken to facilitate this process. These include: outlines for conducting STD staff training; algorithms for STDs using a syndromic approach; hospital-based IEC activities; and standardized supervision.

All hospital and health center employees should receive a briefing on the operation of the STD clinics. All clinical staff should participate as much as possible in technical training activities.

The question of partner notification is one issue which goes beyond national boundaries. The activities in Region 4 provide an excellent basis for an in-depth look at this problem. Located on the outskirts of Bambari is a private health center operated by the Catholic mission with a defined catchment population, (i.e., the population has been enumerated and registered, and an address is available for each household). It is suggested that the CDC and the MOH prepare a formal operations research protocol, with appropriate research hypotheses and questions, methods, decision variables, and experimental or quasi-experimental designs to test potential solutions. The defined population may be used as the universe of the study, with attention paid to informed consent and ethical review matters.

IEC efforts need more project support. Various communication channels may be explored. In view of the terrain and logistics difficulties, limited operations research on the use of video caravans visiting villages should be considered. Fees could be charged for the showing of popular commercial movies, interspersed with standard advertising messages from businesses and special health-related messages from the MOH. The fees and charges for the commercials could help defray the program costs.

Training

For this component, the CDC's objective was to assist in developing and implementing a comprehensive training plan that included the monitoring of health personnel expertise for programs designed to combat ARI, HIV/AIDS, and high risk births.

Specific objectives (to be met by 1997) were to upgrade health facility and health worker capacity to meet WHO standards in clinical assessment, treatment, patient education, supplies and equipment, and reporting through the establishment of national quality standards, development of effective evaluation methods, and programs to improve management.

Accomplishments are discussed within the context of specific interventions.

Constraints/Problems

The training component of this project has been lagging and the MOH is now implementing a more horizontal approach to training and supervision. The objective of the training component is to upgrade health facility operators and health worker capacity to meet WHO standards in clinical assessment, treatment, patient education, supplies and equipment, and reporting. Progress in this area is varied, depending on each project subcomponent (child survival, cost recovery, HIV/STD, AFRICARE, PSI). Clinical training is severely hampered by the deplorable status of health facilities and the difficult working environment of health workers. For example, while it is stated that the country has 4,750 beds, the evaluation team observed 120-bed hospitals where only about 20 beds were in fact usable. Facilities are frequently devoid of basic tools such as stethoscopes, scales, and microscopes and most are devoid of drugs. Training without the proper working environment may be a useless exercise.

Recommendations: See overall recommendations regarding an integrated approach to training.

Health Information Systems

Objectives: The CDC technical assistance was to help develop a plan for the integration of current child survival surveillance systems into the HMIS, including providing computers.

Accomplishments

By the time of the mid-term evaluation, a consultancy had been conducted in January 1995 to develop a computer program to compile data received by the sentinel posts and develop graphics to be used in the monthly reports. Staff was trained on how to complete the report form and analyze data. In early July 1995, preliminary data were just beginning to be available, with age-specific rates for specific diseases: diarrhea, dysentery, cholera, malaria, ARI, meningitis, PEV diseases, and yellow fever.

Problems/constraints

The two major constraints have been:

1. some delay in reestablishing the data collection system for the sentinel post program; and
2. the major lag in activities designed to make the national health information system operational, thus making any attempt at integration problematic. (These activities were not within the purview of the SCS project).

Recommendations

In keeping with the overall recommendation of developing a primary care facility-based system for providing and monitoring services, SCS assistance in the area of HIS might be conceived as having two major components:

1. the simplified epidemiologic surveillance system using sentinel posts; and
2. the routine HIS to be used for overall management of the entire health system.

The SCS project does not have a mandate to assist in the entire overhaul of the National MIS. What it can do, however, is to help decide what type of minimal information needs to be collected at each facility in the country, depending on its complexity. It can do this by closely monitoring the use of a one-page form that includes utilization and financial data (which could also be used by the institution for decision-making purposes), modifying the form as needed, and then developing a plan for its introduction nationwide.

Health Care Financing

Objectives: To assist the MOH in developing a national cost recovery system for health care services, the CDC was to provide short and long-term technical assistance to undertake studies in financial management and health economics, organize workshops to review the results of the studies, and initiate a pilot phase for cost recovery. Pharmaceuticals were to be purchased for approximately 10 sites to initiate cost recovery programs.

Accomplishments

The CAR has built on the progressive health financing law that provides norms for the payment of services to create the entire legislative underpinning which now allows health facilities to charge for services and retain their earnings. This impressive achievement, with an enormous potential for greatly facilitating the decentralization process, now faces the challenge of ensuring a safe, dependable and sustainable drug supply system and developing the appropriate micro-management tools and practices to permit adequate financial control at the facility level.

The development of a national cost recovery system for health care services is a major objective of the Sustainable Child Survival project. Project support for this initiative includes the funding of a cost recovery advisor, short-term technical assistance, and funding for a pilot phase for cost recovery programs. A "Cellule d'Economie de la Santé" was to receive project support for vehicle and equipment, supplies, and local travel. In addition, the Cellule was to conduct numerous studies pertaining to hospital accounting, hospital efficiency, social insurance feasibility, urban health financing, and the cost of health care; coordinate management training for health personnel and the newly-established board of directors of individual health

institutions; and conduct workshops to review results of the various studies and build consensus on health financing.

A six-step approach has been adopted for the implementation of a cost recovery system:

1. analysis of the pilot cost recovery experiences;
2. legislative underpinnings;
3. creating a central essential drug procurement authority;
4. creating institutional oversight boards and training board members;
5. staff training in appropriate drug utilization, stock control, and management and financial management; and
6. developing an information system for monitoring and evaluation.

The SCS project has provided effective assistance which facilitated a number of key developments pertaining to the cost-recovery program implementation:

- An advisor was assigned to a newly-created cost recovery unit at the MOH.
- Short-term technical assistance was provided by ABT Associates. This facilitated an analysis of existing cost recovery experiences and provided useful guidance to the MOH in policy development in this area. Appropriate laws and decrees were promulgated giving the needed legislation to the initiative and creating the oversight boards for each health facility.
- A consensus was developed around a unified cost recovery option and implementation method. Very hard issues had to be resolved, not the least of which pertained to the actual fees to be charged and the use of these fees for procurement of drugs and supplies and for providing incentive payments to providers.
- Cost recovery activities were initiated at selected institutions.

Constraints

Fees are now being charged to patients at Bangui Hospitals and at most health facilities in the country. However, the cost recovery unit at the MOH has enunciated several prerequisites to be met by each facility before they can receive a drug allotment from the central drug authority as capital stock, and initiate the cost recovery process. The prerequisites include the presence of a trained oversight board at the facility, a room to lodge the pharmacy, and personnel trained in prescribing drugs, inventory control, drug procurement, and financial management.

To date, few health facilities have been able to fulfill these conditions and thus most facilities in the country are devoid of drugs. Patients are given prescriptions to be filled at private pharmacies. In addition, there does not seem to be any clear perception of the complex micro-

management issues and training needs to be faced at the institutional level prior to the introduction of the system. Designated future managers are usually health personnel (usually male nurses) who will receive additional training for these new tasks. Although appropriate for smaller facilities, this notion may not easily apply to large regional and district hospitals, and regional offices responsible for supervision and audit functions. Finally, the reporting system adds a new, partially redundant and burdensome task for personnel at health facilities. The entire process is now paralyzed due to lack of funding for the training component. It has been stated that the stock of essential drugs at the Bangui drug authority is adequate to meet the needs of all health facilities.

The "cellule" is actually very small and does not appear to have adequate manpower assigned to it to conduct, or even oversee, the many activities identified in the project paper.

Recommendations

MOH: The following issues may be beyond the specific purview of the SCS project, but failure to resolve them may seriously jeopardize the success of SCS assistance to this component.

The MOH might review the implications of encouraging the development of alternative drug procurement systems with a view to ensuring competition, the survival of the private sector pharmaceutical system, and backup availability in case of bottlenecks at the public drug procurement authority. Specifically, the Ministry could encourage private importers to buy generic drugs; concurrently, MOH health facilities should be free to purchase drugs either from private importers who respect the essential drug list or from the Central Drug Procurement Agency. The financial management and inventory control aspects of the training program for health facility managers should be revamped to emphasize appropriate control systems at the institutional level and auditing capabilities at the regional level. Consideration should be given to retaining professional accountants at the larger regional and district hospitals and providing bookkeeping training to selected personnel at smaller institutions. The people in charge of recording financial transactions (accountants and bookkeepers) should not handle funds; the reverse is also true. The treasurer of the institutional management boards should be apprised of basic control procedures.

In view of the MOH's limited resources, and the disproportionate use of these resources to the benefit of three tertiary care Bangui Hospitals, the MOH should carefully consider the feasibility of divesting itself of the financial responsibility of managing at least one of the hospitals. Such a hospital could be transformed into the principal unit of a completely auto-financed, government-owned health maintenance organization (HMO) whose clients would include government employees and private sector employees who are recruited on a prepaid basis. A National Trust Fund could be managed by a completely autonomous Board of Directors recruited from the various sectors of CAR society (business, banking, labor, the university, religious groups, NGOs, the Ministry of Health, and Ministry of Finance). The fund could be constituted from:

1. a government earmark from its personnel line item in the National Budget;
2. surcharge on drugs sold; and
3. employers' contributions.

This fund could be used to finance the HMO and assist in indigent care.

The MOH intends to closely monitor the operation of the cost-recovery program. This is quite appropriate, as it allows the adjustment of fees charged to patients to reflect costs and finance shortfalls in revenue. The MOH might consider revising and simplifying the monitoring instrument (which could be limited to a single page) to avoid collecting redundant information. (The first three pages concern data on facility utilization, information that is already collected through the national health information system (SNIS).)

CDC

A project funding shortfall has seriously hampered the achievement of SCS cost recovery objectives. The CDC technical advisor outlined a proposal to shift some local currency funds to the cost recovery effort. The evaluation team endorses this initiative of fund reprogramming, but advises caution in planning massive vertical training exercises when the foundations for strengthening local institutional management have not been built. The evaluation team suggests that the contract of the CDC Technical Officer be extended, not only to help fulfill the various recommendations entailed in previous sections of this report, but also to assist in addressing other key issues. These include the following:

1. in the area of essential drugs, deciding which types of drugs should be available for each facility level, beginning with the village pharmacy and the primary health care center;
2. deciding what type of logistics system(s) should be implemented to ensure available drugs at the most peripheral sites;
3. developing an integrated training module for facility management (the CDC might consider requesting the assistance of the PROSALUD project (see above)); and
4. simplifying the reporting form that institutions will fill out for management purposes.

Condom Social Marketing

Objectives

On May 28, 1993, USAID signed a grant agreement that provided PSI with US\$1.734 million and 3.5 million condoms to be marketed in the CAR over a four-year period. In addition, PSI was to:

- (a) systematically expand the availability of condoms through the maintenance of a vast distribution network;
- (b) inform the population about the correct use of condoms;
- (c) raise public awareness of AIDS and STDs;
- (d) promote sustainability;
- (e) generate revenue through sales; and
- (f) determine the feasibility of social marketing other health products (such as ORS).

Accomplishments

Midway into the project, PSI has already met its LOP condom distribution goals. The successful social marketing approach is being assessed as a possible model for the distribution and sale of ORS packets and iodized salt.

PSI is successfully meeting project objectives. More than three million condoms have already been distributed and an additional 8,814,000 condoms have been programmed for shipment through the remainder of the project. PSI has hired four regional sales representatives and established a distribution network in association with a local organization, FNEC. This entity, in turns, sells to local wholesalers and retailers. Thus, PSI takes advantage of an existing commercial infrastructure to market its products. While the official retail price has been fixed at 50 FCFA by PSI, the going price is frequently much higher. Various promotional activities are being used to promote condoms such as seminars, special events such as soccer matches, song contests, T-shirt distribution, concerts, village question and answer sessions, cultural weeks, recruitment of business leaders, and radio and television broadcasts. The demonstrated product demand provides indirect evidence that the promotional and educational efforts are having an impact.

PSI has begun discussions with the MOH and with UNICEF on the potential for using PSI expertise to market ORS packets and iodized salt. No decisions in this area have been made as yet.

Problems/constraints

Despite the high awareness levels in the population pertaining to AIDS knowledge and prevention seemingly documented in the Demographic and Health Survey, the results of focus group work and patient interviews at health facilities do not document extensive changes in sexual behavior. Furthermore, no reliable information exists on the effective use of condoms by those who purchase them.

One approach to sustainability is to transfer skills to local professionals. PSI has trained or facilitated the training of professionals at all levels of the marketing and distribution system. The assumption is that activities will continue via a private entity which will replace PSI once the project ends. At this time, however, it is not clear how such a team could be maintained without

outside support given that condom sales are subsidized and revenues are insufficient to meet recurrent program costs.

Recommendations

A special effort should be made to ensure that condoms are used by high risk groups, including STD patients. This could be assessed by monitoring condom use by sex workers and STD patients seen at clinics. In addition, condom availability at pharmacies in health facilities and particularly in STD clinics could be improved and an information system devised to document this use.

Assessment of the project's overall potential impact must await the results of a planned Knowledge, Attitude and Practice survey focusing on sexual behavior. This would permit an estimate of the total number of condoms needed on a nationwide basis, and provide a profile of current condom users in terms of risk factors (sex workers for example). PSI should proceed with this KAP survey. The survey will include pricing information to assess how much the market will bear in terms of condom retail price.

Mosquito Net project

Objectives

An amendment to the PSI grant (August 22, 1994) provided US\$ 100,000 in increased grant funding to introduce the social marketing of Impregnated Mosquito Nets (IMNs) as a new project element. The activity, which is described as "Operations Research Program for the Social Marketing of Impregnated Mosquito Nets in the Central African Republic," seeks to determine whether it is possible to implement a social marketing program that will increase the demand for and use of impregnated mosquito nets in the CAR. An initial stock of 12,000 nets was to be sold.

Accomplishments

Based on the review of the project document and field visits to the project site (Bossebele), the evaluation team was able to conclude that the project document represents a description of activities to be conducted rather than a formal research protocol. A formal research protocol would incorporate: a detailed definition of the health problem; the operational problem; specific research questions to be answered; a better definition of decision variables; data collection methods; sensitivity analysis; and testing of alternative interventions on a quasi-experimental basis. As it now stands, the 12,000 available pre-treated nets are being distributed very rapidly and it is conceivable that the entire stock will be distributed without knowing fundamental issues such as the:

- net utilization at the household level;
- optimum sales price;
- optimum retreatment method; and
- user profiles.

Recommendations

Since this is an operations research project, a more rigorous research protocol formulation is needed. A cohort approach is suggested, with the longitudinal follow-up of purchasers, and a definition of decision variables to be examined.

AFRICARE Berberati Child Survival program

Objectives

AFRICARE received US\$ 900,000 to implement a three-year community-based Child Survival program in the Berberati area of the CAR. The ultimate goal is to create community ownership of child survival techniques and practices by training health staff at the provincial, district and village levels, and supporting and reinforcing the service delivery system that exists in the Berberati district. Interventions are to include:

- ORT promotion;
- immunization promotion;
- promoting measures to reduce the transmission of malaria;
- preventing high-risk births;
- promoting appropriate ARI case management through training and supervision of health personnel and the availability of essential medicine;
- AIDS prevention education and counseling, and the promotion of condom use; and
- demonstration of a cost recovery scheme in a rural community.

Accomplishments

AFRICARE is making a valuable contribution to the understanding of how, in practical terms, a village can assume responsibility for ownership of child survival techniques and practices. The conceptual basis for the project, with its focus on integrated village-based health services, has the potential to provide a useful framework for the extension of health services nationwide.

AFRICARE placed a particular emphasis on support strategies by strengthening training and supervision, reaching communities and influencing health behavior, improving the ability of health workers to solve problems, and empowering community members, particularly women, to take responsibility for their health and the health of their community. AFRICARE has directed a great deal of its resources toward influencing health behaviors that impact on family life. AFRICARE works closely with the Peace Corps in community-level initiatives for health talks,

condom social marketing, and community organizing for the resolution of health and social problems. Specifically, interviews with community members indicate that through community programs, activities and training, AFRICARE has addressed infant immunization, child care, midwifery services, birth spacing, well baby care, and basic health and hygiene. In addition, mothers are now more willing to seek medical services for such ailments as fevers related to malaria and diarrhea, and many now have vaccination cards for their children. Furthermore:

- All the women and men interviewed were satisfied with the IEC activities in regards to primary care offered by AFRICARE.
- All the lead animators as well as the women of the villages that were not chosen want to be involved in AFRICARE activities.
- Most of the women attest to using health care services in serious cases of diarrhea, infectious respiratory diseases, and malaria.
- If the occasion arises, they also resort to traditional healing.

In short, there is the clear impression that villagers are ready and willing to take charge of their health, that village health committees are functioning and that, in those villages where a rudimentary health system is in place, such a system is quite likely to survive on its own should the involvement of AFRICARE cease.

Problems/Constraints

Coordination with the MOH

One major constraint for the AFRICARE project in fulfilling its objectives for continuing and expanding its program is the lack of more effective collaboration with the Ministry of Health at the regional level. It appears the MOH needs to designate a specific representative to assist in program expansion and replication, particularly in establishing village pharmacies and increasing the availability of services.

Community understanding, acceptance and satisfaction

AFRICARE originally identified 15 villages for program implementation. The program has been implemented in nine villages. The team visited seven of the nine villages where the program is in place and two of the six villages where the program was not implemented.

Villagers who were interviewed in Sango mentioned the following problems:

- A majority of the women complained about the lack of available care services, medicines, potable water, and prenatal services (necessary prenatal equipment) in the concerned villages which are often far from the regional health center.
- Mothers have to go several kilometers by foot more than once to vaccinate their children at the nearest health post. (Around 20 kilometers from Mbamba to Bania where the health post is located without meeting the medical personnel.)
- Vaccination services are often infrequent.
- The target population here once again appeals to AFRICARE to help them in procuring health care services and medicines and not to give them only health education messages that they have been taught by others long before AFRICARE.

In the area of sustainability and replicability, several issues need to be addressed:

Initially, 15 villages were to be involved in the project. The intervention of AFRICARE would have led each village to have at its disposal a village health committee, at least one community health worker/health post attendant, one village health post, one trained midwife, one mini-pharmacy with a limited number of essential drugs, and a simple management system to ensure the basic accounting of funds as well as some minimum capability for the replenishment of stock.

Currently, nine villages are active of which seven have a health post. Five villages have been "rejected" because they did not meet the necessary prerequisites to take part in the project. In active villages, health education activities have been conducted by local health workers with the assistance of four "animators" based at the AFRICARE office in Berberati. It appears that the degree of knowledge of villagers pertaining to hygiene, sanitation and health-promoting practices is appreciable even though it is not always evident that this knowledge translates into improved practices. In some villages, a significant number of latrines have been built and they appear to be in use. In addition, mothers appear to have an adequate knowledge of ORT and seem intent on having their children vaccinated.

This increased demand for services is impaired by a problem of access. While mothers want their children vaccinated, they must walk more than 10 miles to the nearest vaccination post, as mobile team visits to the village are sporadic. Those village health workers who were trained at the regional hospital appear capable of prescribing some basic drugs, but these drugs were generally unavailable at village pharmacies. Village health workers do not receive any technical supervision pertaining to their clinical skills and practices. Furthermore, referral services are not available and MOH personnel at referral sites and at the regional level have little implication in project implementation. Also, government health facilities are not well regarded by villagers.

The evaluation team was not made aware of a documented approach to organization for villages which pass the initial test, nor does a specific step-by-step strategy to eventually enroll non-participating villages appear to exist. Furthermore, AFRICARE does not appear to have retained the necessary local professional expertise for community organization. These factors adversely affect the potential for replication; on a nationwide basis, villages cannot be "rejected," and assuming all villages are enrolled, some standardized approach becomes desirable to avoid repeating mistakes in a very difficult endeavor.

Recommendations

To reach its goal of providing a basic health services package that is accessible at the village level, AFRICARE should build on its efforts to improve access by villagers to services. The specific package contents should be developed jointly with villagers with a view to ensuring its sustainability once AFRICARE leaves.

Training animators to organize and facilitate activities is a very important part of the sustainability process. Since there seems to be some misunderstanding of the role of animators, this can be corrected by revisiting the program objectives, their role, and intermittent refresher training. Animators are held in high regard by the villagers and their role continues to be very important. The regular meetings and refresher training as planned should be continued. Present animators can also be included in the training process as the program expands and new leaders are identified.

In general, AFRICARE's activities were positively perceived by the community. Although some of the needs and requests of villagers may be beyond the scope of AFRICARE project objectives, activities that foster independence and empowerment can be continued and new ones implemented with participation by villagers and/or village animators. This is particularly true of the villages which have not as yet been integrated into the project. Since the public sector is usually weak in its capacity for grassroots community organization, AFRICARE might consider finding a local partner (an indigenous non-government organization) with grassroots development experience, and strengthen the partner's capacity to work in other communities and possibly nationwide. AFRICARE itself could strengthen its local expertise in this area by hiring a Central African experienced in community organization methodology. The methodology used would need codification and better documentation. Activities could include leadership training and the development of women's groups.

Demographic and Health Survey

The Demographic and Health Survey (DHS) used a sample of 5,884 women, 15-49 years old, and 1,729 men, 15-59 years old. Field work was conducted between September 1994 and March 1995 by the National Census Office with the assistance of Macro International and the financial support of USAID, UNICEF and UNFPA

Accomplishments

Completing the survey is an outstanding success of the SCS project and illustrates the feasibility of effective partnership between various actors, namely in this instance the Ministry of Health, the Ministry of Plan, USAID, UNICEF, UNFPA, MACRO, and the National Census Office. Preliminary survey results became available quickly and ahead of schedule. A detailed review of these results will await release of the final report.

The principal results are as follows:

Fertility: five children per woman
eight percent of women aged 45-49 never had a child. (This is an indirect measure of infertility.)

Contraception: Knowledge: 68 percent of women know at least one modern method
Use: three percent of women use a modern method

IMR: 97/1000 for the period 1991-1994
Risk of dying by age five (0q5): 157/1000

Prenatal Care: 67 percent of women who delivered during the preceding three years had at least one prenatal consultation

Delivery: 46 percent of births are attended by a trained professional

Vaccination (children 12-23 months old):

DPT3: 48 percent
OPV3: 46 percent
BCG: 77 percent
Measles: 52 percent

ORT: 23 percent of children under three had diarrhea during the last two weeks preceding the survey; of those, 28 percent received ORS-based solutions and seven percent a home-based solution (total 35 percent).

Breastfeeding: 99 percent of infants are breastfed at some point
four percent are exclusively breastfed for the first four months of life

AIDS/HIV: Knowledge: 93 percent of women and 99 percent of men know of AIDS
Practice: 75 percent of women and 85 percent of men claim to have a strategy to protect themselves against AIDS; 42 percent of women and 49 percent of men claim to use a condom for protection.

Project Management Issues

USAID/AFR/WA management

USAID worldwide uses a number of mechanisms for project oversight. In countries that have a USAID mission, direct oversight is easily feasible as staff is on site to oversee activities. Another model is that of the PVO grants managed by the BHR/PVC office. Such grants are overseen directly by Washington which may subcontract to a separate agency for such activities as proposal assessment, conducting baseline, mid-term and final surveys, as well as devising methodologies for conducting such surveys. Thus, USAID has a long history of distant oversight of country projects.

The implications of a Small Country Strategy are not very different from those applied in the past by the BHR/PVC office. Such a program does not necessarily need a full-time USAID representative in-country to work efficiently, nor do the USAID contractors/grantees in such instances feel, or need to feel, that they represent USAID officially, or unofficially.

In the CAR, however, the situation of the two CDC advisors appears to have led to some misunderstandings, related in part to the fact that CDC is an US government entity, and that the CDC advisors are not TAACS advisors. It is unlikely that the problems would have occurred if AFRICARE and PSI were the only actors involved.

US Embassy and Advisor oversight (for management and services)

The change in project design, with the creation of four separate, autonomous components (CDC, PSI, AFRICARE, and DHS) and the lack of an overall Chief of Party, placed an unexpected burden on the ALO to whom some Chief of Party tasks were effectively delegated without the necessary authority or wherewithal to assume them.

Currently, the project is run via: a PASA between USAID and CDC which is administered directly in Washington, D.C., and Atlanta, Georgia; grants to AFRICARE and PSI; and a contract with MACRO for the DHS. Because of the linkage mechanisms between USAID and its partners, direct oversight responsibility by USAID is looser than if Cooperative Agreements had been signed between USAID and the organizations involved. The fact that CDC is a federal organization, as noted before, also imposes restrictions on the type of oversight that could be envisioned. On the other hand, USAID has some statutory oversight responsibilities pertaining to the use of funds which it cannot easily delegate to another entity outside of USAID.

While the basic ALO model appears sound, it seems that it would function best when a separate Chief of Party has the defined responsibility of overall project coordination. In the absence of a Chief of Party, USAID might consider a number of options which are presented in the section on recommendations.

Project Coordination

Four coordination levels were identified:

1. internal coordination of project activities within the Directorate of Preventive Medicine;
2. internal coordination of project components between the CDC, AFRICARE, PSI, MACRO, the ALO, and USAID/W;
3. external coordination with other MSPP Directorates; and
4. external coordination with other donors.

While coordination for levels one, three and four would logically be the purview of the Director of Preventive Medicine as National Project Coordinator, that for level two would appear to be more the ALO's responsibility.

Coordination has not been a strong suit of this project. Within the Child Survival project components, (i.e., in the Directorate of Preventive Medicine), activities pertaining to project planning, budgeting, implementation, and financial management are done by either the CDC Technical Officer with little input from the National Coordinator, or they are developed by program managers and presented to the Technical Officer as a "fait accompli."

The regular bi-weekly meeting of respective chiefs of party with the ALO provides a venue and opportunity for coordination between the USAID direct funding recipients, (CDC, AFRICARE, PSI, MACRO), and the ALO. However, meeting participants report that such occasions are not specifically used to study how the various project components could work better together.

As for coordination with other MSPP Directorates, efforts by the Minister of Health to hold regular staff meetings are now beginning to bear fruit and joint planning sessions are now being conducted with a view to developing better integrated programs.

Other international actors involved in health in the CAR have voiced their concern that the USAID program in the CAR contributes to a perpetuation of vertical organization at the same time that donor agencies are trying to integrate services in the field by promoting the notion of a minimum services package.

Recommendations

Project oversight: The ALO system as it currently functions in the CAR is basically sound, as it reflects the contractual nature of the relationship between USAID and the fund recipients, (CDC, PSI, AFRICARE, and MACRO), as well as statutory regulations pertaining to the administration of USAID programs. USAID should consider improving the ALO system in the CAR by:

- ensuring better, more formalized lines of communications between the ALO and field project managers so that the ALO maintains a good understanding of project activities;

- outlining specific areas where the ALO has the authority to intervene; and
- through a project-funded Personal Service Contract, financing a project manager who would be supervised by the ALO but have oversight responsibilities over the entire project.

Coordination: The MOH could take the lead in the creation of a technical committee on health services presided over by the Director General and composed of the heads of the technical services at the Ministry and various experts provided by donor agencies. Committee members could organize themselves into various subcommittees focusing on specific aspects of service delivery (training/supervision, MIS, finances, curative care, etc.) depending on their interest and expertise. Subcommittees could meet once a month, or as often as necessary, while the entire committee could meet quarterly to review progress made and make necessary adjustments in program implementation.

At the SCS project level, technical officers from each project component could use their bi-weekly meeting to discuss coordination issues and joint problem-solving, and optimize opportunities for collaboration.

VI. FACTORS AFFECTING PROJECT IMPLEMENTATION

Socio-political context

The major factor here, aside from widespread poverty, is a nationwide strike which effectively closed down health institutions intermittently for prolonged periods between 1991 and 1993.

Geo-demographic context

The CAR is a large country with a widely dispersed population. The road network is limited and public transportation scarce. The government and population have a pronatalist attitude. The government provides a family allocation for newborns of public employees.

Institutional context

The structural and organizational constraints identified in the project paper, which relate principally to the excessive centralization of the MOH, to the vertical organization of services and lack of an adequate management system for both program and financial management, are being partially addressed by the project. The operation of an efficient cost-recovery system under the control of institutional management boards will create a strong impetus for "de facto" decentralization, as these local boards will have effective control of their institutional resources. Concurrently, the SCS project's basic design appears to have contributed to the persistence of a vertical approach to service delivery, as it was designed to essentially continue CCCD activities.

Some of the constraints faced by the MOH were observed by the evaluation team during field visits to a number of health facilities and regional offices.

Health personnel working conditions

Salary allocations to MOH employees are low. With this low salary, employees working in towns and villages where they have no family must pay rent and buy food. Many employees resort to an unending cycle of loans to make ends meet. There is also the temptation of freelance private practice, at times using MOH-owned supplies and drugs.

Most employees work in an environment of older buildings dating back to the colonial period. Because of the antiquated pattern of land use on hospital campuses, buildings are dispersed and employees must walk long distances to go continuously from one building to the next. Typically, one finds separate pavilions for internal medicine, surgery, obstetrics-gynecology, pediatrics, and the outpatient department. Because of low utilization, each building may house only two or three patients, most beds being in a complete state of disrepair. Rather than consolidate all in-patient services into one of the more functional buildings, staff finds it necessary to respect the old colonial pattern, thus making it more difficult to oversee patient care and maintain adequate cleanliness in all buildings used.

Personnel distribution and facility utilization

This situation results in a "penurie/plethore" paradox: peripheral facilities do not usually have the full complement of staff needed to operate the institution. A district hospital, for example, may not have a physician. At the same time, because of the low utilization rates, most employees are underutilized, or there is inefficient use of their time as they travel from building to building. Consolidating hospital activities into a single building would seriously reduce the number of employees needed to operate a facility.

Quality of care at health facilities

The quality of care suffers from the following:

- patients are housed in older buildings which lack basic amenities;
- drugs, equipment and supplies are frequently inadequate;
- many hospitals are without electricity;
- clinical supervision is insufficient; and
- review of negative outcomes is not systematically performed.

Structure of the Central Office of the MOH

The MOH is currently organized in such a way that its implementing arms (i.e., the Regions), answer to a central unit, the General Secretariat, which is inadequately staffed to provide the

necessary level of support. Requests from the Region are transferred formally or informally to the appropriate technical directorate (such as Preventive Medicine or Community Health), down to the appropriate service, and up the ladder back to the Region. Regional Officers complain that the cumbersome process is fraught with delays.

Although each Region has a budgetary allocation, the amount available is not immediately accessible to Regional Heads. They submit proforma or vouchers for service rendered and the Treasury must pay the outstanding accounts. This slow process has led many providers of goods to refuse to supply Regions since they do not know when they will be paid.

Efforts are being made to improve the coordination of activities at the Central level between the various directorates, and within each Directorate, between the various services. The responsibilities of the Directorate of Preventive Medicine cover a vast array of services including the key child survival interventions (i.e., EPI and CDD), training, and operation of a sentinel post system for epidemiologic surveillance. At the same time, some of the other Directorates seem to be underutilized.

Finally, the impression remains that MOH staff spends an inordinate amount of time preparing very detailed policy and planning documents while the follow-through, (i.e., service delivery), is lagging. The Planning Directorate is now making a conscious effort to synthesize all of these documents into a manageable guide for a more integrated service delivery approach that includes integrated supervision.

Program implementation and supervision

The evaluation team visited several health facilities where the division of tasks along vertical program lines persists. At the health post level, for example, the person in charge of weighing babies will not do vaccinations and the vaccinator does not provide curative care. Thus a facility may be staffed by four or five people, each with a separate responsibility, while it sees less than 10 patients a day.

At the district and regional levels, supervisory teams go out on separate days, at times using separate vehicles which are kept segregated by program, for separate supervision of EPI, reproductive health or HIV prevention activities. While field personnel stated that donor policies preclude using assets more liberally, steps are being taken centrally, with donor concurrence, to promote the concept of integrated supervision.

Plethora of positions and titles, and lack of managerial expertise at the facility level

The CAR employs personnel with a multitude of technical backgrounds and job positions, ranging from physician to senior technical health officer, various levels of nurses, "secouristes," "matrones," and health agents. Curiously, most administrative positions even at larger facilities are taken up by technical health personnel, and there is a dearth of accountants, bookkeepers and

formally trained managers. While this system might have been adequate when all services were free, it might require modification in view of the control systems to be put in place in any given cost recovery scheme.

MOH responses

The MOH is making commendable efforts to eliminate some of these problems. On the issue of personnel salaries, it is anticipated that 30 percent of fees collected at facilities will be used to supplement staff income; efforts are also being made to re-equip some facilities and renovate some buildings; the new drug and supply procurement scheme should impact positively on the availability of commodities at health facilities and on the quality of care.

It is not clear whether the MOH might currently consider strengthening the office of the General Secretary, by assigning to it staff to serve as backstoppers to regional directors. In addition, the cost recovery unit is now devoid of adequate auditing and data management capabilities. Nor is it clear how the new concepts of integration and supervision will impact on the respective responsibilities of the various Central Directorates. Since the MOH review of these matters is not complete, any recommendation pertaining to the matter of restructuring may be premature.

Finally, efforts are now being undertaken to enlist the participation of the Medical School in the development of a postgraduate curriculum on health management issues.

VII. PROJECT SUSTAINABILITY

The project sustainability component rests on four major strategies:

1. transfer of capabilities for policy development and planning to MOH counterparts;
2. transfer of technical capabilities through training and technical assistance;
3. implementation of a functioning management information system to facilitate the collection of data for decision-making; and
4. implementation of a cost-recovery program to increase MOH financial resources to allow it to pay for recurrent costs.

The MOH's policy and program planning capabilities seem to have been strengthened as witnessed by the existence of policy documents covering most aspects of service delivery. However, many of these documents are not reader-friendly, and suffer from an excess of details and overly ambitious objectives and targets.

The operation of the National Health Information System (NHIS) remains a problematic area. The NHIS is responsible for the collection of service statistics. The Health and Management Information System is cumbersome and the most recent report produced presents three year old data. The SCS provided support to the development of a sentinel post system of reporting which

focuses on a limited list of key illnesses. After a long hiatus, the sentinel reporting system is back in operation. While epidemiologically sound, it does not provide the requisite operational data for decision-making at the facility, district, regional or central level.

In terms of cost recovery, the evaluation team examined a number of factors pertaining to the capacity of the newly-designed system to adequately finance the health sector. The team reviewed the 1995 MOH budget and conducted a study of expenses incurred by patients attending the three Bangui Hospitals. In addition, the team used assumptions on health sector financing needs proposed by the World Bank.

1995 MOH budget

The total CAR operational budget for 1995 is 68.9 billion CFA or \$142 million of which seven million are assigned to the MOH (4.95 percent) or US\$2.42 per capita. To this must be added an "investment" budget of US\$9.34 million which in fact finances the operating costs of many priority health programs such as EPI and CDD. Thus, for 1995, the MOH is expected to have over US\$16 million at hand for its programs and projects.

Of the regular "operating" budget, 71 percent is devoted to salaries and the remainder to other expenses. Of these, 48 percent is used for the operation of the three Bangui hospitals. Given hospital operations costs and central office costs, less than 10 percent of the non-personnel regular budget is left for community health and primary health care activities.

World Bank data

The Bank has estimated public expenses for health in the CAR at US\$3.58 per capita and household expenses at US\$6.20 per capita, for a total of US\$9.78 per capita per year (1990 figures). Because of the devaluation, it is difficult to estimate 1995 household expenditures. Should the same ratio be maintained, the revised estimate would be US\$4.19 for a total of \$6.61, or US\$19,830,000 for the country.

Given a country at the CAR's development level, the World Bank estimates that US\$6.70 per capita per year is enough to guarantee a minimal health package which includes the operation of regional hospitals. This suggests that the potential exists for the CAR to meet this expense level.

Some barriers which have prevented a more efficient use of resources are being slowly removed by the government. These are discussed below. The results of the *Bangui Patient Expenditure Study* that the evaluation team conducted provide additional support for the notion that a significant amount of resources can be mobilized from the population.

Bangui Patient Expenditure Study

The objective of the study was to determine the expenditure levels, by category of expense, of patients being treated at the three Bangui Hospitals (CHU, Amitie, and Communautaire).

The design was a descriptive survey of a convenience sample of hospital outpatients and of patients being discharged on the days of the study. The setting included "Complexe Hospitalier Universitaire," "Hôpital de l'Amitie," and "Hôpital Communautaire" in Bangui.

Participants were patients who had either attended an outpatient clinic or had just been discharged from the hospital.

The outcome measures were the out-of-pocket expenses incurred by the patients or caretakers for given categories of interventions.

Results covered 165 patients of whom 98 were in-patients and 67 outpatients. The average expenditures per patient for various cost centers were as follows (in FCFA):

	In-patients	Outpatients
Consultation fee	1262	1367
Drugs	8446	4202
Lab	3179	1373
X-ray	1647	827
Room	5338	
Other	6334	184
Total	26206	7953

In summary, the average in-patient spent about US\$54 and the average outpatient spent US\$16.40 for care. The range was \$2.00 to US\$727 for in-patients, the latter amount being spent by an individual who was being treated for liver cancer. For in-patients, drugs constituted 32 percent of expenses, while for outpatients, drugs constituted 53 percent of expenses. For outpatients, the range was \$1.00 to \$240.

The average number of hospital days was nine. The average patient expense per day was \$6.00.

These numbers represent an underestimate of expenses because patients are likely to forget some expenses and because the report does not include patients who died in the hospital and who therefore might be anticipated to have had a more severe illness. The expenditure levels suggest that the population is willing to contribute significantly to the cost of health care.

VIII. CONCLUSIONS

This review has touched on some implementation issues and suggested mid-program decisions and changes which need to be considered. The project has adopted very ambitious goals and objectives but, in retrospect, does not appear to have committed the necessary resources for these objectives to be met in their entirety, particularly in view of the inauspicious national context when the project began. While the terms of assignment of the HIV/AIDS CDC Advisor appear to have been reasonable and well defined, that of the Child Survival Advisor appear to have been inordinately broad, and it appears further that she did not benefit from the necessary administrative support attendant to detailed project management. This being said, the report highlights some the project's solid accomplishments, in particular, the advances in the areas of HIV/STD, condom social marketing and cost recovery, and completion of the DHS survey.

The principal challenge faced by the MOH is to ensure that the population of the CAR has access to quality services at the various health facilities in the country. To help the Ministry meet this challenge, the project has attempted, in the mode of the CCCD project, to consider each intervention separately and to develop for each intervention national policies, action plans, training programs, supervisory schemes, and data collection systems. The extent to which these policies and plans have, or have not been implemented successfully, cannot be imputable to any one individual or any one Department or Directorate. One visit to any typical health facility in the country will bring a quick understanding of the fact that formidable changes are needed to make these facilities attractive to clients, who are now being asked to pay for services that they previously received for free. This issue has not been adequately faced and the team suggests that the project do so on a small scale, focusing on child survival interventions, cost recovery, supervision, and data collection from the bottom up, (i.e., from the perspective of a small facility), in an integrated manner. Where enough lessons have already been learned, such as in the area of HIV/AIDS/STDs, it is time to think of going to a larger scale as the AIDS epidemic continues to spread. In the remaining two years, the AIDS/HIV advisor can use the expertise of the pilot project to assist the CAR in planning for a major expansion of this effort.

In terms of project management, it appears in retrospect that the project design was changed (i.e., new arrangements were adopted such as grants to AFRICARE and PSI), without much consideration being given as to how these separate elements could be coordinated effectively. It might have been thought that the ALO system would provide the requisite coordination, but this has not proven to be case in view of the ambiguous definition of the ALO's responsibilities. However, the team could not clearly discern the extent to which this element had any significant impact on the project.

The team did not have the requisite financial data, particularly from the CDC, to assess whether additional funds would be necessary to implement its recommendations. In some instances, such as with AFRICARE, the team believes that the funding level is adequate to improve access to health service. A down scaling of the massive training activities should result in significant

savings which could be applied to the small scale field activities suggested and the contract extension of the two advisors.

APPENDICES

APPENDIX A

QUESTIONNAIRE POUR LES PERSONNES DU CENTRE DES MST

Hôpital _____

Age _____

1. Est-ce votre première venue à cette clinique?

Oui _____ Non _____

b. Si non, combien de fois êtes vous venu ici?

_____ fois

2. Pourquoi êtes-vous ici?

3. Avez-vous reçu des informations à propos du HIV/MST?

Oui _____ Non _____

4. Quelles sortes d'informations?

5. Avez-vous reçu un traitement contre les MST?

Oui _____ Non _____

6. Quel type de traitement?

- a) antibiotique
- b) autre _____

7. Avez-vous suivi normalement le traitement?

Oui _____ Non _____

8. Après le traitement, êtes-vous venu pour le contrôle?

Oui _____ Non _____

9. Le conjoint, était-il au courant?

Oui _____ Non _____

10. Avez-vous reçu des conseils?

Oui _____ Non _____

11. Est-ce-que ces conseils vous ont été utiles?

Oui _____ Non _____

12. Comment?

13. Vous a-t-on donné des préservatifs?

Oui _____ Non _____

b) Si non, où vous en procurez-vous?

14. Utilisez-vous les condoms tout le temps?

Oui _____ Non _____

b. Si non, pourquoi?

15. Avez-vous payé pour les services pour HIV/MST?

Oui _____ Non _____

b) Quels services _____

c) Combien?

16. Que peuvent faire les institutions sanitaires pour réduire les MST?

17. Avez-vous reçu satisfaction?

Merçi Beaucoup

QUESTIONNAIRE POUR LE PERSONNEL DU CENTRE DES MST

Hôpital _____

Personnel _____

1. Travaillez-vous en collaboration avec le ministère de la santé?

Oui _____ Non _____

a) Si oui, comment?

b. Si non, pourquoi

2. Quelle est votre population cible?

3. Pensez-vous qu'elle comprend le danger de l'infection par VIH/MST?

4. Avez-vous une méthode de notifier les partenaires?

Oui _____ Non _____

5. Si oui, quel impact a-t-elle dans la réduction des MST?

6. Avez-vous des conseils individuels pour la préservation contre le VIH?

7. Vos conseils, profitent-ils?

b) Comment?

8. Distribuez-vous des condoms?

Oui _____ Non _____

9. A quelle fréquence?

- a. de jour
- b. de semaine
- c. de mois

10. Quelle méthode de dépistage avez-vous?

- a) Elisa
- b) Western Blot
- c) autre _____

11. Donnez-vous des préservatifs?

Oui _____ Non _____

a) Si Oui, combien?

b) Si non, pourquoi?

12. Demandez-vous souvent aux malades de revenir après le traitement pour un contrôle?

Oui _____ Non _____

13. Comment faites-vous pour être sûr qu'ils reviendront?

14. Quels obstacles s'opposent-ils à la mise en place des services de prévention du VIH et autres MST?

15. Quelle est la meilleure méthode de prévention?

16. Que peuvent faire les institutions sanitaires pour réduire les MST?

17. Avez-vous reçu satisfaction?

Merci Beaucoup

QUESTIONNAIRE POUR LES MERES

Hopital _____

Age _____

1. Combien d'enfants avez vous? _____

2. Age de chaque enfant? _____

3. Nombre d'enfants decedes? _____

b. Si oui, quelle est la cause?

4. Combien de fois etes- vous allee a ce centre medical?

_____ fois

5. Quels types des services votre enfant a-t-il recus?

- a) immunisation (les vaccinations)
- b) controle des maladies diarrheiques
- c) paludisme
- d) respiratoires aigues
- e) HIV/SIDA
- f) MST
- g) D'autres _____

6. Avez vous paye pour les services pour l'enfant?

Oui _____ Non _____

b) Quels services _____

c) Combien?

7. Quels types des services avez vous recus?

- a) immunisation (les vaccinations)
- b) controle des maladies diarrheiques
- c) paludisme
- d) respiratoires aigues
- e) HIV/SIDA
- f) espacement des naissances
- g) MST
- h) autres _____

8. Avez vous paye pour vous - meme?

Oui _____ Non _____

b) Quels services? _____

c) Combien?

9. Est-ce que vos enfants ont ete vaccines?

Oui _____ Non _____

b) Si non, pourquoi?

10. Si oui, quels types de vaccinations?

- a) Rougeole
- b) DPCT (diphtherie, cogueluche, tetanus)
- c) Poliomyelite
- d) Typhoide
- e) Fievre Jaune
- f) BCG
- g) Fevre Jaune
- h) Autre _____

11. Avez vous recu des informations sur la nature du vaccin et les effets secondaires?

Oui _____ Non _____

12. Avez vous un carnet de sante?

Oui _____ Non _____

a) Si non, pourquoi?

13. Si Oui, est - il a jour?

Oui _____ Non _____

14. Votre enfant, a-t-il deja fait la diarrhee au moins une fois?

Oui _____ Non _____

15. Votre enfant, a-t-il fait la diarrhee cette annee?

Oui _____ Non _____

16. A-t-il recu un traitement?

Oui _____ Non _____

17. Si non, pourquoi?

18. Si oui, lequel

a) antibiotique

b) SRO

c) Autre _____

19. Est-ce-que vous avez des problemes pour suivre correctment les prescriptions?

Oui _____ Non _____

20. Si oui, lesquels?

21. Votre enfant, a-t-il deja eu un acces palustre?

Oui _____ Non _____

22. A-t-il recu un traitement?

Oui _____ Non _____

23. Si non, pourquoi?

24. Si oui, lequel?

- a) Chloroquine
- b) fansidar
- c) quinimax
- d) nivaquine
- e) Autre _____

25. Est-ce-que vous avez des problemes pour suivre correctment les prescriptions?

26. Avez vous ete informee du service des soins maternel et
infantiles et planification familiale (SMI/PF)?

Oui ----- Non _____

27. Si oui, combien de fois y etes-vous allee?

28. Quelles informations avez-vous recues?

29. Est-ce-que vous avez generalement, des problemes dans ce
centre de sante?

Oui _____ Non _____

30. Si oui, lesquels?

31. Qu'avez - vous aime?

MERCI BEAUCOUP

APPENDIX B

APPENDIX C

EVALUATION TEAM

A. Augustin, MD, MPH
K. Bakatubia, MD, MPH
J. Bureau, MD
L. Bainilago
M. Kongbo
A. Gilliam, Ph.D.

BASICS, Team Leader
UNDP, Technical Coordinator
Pediatrician, University of Bangui
Professor of Anthropology, Bangui
Economist, Ministry of Plan
Behavioral Scientist, DCD