

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE CONGO PRIMARY HEALTH CARE			2. PROJECT NUMBER 698-0410.30	3. MISSION/AID/W OFFICE USAID/Kinshasa
4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 85/11			<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	
5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>82</u>	B. Final Obligation Expected FY <u>82</u>	C. Final Input Delivery FY <u>85</u>	A. Total \$ <u>701,000</u> B. U.S. \$ <u>500,000</u>	From (month/yr.) <u>June 1982</u> To (month/yr.) <u>July 1985</u> Date of Evaluation Review <u>August 1985</u>

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. USAID should obtain, for its files, a copy of the initial data from the health information system due in September 1985.	USAID	October 1985

<p>9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS</p> <table> <tr> <td><input type="checkbox"/> Project Paper</td> <td><input type="checkbox"/> Implementation Plan e.g., CPI Network</td> <td><input type="checkbox"/> Other (Specify) _____</td> </tr> <tr> <td><input type="checkbox"/> Financial Plan</td> <td><input type="checkbox"/> PIO/T</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> Logical Framework</td> <td><input type="checkbox"/> PIO/C</td> <td><input type="checkbox"/> Other (Specify) _____</td> </tr> <tr> <td><input type="checkbox"/> Project Agreement</td> <td><input type="checkbox"/> PIO/P</td> <td>_____</td> </tr> </table>	<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____	<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____	<p>10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT</p> <p>A. <input type="checkbox"/> Continue Project Without Change</p> <p>B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan</p> <p>C. <input checked="" type="checkbox"/> Discontinue Project</p>
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____											
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____											
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____											
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____											
<p>11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)</p> <ol style="list-style-type: none"> Dr. May Post Carol Payne, USAID/PHO Debra A. Rectenwald, USAID/DEO 	<p>12. Mission/AID/W Office Director Approval</p> <p>Signature: <i>[Signature]</i></p> <p>Typed Name: RICHARD L. PODOL</p> <p>Date: 14 Sep 85</p>												

EXECUTIVE SUMMARY

1. PROJECT TITLE AND NUMBER

Congo Primary Health Care, 698-0410.39

2. PROJECT DESCRIPTION AND DEVELOPMENT PROBLEM

The purpose of this project was to assist the Government of the People's Republic of the Congo in accelerating the implementation of Primary Health Care (PHC) in rural areas. Specifically, the focus was in Mossendjo District of the region of Niari. Realization of the project goals was expected to contribute significantly to an overall improvement in the health status of a rural population lacking basic health services, particularly for mothers and young children.

3. PURPOSE OF EVALUATION

This final evaluation of the Congo Primary Health Care Project constitutes a Lessons Learned Evaluation.

4. EVALUATION METHODOLOGY

The evaluation team spent a week in the Congo interviewing project officials and visiting the project site. The team also reviewed project documentation on file.

5. FINDINGS

The health information system has yet to produce any accumulated data on the Mossendjo Health District. It has taken the LOP to design the system and lay the groundwork. Other data were not available because the PHC project staff determined that such data were either impossible to collect with the current health information system or useless as indicators of project progress. The Enlarged Program of Immunization has been successfully implemented. The PHC staff is collaborating with government health employees to implement the project. Although ideally this should lead to a sustainable project, in reality it has been difficult for project implementation. Dispensary nurses are supported and selected by the Ministry of Health. Sometimes a lack of control over personnel selection has made the project less effective.

6. LESSONS LEARNED

To demonstrate a measurable effect on health status due to primary health care activities requires a well-established health care infrastructure, base-line data, and a functioning health information system. The health information system should be simple and designed to provide information necessary for program monitoring, planning, and evaluation. Project activity targets should be developed by individuals who are thoroughly familiar with health care delivery systems and who can identify realistic health program outputs.

RECOMMENDATIONS

See PES facesheet.

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I. INTRODUCTION

This final evaluation of the Congo Primary Health Care Project constitutes a Lessons Learned Evaluation. The evaluation team was composed of Dr. May Post, Carol Payne USAID/PHO, and Debra Rectenwald USAID/DEO. The team spent a week in the Congo interviewing project officials and visiting the project site. The team also reviewed project documentation on file. The evaluation took place between August 7th and 14th, 1985.

The project evaluators would like to note that some of the data necessary to measure achievement of project activity targets was not readily available at the time of the evaluation. In some instances, the current health information service (HIS) will furnish the necessary data beginning only in September. In other instances, PHC project staff determined that the achievement of certain activity targets was either impossible to measure with the current HIS, or useless as an indicator of project progress.

No formal request was made by CARE/Congo PHC staff to revise the activity targets. CARE/Congo's formal recommendations for modifications of project activity targets, based on the December 1984 Gaffikin report, would have served the purpose of informing USAID of PHC staff intentions. CARE/Congo advised USAID the week before the evaluation that the Gaffikin report would serve as CARE's final evaluation.

II. PROJECT BACKGROUND

On June 14, 1982, CARE/Congo and USAID signed an Operational Program Grant (OPG) agreement funding the Congo Primary Health Care project with an AID LOP contribution of \$ 500,000. The stated purpose of the project was to assist the Government of the People's Republic of the Congo (GPRC) in accelerating the implementation of primary health care (PHC) in rural areas, specifically in the Mossendjo District of Niari Region. CARE delayed recruitment of a project advisor until the GPRC had signed the project agreement in October 1982. Thus, recruitment was completed, and the project advisor assumed his responsibilities, only in December 1982. There was, therefore, a 6-month project mobilization period.

In August 1983 a consulting epidemiologist conducted a baseline data survey in the Mossendjo district and designed a health information system (HIS) for the project. In September 1983, eight months after the functional beginning of the project, USAID conducted a progress evaluation. The evaluation team reported that, up to August 1983, project activities had focused on establishing a PHC infrastructure. Some of the necessary groundwork activities undertaken by the project team during the first eight months of project implementation had not been set forth in the original project design, (establishment of working relationships with local government and health-care authorities, the development of a data base and ongoing data collection system). The evaluation team also noted that the project purpose was stated in terms too general to be very meaningful. Despite these shortcomings, the evaluators reported that substantial progress had been made and recommended that the Project Assistance Completion Date (PACD) be extended by six months.

Based on the interim evaluation findings, USAID and CARE/Congo adjusted project goals, objectives, and activity targets. Project Implementation Letter (PIL) No. 1, dated April 16, 1984, extended the PACD to June 17, 1985 with the understanding that there would be no additional AID financial input. PIL No. 2, dated July 17, 1984, revised and summarized project goals, objectives, and activity targets.

From October through December 1984, a second consultant (epidemiologist) contracted by CARE/Congo analyzed the project's HIS, goals, objectives, and activity targets (Gaffikin, CARE/Congo, Oct.-Dec. 1984). The purpose of this analysis was two-fold: 1) to provide guidelines for the final project evaluation, and 2) to evaluate and make recommendations for the HIS. The initial project advisor resigned, and the current project advisor arrived on-site in December 1984. The current project advisor has drawn heavily on the Gaffikin report recommendations to redesign the project HIS.

III. PROGRESS IN RELATION TO DESIGN

A. Revised Project Activity Targets.

The output targets of this evaluation are the revised project activity targets. The original project targets were modified based on experience gained by the project staff during implementation, the recommendations made by the project's short-term consultant in epidemiology, and USAID's September 1983 progress evaluation. The revised targets appear below, with a statement of the progress made toward achieving the target.

1. Establish rural health training facility in Mossendjo. Achieved. May 1983.
2. Establish MCH center at Mossendjo. Achieved. December 1984.
3. Establish "Integrated Rural Health Center" encompassing the existing central dispensary and new MCH Center. Achieved.
4. Form a District Health Committee to involve local health committees in PHC planning and implementation. District Health Committee not yet formed. Accomplishment beyond project control.
5. Establish EPI warehouse in Mossendjo and extend cold chain. Achieved. Cold chain extension began November 1983. EPI warehouse established January 1985.
6. Establish pharmaceutical warehouse at Mossendjo Integrated Rural Health Center with three months stock. Achieved. Warehouse established June, 1984.
7. Develop and implement ongoing health information system. HIS is currently being revised. Initial accumulated data will be available September 1985.
8. Conduct baseline and endline morbidity and KAP surveys. Baseline surveys conducted. Endline Surveys planned for 1987.
9. Conduct an immunization coverage survey of the entire district. Completed by COCD/Congo.
10. Form 20 Community Health Committees. Achieved. Thirty-four health committees have been formed.
11. Develop VHW training of at least 16 among these VHWs in sanitation or epidemiology. Achieved.
12. Train 50 VHWs. (1983:23, 1984:19, 1985:8). Achieved. August 1985.
13. Complete training of at least 16 among these VHWs in sanitation or epidemiology. Refer to No. 11.

14. Management training for 27 Treasurers of VHCs (and 27 VHWs). Sixteen treasurers received formal training at the training center in 1984. Other treasurers have received informal on-the-job training from the FHC team.
15. Develop in-service training mini-courses for health personnel in FHC, Prenatal Care, Oral Rehydration Therapy, Malaria Treatment, and Nutritional Surveillance. Data unavailable.
16. a) Train 10 Traditional Birth Attendants (TBAs). Eight TBAs were trained by the FHC midwife in November 1984.

b) Train 6 health personnel in family planning. A training session in family planning (FP) methods took place in December 1984. Contacts have been made with the Family Planning section of the MCH Division, Ministry of Health, to use its manpower resources for training local staff. Yet, prior to the evaluation, the MCH had not provided FP training personnel to the MCH center.
17. Develop and produce training materials and guides for VHW trainers and supervisors. Achieved.
18. 26 Villages and 8 town neighborhoods covered by EPI vaccination services. Achieved.
19. Permanent EPI team selected and trained. In July 1983, a national EPI team gave on-the-job training courses to 16 people; 12 were from the district level and four were from the regional level. Of the 12 from the district only six are left; because of continuous turn-over rate of personnel, no permanent team has yet been selected.
20. Immunize 1500 children under three with measles vaccine. Achieved beyond target. 1606 children immunized.
21. Immunize 500 children under one with BCG vaccine. Achieved beyond target. 1044 children immunized.
22. Immunize 1400 children under four with 1 dose DPT/Polio. Achieved beyond target. 1924 children immunized.
23. Immunize 1200 children among the 1400 above with 2 or 3 doses DPT/Polio. Achieved. 1252 immunized of the 1924 above.
24. Monitor the growth of 1300 children under five in Mossendjo using growth charts. Data unavailable.
25. Monitor the growth of 110 children under five in 3 villages, using growth charts. Achieved.
26. Increase the number of deliveries in health facilities from 750 to 850. Data unavailable. Health facilities should be defined more specifically. They term can mean maternity centers, dispensaries, or the hospital. Based on available 1983 baseline data, 862 facility births are projected in 1985.

27. 80 deliveries performed by trained TBAs. Data unavailable. Registration forms were developed for TBAs as part of the revised health information system that was implemented in January 1985. An increase in the percentage of home deliveries attended by trained TBAs is an indicator of increased availability of basic health care for village women and should be encouraged.
28. 640 women have had 3 prenatal visits. Data unavailable. It is unclear from the target whether the prenatal visits were to be at the hospital, the maternities, or the dispensaries. To measure target achievement, attendance records from the hospital and maternity registers, provided the visits were documented as prenatal and included the breakdown for the type of visit (first, second or third), are required.
29. 390 women in rural areas have had 1 prenatal visit. Data not applicable. Hospital, dispensary, and maternity staff do not routinely document in attendance registers how many women coming for prenatal visits are from rural areas.
30. 200 urban women acceptors of a family planning method. Family planning activities not yet implemented. Delay in assignment of personnel by the MOH seems to be a very common management problem. Since this target has not yet been achieved, a survey to determine fertility patterns, desire for children, current health and family planning practices is highly recommended. This survey would serve as a basis for planning an effective family planning component in the PHC program.
31. 42 visits to dispensaries by PHC supervisor (1 visit/2 months). Data unavailable.
32. 300 visits by dispensary by Head Nurse/Supervisors to VHWs. Data unavailable.
33. 200 visits by VHWs to dispensaries. Not achieved. Because of transportation difficulties it does not seem reasonable to require the VHWs to travel to the dispensaries.
34. 200 visits by nurses from rural dispensaries to VHWs. Data is unavailable. Poor road conditions, vehicle breakdowns, and inactive supervisors will inhibit target achievement.
35. Increase in use of latrines and garbage pits by individual house-holds (25% of rural and 75% of urban are users). Data unavailable. From interviews with village health workers, however, it is probable that the activity target concerning the latrines will be met while the target concerning the garbage pits will not.

B. Prospects of Achieving Goals

Measurement of intermediate goals, anticipated for 1987, will indicate project impact. The intermediate goals are:

1. Reduce infant mortality rate by 25%;
2. Reduce mortality rate of children under five by 25%;
3. Reduce measles morbidity and mortality by 50%;
4. Reduce mortality due to diarrhea and dehydration by 25%;
5. Reduce the percentage of low birth-weight infants (less than 2500 grams) by 25%; and
6. Reduce the number of stunted children 4-30 months old by 25%.

Although it is difficult at this stage of project implementation to make definite predictions concerning achievement of intermediate goals, a brief discussion of each intermediate goal is appropriate. Reductions in infant and child mortality rate or the prevalence of malnutrition (intermediate goals 1, 2, and 6), for instance, may result from exogenous, unmeasurable factors such as increases in standard of living or improvements in the national health system.

The most reliable source of measles data (intermediate goal 3) is hospital records; birthweight data (intermediate goal 5) is available only from hospital or maternity records. Changes in these indicators are, therefore, measurable only in a subset of the total population and do not reflect changes in the community as a whole. None of these intermediate goals will provide a sensitive measure of primary health care (PHC) project efforts.

A more sensitive evaluation might consider variables likely to be affected by project effort, such as percentage of registered high risk mothers or malnourished children who receive appropriate follow-up, or increased vaccination coverage in the target population. The Gaffikin report serves as an excellent information source to design an evaluation demonstrating project effects.

IV. EXTENSION WORK

A. Health Information System

The Health Information System (HIS), designed to monitor and evaluate project variables and their effect on health status, has yet to produce any accumulated data on the Mossendjo Health District. Establishing such a system has been a tedious process. Original objectives in the Project Paper, which required the HIS to measure project effects in two years, were unrealistic; it has taken two years to design and set up the system.

In May 1983 CARE/Congo hired Richard Greene, an epidemiologist, for three months to design the health information system. The primary purposes of the HIS, according to Greene's report, were to identify health priorities and to monitor public health problems. Establishing a sustainable data collection system was an important objective.

When Mr. Greene began his work there was little on-going disease surveillance or data gathering in the Mossendjo Health District. Mossendjo hospital was forwarding records to the Ministry of Health, but keeping few records on hospital patients. The Central Dispensary, one of the two urban dispensaries, was collecting specific information on outpatients; however, this information was not being analyzed. In addition, no health information was being gathered in the villages.

Mr. Greene designed the HIS to be set up in three phases. He believed it was important to start at the hospital because mortality information collected there represents nearly all institutional-based fatalities recorded in the district (see Greene's report p. 24). Also, the hospital has ultimate responsibility for data collection in the district; whether or not the HIS is effective will depend on the hospital staff's ability to carry out this responsibility. The PHC team convinced hospital staff to collect monthly data on all patients. Mortality by cause and age was recorded, and several diseases were selected for monitoring. These included: measles, whooping cough, tuberculosis, polio, diarrhea, malaria, protein-calorie malnutrition, anemia, bronchitis, tetanus, diarrhea, pneumonia, schistosomiasis, and venereal disease.

In the second design phase of the health information system, a uniform data collection system for the two urban dispensaries was devised for outpatients. Disease counts for measles, whooping cough, diarrhea, bronchitis, malaria, and protein-calorie malnutrition were established (see Greene p. 26). Identical data collecting methods were extended to rural dispensaries once the HIS was in place in Mossendjo city.

Initially, dispensary nurses displayed animosity towards the HIS. Many nurses, already overworked and poorly paid, viewed the system as an additional burden and refused to participate. The PHC team spent much time educating health personnel on the importance of the HIS. All dispensaries in the district are now cooperating with the team.

To complete the data collection system, villagers were trained in primary health care and data collection. These village health workers complete a picture-coded form indicating whom they have treated and why. The form is used to monitor malaria, headaches, diarrhea, cuts, fractures, malnutrition, and dispensary and home deliveries.

The health workers are supervised by dispensary nurses. Each month a nurse is required to collect village health reports and submit the reports to either the hospital or the primary health care team. In addition, the nurse also submits his monthly health report and reports on supervision and vaccinations. (There have been several monitoring problems. Please refer to supervision in Section IV B.)

It is the Chief Surveillance Officer on the PHC team who monitors the HIS. He collaborates with the hospital on data collection. When data from the HIS become available, the Chief Surveillance Officer and his counterpart will prepare reports on well-child clinics, vaccinations clinics, maternal-child health care clinics, family planning, and on all the diseases monitored in the program. Charts depicting vital primary health care statistics in the district will also be available.

In December 1984, Lynne Gaffikin was hired to review the health information system. She recognized that much of the data collection proposed in the original project paper was irrelevant to or inappropriate for the measurement of stated goals and objectives. In her report, Gaffikin distinguished between goal-directed data collection and level-of-effort data collection. For example, one of the revised project activity targets reads "monitor the growth of 1300 children under five in Mossendjo, using growth charts". If monitor is to mean three consecutive weight for age measurements, the target reflects numbers of children weighed three times or more. This information is not useful for planning or evaluation purposes. A more meaningful target would read "Provide follow-up for X% of children under five years of age identified as malnourished by project staff".

Based on Gaffikin's recommendations, the new PHC project advisor has been strengthening the system's analytic and feedback aspects. His objective has been to improve the quality and continuity of the existing system. All HIS forms will be revised to gather simple but specific information for project monitoring or planning purposes. A system has been set up to check which dispensaries and health workers have submitted their monthly reports; soon there will be follow-up on all delinquent dispensaries and health workers.

The project advisor also altered the system to eliminate double counting of referral cases. Referred patients must now present slips from the dispensary or health worker to the nurse. The slips are tallied monthly and subtracted from the total number of treated cases. All these revisions have taken time - another reason why data is not yet available from Mossendjo.

The PHC project advisor estimates that some data will finally be ready for analysis by September 1985. He has agreed to send a summary of these data to USAID. The summary will be included as an annex to this report. Additional data, recently sent to USAID/Kinshasa by the project advisor, which were not

available at the time of the evaluation, have been placed in the project files.

In the future, the FHC team intends to focus on the system's feedback capabilities. Once data from the HIS are available, the team will discuss the results with dispensary supervisors and health workers. This will encourage the extension workers and allow them to better understand surrounding health problems. Confering on the results with the extension workers may also provide guidelines for planning community-level FHC activities.

B. Village Health Committees

Since October 1983, the FHC team has set up thirty-four health committees in villages with functioning political councils. Political officials on these councils were asked to serve on the health committees. The village health committees are responsible for identifying health problems and animating villagers. Each committee member is assigned a task: The president and vice-president are responsible for planning a health program; three secretaries head the vaccination, community sanitation, and latrine construction programs; and a fourth secretary and the treasurer control the funds.

The committees are asked to meet monthly to discuss health problems. Projects typically chosen by the committees include construction of water sources and latrines. Site visits show that the villagers have only a vague notion of the importance of community health care projects. Only about 1/3 of all village health committees meet regularly. Active committees seem to be determined by an active leader and/or isolation from other health facilities. Committees near the hospital or a dispensary do not function well because villagers prefer to listen to better-trained doctors and nurses who have the authority to do operations and give injections.

The committee is also responsible for selecting the village health worker (VHW) and collecting 3000 CFA to purchase the pharmaceutical kits (total cost estimated to be about 20,000 CFAs) for the VHWs. This contribution and the fees for treatment are to stimulate a feeling of responsibility and ownership in the villagers.

C. Village Health Workers

The village health worker (VHW) is selected by the health committee. A candidate must be married, literate, and able to earn his living in the village. Once the VHW is selected, he is sent to Mossendjo for a two week training session. At Mossendjo he learns to treat malaria, small burns and cuts, and diarrhea. He is also taught community sanitary practices such as latrine and water source construction. Fifty health workers have been trained since the beginning of the project.

The VHWs serve on the health committee. They are responsible for animating villagers to practice proper environmental and preventive health

measures. VHWs also contribute significantly to EPI activities, by keeping track of under-fives (the target population), identifying children in need of vaccinations, and reminding mothers about vaccination sessions. Each month the VHW is asked to record what actions he has taken.

At the end of his training, the VHW receives a pharmaceutical kit containing preventive and curative medicines including chloroquine, aspirin, bandages, and compresses, etc. to treat minor problems. Villagers pay for their treatment. Payments are turned over to the treasurer at the end of each month. Site visits attest to the fact that users are regularly paying for medicines received. In August 1985, a fixed fee for all drugs was instituted to facilitate fee calculations. Under this system, the cost of drugs is based on the age of the client, regardless of the disease category. Children under five years pay 10 CFA for each treatment, while children under twelve pay 50 CFA; anyone older than twelve pays 200 CFA for each treatment.

The area in which the FHC team is working is divided into three axes (Roads); on each axis is a dispensary. The dispensary nurse is to supervise all of the village health workers on his axis (approximately eight villages). The nurse receives formal training in primary health care at the Mossendjo training center. The project provides him with a motorbike and enough fuel to make monthly visits to the villages. He is also given necessary equipment to direct the vaccination program. Effective supervision is one of the most important determinants of project success. This is made clear by comparing the different axes. On the axis where the supervisor is active and concerned about his work, latrines have been built, water sources are clean, and medicines are available. On the axes supervised by inactive nurses there are few visible signs of the project's effect.

The dispensary nurses are supported by the government; the FHC team must work with the nurse selected by the Ministry of Health. Sometimes this lack of control has made the project less effective. In some cases the nurse is incompetent or is indifferent to primary health care activities. In other cases, the nurse is competent and concerned, however, shortly after training he is transferred. (Nurses are usually transferred every three years.) Other supervisory problems include poor road conditions and vehicle breakdowns. During the rainy season the slippery clay roads are often impassable; dispensary nurses cannot travel even ten kilometers to the next village. The nurses do not have the skills or spare parts to repair their motorbikes. When the bike breaks down, it must be repaired in Mossendjo. All these problems have prevented the extension network to work as effectively as it could.

D. Traditional Birth Attendants

Future FHC plans include the development of a maternal-child health care component identical to the village health worker component. Ideally, a traditional birth attendant (TBA) would work side by side with the health worker; however, the TBA would submit her picture-coded forms indicating the number of pregnant women, births (dead and live), and referrals in her village to the maternity. The FHC would like to see maternities built next to all the dispensaries. The TBA at the maternity, like the dispensary nurse, would be supervised by the hospital.

To date, eight TBAs have been trained. Training consisted of three days in the village (in the form of informal class/discussions) and seven days practical work in the hospital. A second training session is planned for September. One evaluator felt that the TBA training should take place completely in the villages so that it can focus mainly on skills upgrading and on improved home delivery techniques in the village (where TBAs have been practicing for centuries).

J. HEALTH PROGRAMS

A. Maternal-Child Health Center

The implementation plan called for the establishment of a maternal and child health (MCH) center by December 1983. The center was not opened, however, until April 1985. The opening was delayed because the building contributed by the GPRC for the MCH center was in serious disrepair and required much construction, renovation, time, and expense. There were several construction delays, the most significant being the June 1983 resignation of the CARE construction supervisor.

Renovation was finally completed in mid 1984, and the center became partially operational in March 1985 with the arrival of some equipment and personnel. The center became fully operational in April 1985, although the center still had many problems: there was no electricity, an inadequate water supply, and a lack of equipment (e.g. blood pressure cuffs). These problems are still present today. All pre-natal activities are conducted at the center, except laboratory work, which is done at the hospital.

The MCH center will provide basic health care to mothers and children who live near the center (1-2 hours walking distance) or who have been referred to the center by project-trained health personnel and traditional birth attendants (TBA). Since the center only became functional in April 1985, it is infeasible to expect much achievement at this date. Progress is being made, but not to the point where it has significantly improved the target population's health.

B. Well-Child Clinic and Nutrition

The well-child clinic focuses on growth monitoring and nutrition education. The Mossendjo MCH center staff record the weight/age of children five years of age and younger. Under ideal conditions, growth monitoring occurs at regular one to two month intervals, while nutrition education sessions, led by trained amateurs, coincide with the Tuesday and Thursday MCH clinics.

One of the revised project activity targets for well-child care reads "Monitor the growth of 1300 children under five in Mossendjo using growth charts". Since the objective of growth monitoring is the identification and follow-up of malnourished children, the project HIS has been designed to assess the percentage of children identified as malnourished who are monitored. Project staff have developed a system whereby a malnourished child who does not return for his or her weighing session receives a follow-up visit from MCH or EHC personnel.

At the village-level, VHWS monitor the growth of children five and under using armbands. Children identified as malnourished are referred to rural dispensaries and MCH centers for follow-up. One of the revised activity targets reads "Monitor the growth of 110 children under 5 in 3 villages using growth charts". This activity target was achieved only because EPI personnel weighed children attending immunization programs. The use of scales by VHWS for growth monitoring purposes has not, to date, been undertaken. Project

staff envision the possibility of a third training session for VHVs, focusing on nutrition and growth monitoring. VHVs who successfully complete the training course will be furnished a scale and growth charts for use in their village.

Project staff stress that it is useless to detect malnutrition if follow-up services are inadequate. At present, the project advisor estimates that most mothers of malnourished infants obtain little appropriate nutrition information from rural dispensaries and MCH centers. In the next phase of the project, a malnutrition reference center will be established at each of four MCH centers. These reference centers will combine nutrition education with an on-site feeding program. Most food for on-site feeding program will be provided by the family of the malnourished child, although agriculture project surplus and World Food Program donations will also be utilized.

C. Expanded Program of Immunization (EPI)

1. The Cold Chain. Immunization activities began after a cold chain was set up in Mossendjo district in August, 1983. The following November, immunization activities were extended to three rural centers and by May, 1984, immunization activities in Mossendjo were transferred from the hospital to the MCH center. The capacity and quality of refrigeration equipment in the cold chain is adequate. Portable equipment for transporting vaccines such as standard vaccine carriers, thermos, and backpacks are available in sufficient quantities. All vaccines used in the project are procured through EPI/Brazzaville.

Management of vaccines and equipment is satisfactory. A system of temperature recording and reporting has been set up at the rural dispensary level refrigerators for constant monitoring purposes. The refrigerators work well, but financing kerosene is foreseen as a problem. At present, CARE is supplying one jerrycan (20 L) of kerosene monthly. CARE should look into the possibility of using solar refrigerator systems to solve long-term kerosene problems.

2. EPI warehouse. The EPI warehouse, established in Mossendjo in January 1985, has no electricity; the freezers and refrigerators run on kerosene. The capacity of refrigeration equipment and the quantity and the stock of vaccines are sufficient. Depletion of vaccine stocks, procured at the regional level in Loubomo has occurred, whereas no such problems have occurred with vaccines procured in Brazzaville. EPI procurement activities need more regional support. There seems to be insufficient coordination between CARE and the regional level.

3. Vaccination strategy. Three distribution strategies are currently employed in the vaccination program:

- (a) The fixed strategy where mothers bring their children to the centers for vaccination;
- (b) The advanced strategy where the nurse from the center goes to the villages on appointed days and vaccinates children. This strategy has a disadvantage; -- it is impossible for the nurse to keep vaccination appointments in the rainy season because of poor road conditions; and
- (c) The assisted strategy which was implemented to assist nurses during the rainy season. The PHC staff from Mossendjo travel alone or with the dispensary nurse to the villages to vaccinate the children.

4. Vaccination schedule.

The fixed centers give all vaccinations every Tuesday and Thursday. The target age groups are:

BCG	...	birth - 12 months
DPT/Polio	...	3 - 24 months
Measles	...	9 - 36 months
Tetanus toxoid	...	expectant mothers after the 6th month of pregnancy

5. Supervision. Supervision by the PHC team is scheduled on Wednesdays, Thursdays, and Fridays. The team obtains the nurse's immunization schedules for the month and bases its own supervisory schedule on the nurse's. Although regular supervision is programmed, road conditions, fuel, maintenance and repair of vehicles are limiting factors.

6. Provision of services. At the time of our evaluation, statistics were unavailable to assess project activity targets; however, a vaccine coverage survey was conducted in May 1985 by OCCC/Congo. The results for Mossendjo are as follows:

<u>Vaccine</u>	<u>Coverage</u>
BCG	80%
DPT/Polio (1)	87,5%
DPT/Polio (2)	70%
DPT/Polio (3)	57%
Measles	59%

Extrapolating on the basis of the coverage survey, and making the following assumptions - (a) infant mortality rate is 90/1000, (b) under-five mortality rate is 215/1000, (c) the vaccine coverage holds for the entire age group being vaccinated, (d) in 1985, there are 5928 children under five in the target area, the following estimates can be made: 1,606 children under three were immunized with measles vaccine, 1,044 children under one were immunized with BCG vaccine, 1,924 children under four received one dose DPT/Polio and 1252 of the 1924 children were immunized with two or three doses DPT/Polio. These estimates are well above the project activity targets.

For women of childbearing age (15-44), one of the original intermediate goals calls for 10% of the women to be immunized with tetanus toxoid (TT) by the 24th project month. Over the past year however, TT was given only to pregnant women at the hospital and was not administered routinely to women of childbearing age. As of January 1985, TT inoculations became part of the fixed center and MCH center activities. Based on the 1983 baseline data birth rate of 40/1000, in 1985 there will be approximately 1347 pregnant women in a total population of 33,692. At the time of the evaluation, 821 (61%) expectant mothers had received a first dose of TT and 295 (36%) had completed the series of two.

Immunization activities are highly satisfactory. All project activity targets were reached. Age groups for the targets should be written to correspond to vaccine age, however.

D. Curative Activities

"Fifty percent decrease in the incidence of measles, gastroenteritis, malaria, and intestinal parasites among children under-five and pregnant women of the target population" was one of the project's intermediate goals. Disease incidence is an unreliable indicator of health status because it is dependent on reporting, utilization of services, and accurate diagnosis. It is also dependent on coverage. As coverage increases, reported incidence will increase, making it hard to determine whether there has been a true change in incidence.

To determine the community-level disease incidence, one must conduct a careful community survey. It is possible to get the cases reported by the health facilities, but it is more important to obtain those that did not use the health facilities. Without a community survey, this information would be impossible to obtain. Thus, the team has based the evaluation findings, not on whether there has been a decrease in the incidence of disease but on the services being provided to combat those diseases and the progress has been made. These services are described below.

1. Measles. From December through March 1984, a vaccination campaign against measles was conducted. In July 1984, the advanced strategy for vaccination was initiated, and nurses from the three fixed centers went to the villages to give measles vaccination. The high percentage of children vaccinated (59%) in the 12-23 months age group, indicated in the May 1984 vaccine coverage survey, reflects the campaign's success.

2. Diarrheal diseases. During their training, the VHWs are taught to recognize the signs of dehydration and to treat it with home-made sugar-salt solutions or to refer the patient to the dispensary. The VHWs also demonstrate the preparation at the home-made sugar-salt solutions to mothers. The 1983 KAP survey estimated that 9.5% of the women surveyed gave sugar-salt solution to their children. The 1985 survey, using cluster sampling, indicate that 10.5% gave sugar-salt solutions and that 37% went to a VHW when their children had diarrhea.

Re-trained VHWs will be taught to give oral rehydration salt (ORS) packets for dehydrated children in the dispensaries. The number of ORS packets sold will be documented in the VHW Registration Form. The number of ORS packets sold can be a measurable factor over the years.

Causes of diarrhea are not readily understood and the sugar-salt solution (SSS) is not readily accepted by mothers in the dehydration treatment. Studies should be conducted to obtain increased acceptance of SSS and oral rehydration therapy by mothers. Acceptance also depends on the health education activities of health personnel concerned and their information, education, communication (IEC) capabilities.

3. Malaria Originally, combatting malaria was not a project activity, although it has recently been initiated in conjunction with the CCCD project. Combatting malaria includes a single dose presumptive chloroquine treatment of all fevers in children under five years of age, weekly chemoprophylaxis of women during pregnancy, and curative treatment of malaria cases.

The single dose presumptive treatment of chloroquine 10mg/kg/day recommended by CCCD has not been totally accepted as yet. It has been noted that this regime certainly decreases temperature but relapses are more frequent with single dose treatment than with curative treatment of 10mg/kg/day for three consecutive days.

At present, malarial chemoprophylaxis of pregnant women is not conducted by VHWs. This is done at the hospital, rural dispensaries, and the MCH center because of logistical problems (i.e. insufficient stock). It is anticipated, however, that in the future, VHWs will be able to give malaria prophylaxis to pregnant women.

The reporting results of a KAP survey conducted in May 1985, indicated that of 283 children under five with fever during the prior two weeks, 129 or 54% had been seen and treated by a health worker. No other data on malaria prophylaxis was available at the time of our evaluation. The project staff still need to implement activities concerning the control and prevention of malaria and diarrheal disease. Data collection on important target diseases such as malaria, should be improved. Regularity of monthly reports turned in by VHWs is also important because the number of cases actually treated can be determined from the VHW registration form.

4. Intestinal parasites. How can one measure a decrease in incidence of intestinal parasites? How can one find "reliable" baseline data on the incidence of intestinal parasites? Even if mass stool surveys are conducted, are the data reliable? Unrealistic targets generate unrealistic expectations from individuals monitoring and evaluating project progress. Prior to the evaluation, no baseline data was available on the incidence of intestinal parasites.

VHWs implement target-related of environmental sanitation and health education activities (See VHW Section). It is anticipated, however, that the re-trained VHWs will be trained to provide Mebendazole, a vermifuge drug.

E. Pharmaceutical Warehouse

The implementation plan stated "Establish pharmaceutical warehouse at Mossendjo with three months stock". This stock was established in June 1984 with medications remaining from supplies ordered for the VHW kits. CARE obtains drugs and supplies for the warehouse from the Congo (Brazzaville), Kenya, and the United States. The warehouse staff is responsible for resupplying the VHW kits. When resupply is needed, the VHWs inform the VHC who in turn gives the list of orders to the nurse supervisor from the rural dispensary during his supervisory visit to the village. The supervisor then takes the list back to Mossendjo. Sometimes, the VHWs come to Mossendjo to submit their monthly reports and to reorder. The village must reimburse the VHW for transportation costs, so this is not done regularly. This should be encouraged, however, because it ensures regular contact between the VHW and the PHC team in Mossendjo. When the roads are good the supervisor has no problem traveling to the villages because he receives his transport costs from the project.

The villagers are charged for medicines and treatment. Charges for medicines are based on the actual cost of drugs, and the money obtained has been found to be sufficient to cover actual costs of drugs plus transportation costs.

Site visits attest to the fact that users are regularly paying for medicines received. VHW records also show that fees are collected from clients at most visits. While villages are generally poor, they have in practice paid for services they value. The user-fee system and the revolving drug funds established by the system seems to be the keys to a largely self-financing sustainable village PHC system in Mossendjo.

User fees in most PHC programs are in fact fees for medicines. A review of the VHW records revealed that everyone who is seen by VHW receives not only a diagnosis but a drug of some kind. Providing mainly those services that clients demand and are willing to pay for appears to have led to a near exclusive emphasis on curative services, apart from vaccines and prophylactic administration of chloroquine. Lacking are the kinds of activities such as non-clinical educational activities, surveillance, that in turn can lead to long-term improvement and changes in the health status. In short, the effects of the reliance on user fees need to be considered for most PHC systems. Have PHC systems become drug-driven systems?

VI. LINKAGES

The CARE/Congo PHC staff members have collaborated with a number of projects in and around Mossendjo. The Congo CCCD program has provided training and materials and, more recently, conducted a vaccination coverage survey of Mossendjo district. Project staff also work with German Cooperation personnel responsible for PHC activities in Kibango, Lubomo, Makabana, and Divenie districts.

In the past, PHC staff have proposed several linkages with the CARE/Congo agriculture project. It was recommended, for example, that a member of the agricultural cooperative participate on each village health committee. (In December 1984, a cooperative member served on 79% of all village health committees.) Present staff, however, feel that this linkage is of limited value to either project. For the future, an exchange training program is being considered. If adopted, agricultural cooperative members will receive training in diarrhea and malaria control and village health workers will receive information on crop diversification. Now that the village-level groundwork for both projects has been laid, it is reasonable to expect increased collaboration in the future.

The strongest potential linkage for boosting PHC project impact lies in nutrition (see Well-Child Clinics and Nutrition, Section V.B). Improved nutrition knowledge on the part of VHVs could draw mothers to agricultural activities. Nutrition-related activities with mothers, for example, might increase village-level demand for vegetables. Mothers might then call on the expertise of the men in the village who have learned crop diversification techniques. (PHC staff remarked that the mother, herself, is often constrained from growing a small garden by her current workload. Nutrition project staff are currently examining ways to make weaning food production less labor intensive for the mother and, hence, increase her time available for other activities.) Close collaboration between the CARE/Congo PHC and nutrition education projects is envisioned for the future.

VII. LESSONS LEARNED

- A. Demonstrating a measurable effect on health status due to primary health care activities requires the following: (a) a well-established health care infrastructure; (b) baseline data; and (c) an established and functioning health information system (HIS).
- B. The HIS for a FHC program should be simple and should be designed to provide information necessary for program monitoring, planning, and evaluation. The HIS should not be designed to collect data and information for the sake of collecting data and information.
- C. Project activity targets should be developed by individuals who are thoroughly familiar with health care delivery systems and, who can identify realistic health program outputs. Unrealistic targets generate unrealistic expectations from individuals monitoring and evaluating project progress.
- D. In addition to providing data on target diseases, the HIS should also provide feedback information on health care delivery services. The feedback system will assist central staff to monitor and supervise peripheral staff activities. (In this project, for instance, activity targets have been established for village health workers. Supervisory staff can, thus, focus attention on the workers who have difficulty attaining the target.)
- E. Even the most sophisticated HIS cannot measure everything. Information critical to project management and review, and the rationale for collecting each category of information, should be determined during the project design phase. Ideally, an expert in HIS design should serve as a member of the initial project design team.
- F. Primary health care is a relatively new concept. Whereas the demand for certain services (immunizations) is high, the demand for other services (education, well-child care, growth-monitoring) may be much lower during the initial years of project implementation. This factor should be taken into consideration when developing activity targets and designing program activities.
- G. The existing health infrastructure system should be a primary consideration during project design. In several instances, project designers envisioned "integrated" services when, in fact, integration is not possible because of the existing health care services structure in the Congo. Congolese health care officials would have been best suited to provide this information.
- H. The implementation of FHC services projects generally follows this pattern: During the first few years of implementation, financial inputs for equipment, materials and technical services are greatest. During the following several years, supervision, and training costs predominate. During the final phase of implementation, inputs are gradually reduced and all responsibility is transferred to local personnel. The impact of a FHC project is most reasonably measured after newly established services have been in operation for at least three years.

I. A FHC project will attain maximum impact through collaboration and integration with other community-based development activities (see Linkages).

J. A national FHC policy and host government support of FHC concepts is essential to project success. The host government policy concerning FHC should serve as the basis for project design. Project design should always be directed towards national health goals. (GPRC policy on FHC was established in a Note de Service dated June 4, 1985).