

XD-ABH-260-A

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ZAIRE CCCD PROJECT MIDTERM EVALUATION

November, 1988

External Evaluation Team:

- Harvey E. Gutman**
Management Specialist/Team Leader
- Dr. Mark LaForce, Epidemiologist**
- Pamela Pine, Health Educator**
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ACKNOWLEDGEMENTS

The team would like to express its appreciation for the guidance, insights and assistance it received from PEV officials in Kinshasa and in the field; from personnel, both government and private, who staff the country's primary health care installations; from USAID; and from other organizations. In particular, the team would like to thank Cit. Ngandu-Kabeya, Commissioner of Health; Dr. Miaka, PEV Director, and his staff, Drs. Maliro, Mutombo, Okwo, Paluka, Rugwamba, Cit. Kapitaine and Mabukota; and Dr. Andrew Vernon/CDC. In USAID the team would like to thank Director Dennis Chandler and his deputy J. Goodwin for their help and interest; Dr. Glenn Post, Chief HPN, and his staff, Ms. Hanaye Bisson and Ms. Rhonda Smith, for their support and stewardship; Mr. Stephen Vance, PRM, for the initial preparations; and Mr. Max Walters, Executive Officer, for his assistance.

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LIST OF ACRONYMS

A.I.D.	Agency for International Development
AIDS	Acquired Immuno-Deficiency Syndrome
CCCD	Combatting Childhood Communicable Diseases
CDC	Centers for Disease Control
CDD	Control of Diarrheal Disease
CEPLANUT	Center for Planning and Nutrition
CPF	Counterpart Fund
EPI	Expanded Program on Immunization
FONAMES	Fondo National Medico Sanitario
GOZ	Government of Zaire
HIS	Health Information System
HPN	Health, Population and Nutrition
IEC	Information, Education and Communication
KAP	Knowledge, Attitudes and Practices
LAPHAKI	Laboratoire Pharmaceutique de Kinshasa
MCZ	Medical Zone Chief
MOH	Ministry of Health
MUHS	Mortality and Utilization of Health Services
OR	Operational Research
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PACD	Project Assistance Completion Dat
PASA	Participating Agency Service Agreement
PCV	Peace Corps Volunteer
PEV	Projet Elargi de Vaccination

PRICOR	Primary Health Care Operations Research
PROAG	Project Agreement
PSND	Projet de Service de Naissance Désirable
SANRU	Santé Rurale
SSS	Sugar Salt Solution
UNICEF	United Nations International Children's Fund
USAID	Country Mission of the United States Agency for International Development
WHO	World Health Organization

NOTE TO THE READER

This report is organized into five sections as called for by the contract. There is a brief Executive Summary that sets out the most salient points, followed by the main report. The main section of the report parallels the outline of the scope of work. There then follow four annexes covering the fields represented by the team members. The annexes provide amplifications and supplementary comments and each is followed by relevant attachments. The last section provides the references, persons and places related to the evaluation, a copy of the scope of work, and additional appendices.

EXECUTIVE SUMMARY

The basic goal of the Projet Elargi de Vaccination/Combating Childhood Communicable Diseases (PEV/CCCD) is the reduction of child mortality and morbidity through vaccination against preventable diseases, oral rehydration therapy (ORT), presumptive malaria treatment of children and chemoprophylaxis during pregnancies to reduce insufficient birth weight.

The Project began in 1982 as part of a broader, regional effort. It built on an existing vaccination program that centered on mobile teams. The Project has been extended to 1990. During its life, it provides technical assistance through the Centers for Disease Control (CDC), equipment, oral rehydration solution (ORS) and chloroquine, vaccine and the development of cold chain facilities. It supports health education and training activities, organizes health information and surveillance systems and engages in operational research in technical disciplines in such areas as sustainability.

In the context of these various sub-objectives, the Project cooperates both with other donors and with related activities sponsored by the United States Agency for International Development (USAID), such as Santé Rurale (SANRU). The Project Agreement (PROAG) Amendment #5 shows that over the life of the Project, the Government of Zaire (GOZ) will contribute \$2.8 million; USAID, \$7.6 million; and the Counterpart Fund (CPF), \$2.7 million.

The original PROAG called for a GOZ contribution, at the then prevailing rate, of \$15 million, including, possibly, CPF which may have been counted as part of a GOZ contribution.

A. Findings

The evaluation team encountered both positive and negative project scenarios. On the positive side, estimates show that in Kinshasa alone measles immunizations, conducted under the Project and its predecessor activity, have prevented between 500,000 and 800,000 measles cases and averted between 27,000 and 41,000 deaths. Outbreaks of polio have greatly diminished nationwide, including a 75 percent reduction in notified cases in Kinshasa. Reported cases of tetanus have decreased almost 50 percent since the start of the Project in 1982.

PEV has made solid strides in upgrading its own professional staff and zonal physicians in CCCD interventions/methodologies. PEV's cold chain now has the capacity of meeting the needs of the nearly 200 health zones at all levels.

An internationally recognized training center in ORT has been established at a Kinshasa hospital.

Reported deaths there from diarrheal disease have decreased from 14 percent to two percent of the intake.

Field staff at the antenna, health zone and health center level are receiving good, albeit limited, training.

In sum, while there are gaps and deficiencies, the Project has achieved a level of maturity that gives it the potential to meet or exceed most of its goals, subject to some adjustments in the time table.

On the negative side, there have been shortfalls in the GOZ's contributions as provided in the PROAG. This has resulted in:

- Non-payment or delays in payment of field personnel salaries.
- Use of sales proceeds from ORT/chloroquine for advances which cannot be repaid and thus decapitalize the revolving fund.
- Lack of operating funds for transportation and supervision, particularly at the field levels.
- Restraint on health education and training activities.
- Irregular shipment of vital vaccine/ORT supplies from Kinshasa to the field.
- Low morale at all levels of the PEV organization.

Largely as a result of these factors, vaccination tallies have stagnated since the last evaluation.

B. Conclusions

The Project is technically and programmatically a sound activity. However, projects such as this one that suffer from inadequate host country support during the collaborative phase do not become suddenly effective and self-sustaining after the Project Assistance Completion Date (PACD).

C. Recommendations

1. The GOZ should release overdue contributions, or a moratorium should be placed on the addition of further zones; marginal zones should be limited to cold chain/ORS/chloroquine supply activities.
2. Immediate arrangements should be made to distribute priority supplies now in PEV storage facilities. Unless inland freight costs and operating and

maintenance expenses at the destinations can be reasonably guaranteed, alternate dispositions should be made for the use of 30 vehicles which are about to arrive.

3. As a partial solution to greater self-financing-- particularly in the context of the scheduled arrival of one million units of ORT packages in January, 1989-- USAID, PEV and the Ministry of Health (MOH) should prevent the use of sales proceeds from ORT and chloroquine for salaries. Infractions should be compensated through withholding of primes.
4. Emphasis should be placed on strengthening health education and training, the weakest components of the Project.
5. PEV's financial, logistic and administrative records should be promptly computerized in formats that can serve as management tools. Accounting should convert to an accrual system.
6. PEV, CDC and USAID should discuss the need for permanent American staff versus specialized short-term assistance.

I. EVALUATION PURPOSE AND METHODOLOGY

A. Purpose

This midterm external evaluation serves two purposes:

1. It assesses:
 - a. The extent to which project activities are leading to the achievement of project goals and objectives.
 - b. The performance of project management and operations at all levels.
 - c. The degree to which Project activities have been integrated into the GOZ primary health care system.
 - d. Project sustainability without USAID assistance.
2. It converts its findings and conclusions into a number of recommendations directed at improving the components of the Project.

B. Methodology

After reviewing documents and initial interviews with Kinshasa-based Project staff, the evaluation team prepared questionnaires for field trips. They were tested by the entire team, accompanied by the PEV Director, at various levels in the Matadi region. Subsequently the team split up into three groups and together with resource staff drawn from Project personnel at PEV and USAID, and a United Nations International Children's Fund (UNICEF) representative, visited six additional regions. This permitted interviews with the regional medical coordinators and the staffs of the PEV antennae, and observation of activities at health zones and urban and rural health centers. These visits included contacts with missionary-sponsored installations and, of course, with the immediate beneficiaries: Mothers and children. Team members also visited the ORT Center at the Yama-Yemo Hospital in Kinshasa, Acquired Immuno-Deficiency Syndrome (AIDS) wards, and the Laboratoire Pharmaceutique de Kinshasa (LAPHAKI), the local ORS producer.

Upon its return to Kinshasa, the core team had little time to compare notes, systematize its findings and agree on basic conclusions prior to the early departure of the epidemiologist. The remaining time was used for detailed discussions with PEV and USAID staff (unfortunately, the project officer had to go on emergency leave) and with representatives of other organizations such as SANRU, LAPHAKI and the Fond National Medico Sanitaire (FONAMES).

II. PROGRAM COMPONENTS

A. Epidemiology

1. Expanded Program on Immunization (EPI)

a. Progress Toward Objectives

Vaccine Coverage

Data are well summarized in the 1987 PEV annual report. In 1987 a little over one million doses of vaccines were administered with 73 percent of the vaccines given to infants under one year of age. Polio vaccine coverage for infants under one year old ranged from 23 percent in Haut Zaire to 81 percent in Kinshasa. Measles vaccine coverage of the estimated population under one year of age ranged from 25 percent in Haut Zaire to 75 percent in Kinshasa. Overall, measles vaccination coverage was better in cities.

What has concerned PEV personnel is the much more attenuated rate of rise in vaccine coverage in recent years. All of the 1987 coverage results fall short of the program goals of 45 percent for Polio 3 and 50 percent for measles.

Thus, the vaccination component of Zaire PEV seems to be stagnant. The rapid increase seen in the first few years of the program reflected both new immunizations as well as data collection on infants already being immunized. So-called easy zones have all been brought into the orbit of PEV, leaving more difficult areas where coverage rates are likely to be lower. Proposals put forth on strategies for raising coverage include intensifying social mobilization and encouraging outreach activities. While these are important in helping to increase coverage rates, they do not focus on two of the most important constraints to PEV activities: Non-payment of salaries and lack of supervision due to insufficient operating funds.

Cold Chain

The central PEV compound has three 20 cubic meter cold rooms, two at four degrees centigrade and one at minus 20 degrees centigrade. Shipment of vaccines to the 19 depots (PEV antennae) throughout Zaire were made at the average rate of four times a year. Fifteen of these depots are supplied by air and four by road. Vaccines are sent in cold boxes that are manufactured in Kinshasa and donated by UNICEF. There are problems in

vaccine shipments with ruptures in vaccine stock. All antennae visited during the field portion of the evaluation have functioning refrigerators and freezers. Some are fueled by petrol, others are electric and some are solar. The majority require petrol, which is obtained locally through a coupon system which seems to work well. There are no repair technicians at the central or antenna level. However, in general the cold chain works at all PEV levels.

Sterilization Procedures

Virtually all health centers changed needles for each vaccination, but none used a single syringe per vaccination. Shortages of syringes at the health center were the rule. Sterilization procedures were well respected.

Vaccinal Calendar

Some health center nurses had a clear idea of local populations and had developed health center family registers to track immunizations. Coverage in such centers was invariably high. Others provided immunization services when asked but had a surprising lack of understanding of the need for second and third doses.

b. Appropriateness of Objectives

Objectives are overly ambitious in relation to GOZ resources, which at the present time are insufficient to pay even base salaries.

2. Control of Diarrheal Disease (CDD)

a. Progress Toward Objectives

The ORS Center at Mamo Yemo continues to be a focal point in the treatment of diarrheal diseases and training for these activities. Indicators such as a fall in the number of infants in the C category indicate that the center is having a good impact. Highly successful training activities continue to be held at Mamo Yemo. A new ORT center at Bukavu is functioning and serves as a training site for that area. Supply of ORS packets was a major problem noted during the evaluation. Frequent ruptures in stock were the rule at antenna and zonal levels. There has not been a high success rate in the promotion of an appropriate home use solution (please see 1987 evaluation).

**ORS Production--Laboratoire Pharmaceutique de Kinshasa
(LAPHAKI)**

LAPHAKI is jointly owned by the GOZ and Belgian Corporation, which manages the operation. LAPHAKI operations are to be self-sustaining with emphasis on social objectives. ORS represents approximately five percent of LAPHAKI's output. A second machine should become operational in November, 1988 for a combined capacity of three to four million units per year. These machines can also manufacture other (often more profitable) products.

Present ORS production is almost at a standstill. PEV owes LAPHAKI an overdue balance. All LAPHAKI prices are adjusted quarterly to reflect the devaluation of the Zaire.

ORS raw materials have to date been supplied free by UNICEF. It is not known whether this will continue. Current stocks would suffice for approximately 2.4 million units except for the lack of trisodium citrate dihydrate. Currently LAPHAKI sells ORS to PEV for Z 15, representing manufacturing costs and a small profit. Distribution charges raise the total cost to approximately Z 23 per unit.

USAID has placed a \$300,000 order for 1.67 million units with the Agency for International Development (A.I.D.). Currently this equals Z 38 or approximately Z 45 per unit including handling and distribution. Since the value of UNICEF's subsidy per unit is not known, the prices cannot be compared. This aspect, i.e. imports versus local production, will be assessed shortly by a social marketing expert. Two treated episodes per year in a target population of six million children at a Z 10 per unit mark-up would provide a profit margin of Z 120 million; even 50 million could finance much of PEV's recurrent expenses after deductions for the higher price of reorders. However, FONAMES' intention to distribute pharmaceuticals, including ORS, through a country-wide depot system could affect PEV's position as the preponderant ORS supplier.

3. Malaria

a. Progress Toward Objectives

Chloroquine is generally used throughout Zaire as the main treatment for malaria. The official PEV policy is to give free chloroquine at 25 mg in three doses of 10, 10 and 5 mg for three consecutive days. Field

observations revealed a surprising variability in the dosing of chloroquine, ranging from 10 to 50 mg. The high variability in presumptive therapy has resulted in inconclusive statistics concerning fever treatments. Chemosensitivity surveillance is still in its infancy; sentinel sites are more reliable in urban areas. The emphasis next year will be on resistance to treatment.

Operational research activities have studied the role of prophylactic treatment of pregnant women with chloroquine. Over 2,000 pregnant women participated in the study, which compared the effect of monthly chloroquine doses of 1200 mg to treatment of febrile episodes. Babies' birth weights showed no difference between treated and untreated groups. This study suffered from a low follow-up rate of 65 percent. There are plans to repeat these studies with greater emphasis on follow-up.

b. **Appropriateness of Objectives**

Objectives are technically appropriate, but their achievability will depend on the availability of funding.

c. **Project Impact**

There is no ready way of assessing the project's impact on malaria. The best indicators will be supplied by the Mortality and Utilization of Health Services (MUHS) surveys which are conducted with considerable professionalism.

B. **Management and Administration**

1. **Steering Committee/Donor Coordination**

The Steering Committee meets twice a year, once to review the past year's operations and a second time at the half-year mark to consider plans for the ensuing year. (The 1988 meeting had not yet taken place at the time of this report.) These meetings can only address overall issues and achieve broad agreements. The Steering Committee has no formal subcommittee structure, though there may be occasional ad hoc meetings to address specific questions. While the Steering Committee is useful, it would hardly qualify as a "decision-making entity" in the true sense of the term.

Except for the Steering Committee, however, there exists no formal coordinating mechanism. Donors have informal contacts and the participating agency representatives know

each other. It is questionable whether there should be a donor coordinating body in addition to the Steering Committee. It would seem preferable to include the GOZ/PEV partner in all deliberations. Meetings of the Steering Committee should be held quarterly to consider pre-distributed agenda items. The chairperson or executive secretary (preferably from the PEV staff) should be notified by members of situations that affect the Project as a whole. Funding changes by the GOZ and donors should be promptly communicated to the Steering Committee and a meeting called to consider the implications, e.g. integration into the GOZ Primary Health System, self-support revolving funds, training, etc.

2. Organizational Chart

The new director revamped PEV's organigramme by creating a third major division through transfer of the cold chain, motor pool and other logistic functions into what A.I.D. would call a General Services Office. This was accompanied by the creation of new subsections and a revised set of job descriptions. Some of these are not specific and, as happens in the U.S. Civil Service, may have been written around a candidate or an incumbent. PEV is a GOZ organization and the Director has the responsibility and authority to organize and staff his service as he sees fit--subject to GOZ regulations. The restructuring is too recent to permit judgments. Performance will be the criterion. In a small organization such as this one, personal relations and understandings may be more important than formal charts and job descriptions.

The new chart has created an internal audit arm, which is a progressive step. The section is located in the Administrative and Finance Division, the traditional target of audits. While the job description states that the position will in certain (undefined) respects report to the Director, it should be attached to that office or at least to the Evaluation Division to avoid any conflict of interest, real or imagined.

3. Financial Control Procedures

A recent audit report has pinpointed various weaknesses which are now being addressed by PEV and the USAID controller. Thus, the team saw no need to reinvestigate this aspect of the Project.

4. Financial Records and Management

As pointed out previously in this report, no progress has been made in computerizing financial records since the 1985

evaluation. The Finance Section has masses of data, but it is not in formats that can readily serve management. For example, there exists no updated, consolidated record of administrative reservations, limiting status reports to allotments, liquidated expenditures and cash balances without taking note of accruals.

5. Commodity Distribution, Information and Management

Laboriously prepared records provide considerable information and can be used to extrapolate needed data. However, the lack of computerized inventories, shipping schedules, reconciliation of sales reports with stock and distribution records, etc., makes the operation inefficient and at the same time excessively labor-intensive. For example, when the team requested a list of undistributed items in the warehouse, this had to be prepared item by item and turned out to be incomplete.

PEV must avail itself of computer technology. The last evaluation pointed this out three years ago. Fault for this deficiency lies largely with the American side. The last CDC Technical Officer was a computer expert; moreover, his predecessor was assisted full-time by an expatriate programmer who served at PEV for two years. These staff apparently gave inadequate attention to PEV's operational computer needs.

6. Five-Year Plan

The plan has been meticulously prepared, is internally consistent and gives clear evidence that PEV has attained a level of considerable competency in programming techniques. However, the plan has taken on the character of an exercise, lacking realism. Projected GOZ, USAID and UNICEF contributions fund 41 percent of the plan's 1989 budget and 34 percent in 1990. In addition to a 100 percent GOZ contribution, the plan projects an abatement in the present rate of inflation. There is no suggestion how to cover these massive deficits nor are there contingency provisions for different funding scenarios. Future plans should be routinely accompanied by "decision packages" which show priorities in the light of various funding assumptions.

7. Long- and Short-Term Technical Assistance/Consultancies

Since the beginning of the Project, CDC, under a Participating Agency Service Agreement (PASA), has detailed two staff members to PEV/CCCD in Zaire, an epidemiologist and a technical officer. Technical elements of the job descriptions have remained unchanged, though PEV has matured and its needs for advisory inputs may no longer be the same

as they were six years ago. More recently, PEV has had the opportunity to review the qualifications of candidates for CDC positions but has not been consulted regarding the duties or utility of the positions. PEV clearly appreciates CDC's professional inputs over the years, although there often have been long time gaps between officers, which has forced epidemiologists to devote considerable time to administrative matters. The evaluation team received indications that PEV professionals might prefer specialized consultancies to long-term assistance. This is not a matter of personalities. The epidemiologist, a very competent, highly-trained officer (the technical officer has just been assigned) is well regarded by his counterparts. The scenario appears to be one of a healthy evolution. CDC may be at the point of succeeding where technical assistance often fails by working itself out of its job in its present form. USAID, PEV and CDC should have a frank exchange on the subject.

C. Health Education

PEV has been in Zaire since 1977. It has brought in or technically trained a number of dedicated, talented individuals to confront diarrheal disease, malaria and disease preventable through vaccination. Seasoned health workers and missionaries have been confronting many of the same challenges for years as well. Yet progress has remained slow at best. The technical side of PEV is fully operational. Yet demand for its services by the target populations remains relatively low. The communication side is barely functional. Vaccination coverage is stagnant and remains at approximately 40 percent.

Health education, the vital link between public health providers and intended beneficiaries, has been ineffective in the PEV context, be it through neglect, inappropriate methods or a combination of both. Evidently, the health education component of the PEV/CCCD program has made little progress since the last evaluation. It has been limited to isolated tasks such as the display of materials at various health functions and the revision of technical materials. While a good theoretical base exists at the central level, there is an obvious inability to fully apply it. There is lack of planning, structure and strategy for the health education program at all levels--central, antenna, zonal, health center and outreach. The problems within the Information, Education and Communications (IEC) section were identified by the PEV, MOH, USAID and CDC. A consultant from the Academy for Educational Development (AED) has arrived to work part-time on PEV problems in Shaba. However, this assistance, though valuable, is insufficient. Operations research, additional staffing and the development of training and work plans for health education are priority needs.

Few materials have been developed or distributed over the past year. In almost all of the sites visited, the few educational tools to be seen--usually posters or charts in French--were often used in a rote manner. Few of the women questioned remember having seen or heard TV or radio announcements. Some recalled "some program" talking about health issues but no one could describe any such program.

Few innovative approaches, such as theater or small group work, have been undertaken. Only a few programs have attempted to link other development strategies, such as community development or income-generation, with health education schemes. Other programs in Zaire, such as SANRU, have explored these issues. Little training, let alone creative training, has been provided to health personnel.

The result of all of the above is that most women could not describe preventive measures for reducing diarrheal episodes, explain what the growth chart meant, relate why or when they were to return to the clinics, or give the correct formula for Sugar Salt Solution (SSS). (After years of trying to educate mothers as to the correct mixture, it may be seen simpler and more effective to rely on obtaining pre-mixed packets.)

The reasons given for this situation by the IEC Chief of Service include first and foremost his perception of a lack of a description of tasks and responsibilities for health education activities, as well as the lack of definition of hierarchal relations and lines of communication within PEV. He also cited lack of personnel support at the Kinshasa level; a blockage in the release of CPF; other claims on the time of the two-person section (presently one); lack of an artist to produce materials; and the cancellation of a trip by CDC/Atlanta health education personnel.

A number of constraints were noted by the evaluator. Of some consequence were a delay encountered in the release of CPF; the acceptance by the second employee (assistant chief) of another position; and the time spent by the chief of in-service training at Mamo Yemo Hospital in ORS use. Clearly there has not been enough managerial and technical support for the health education program. For a program which is operating in 200 zones (two-thirds of the health zones in Zaire), education is critical. Finally, there have been major personnel and management changes together with various transition problems in PEV in the recent past.

The evaluator was not able to discern a clear-cut strategy for the development, distribution or follow-up evaluation of IEC materials, although an outline titled "Operational Strategy" exists, listing tasks to be completed. This situation stems

largely from the lack of supervision, training, guidance and support (both monetary and personnel) for the program on all levels.

HEALTHCOM

Work is needed in all areas of the health education component. HEALTHCOM has a representative in Zaire who will be working along with PEV staff at her base in Shaba. This will be a chance to explore techniques with a view toward adapting them later to other areas. HEALTHCOM also is working with the School of Public Health. Short courses will be developed which will address some of PEV's needs.

It would be advisable for a long-term employee, or a short-term consultant from CDC or HEALTHCOM capable of periodically returning to Zaire, to be available to PEV/K, unless a qualified individual--Zairois or expatriate--can be identified locally.

D. Training

1. Materials

Three of the 12 PEV modules have now been selected for the technical training of Medical Zone Chiefs (MCZs) in the three components of the program. They are of high quality and efficacy shown by the level of knowledge and experience witnessed in the field during the evaluation.

Training materials for nurses consist primarily of a poster for the evaluation and treatment of diarrhea, a set of 45 technical data sheets (fiches techniques) that cover all three components and the methodology to evaluate program impact through a survey of 100 families. These may be of too high a level for A3 nurses. Additional sheets are now being designed to include other related topics such as explaining the importance of vaccinations to mothers, and the use of steam sterilizers. These should be tested in the field before printing and distribution.

Other training materials used by nurses to train health workers include leaflets on SSS preparation and a brochure for ORT training of mothers. These are simple, and can be read and understood with minimal education.

The overriding problem remains distribution. Most materials are unavailable in most health centers, and are therefore rarely used. Few among the trained nurses who were visited had the reference fiches. Only the ORT poster, often outdated, was found in most health centers.

This points to the question of flow of information between the PEV/CCCD central office, the antenna, the zone and the health center. Materials are often available at one level while unavailable at the lower level. Some MCZs were unaware that they could request funds from PEV to organize training in their health zone. Others--both MCZs as well as those on the health center level--remain unaware of the specific PEV objectives. Special attention should be given to the distribution of information and supporting materials.

2. Scope/Effectiveness

Prior to 1986, when FONAMES became the overall coordinating agency, at least 100 senior level officers, 174 MCZs and 1,206 peripheral personnel had been trained using the 12 PEV/CCCD modules. Because of changed responsibilities and structure, there was confusion among the PEV staff regarding their new role in training. As a result, there were no MCZs trained in EPI. Training activity was virtually limited to chemosensitivity and to ORT training.

All the MCZs visited during the evaluation who had been trained in the three components related that they, in turn, have trained some of their head nurses. The percentage of trained nurses ranged from about 20 percent in Haut Zaire to about 60 percent in Bas Zaire. Though there is a great deal of enthusiasm among the trained MCZs to train more nurses, this has been hampered by unanswered requests for funds and the slow development of health centers--also due to lack of funds, equipment and personnel.

On the positive side, the quality of technical training provided to MCZs and head nurses is good. For example, the cold chain is generally well maintained, vaccines well kept and instructions for sterilization and inoculation largely followed.

For field teams and central staff, there is no provision for systematic training in technical areas or management. The training division has tentatively scheduled a number of training sessions based on staff opinions rather than a training needs analysis. The latter should be conducted and should consider job descriptions, gaps between expected and actual performances, and new technical developments.

The following problems associated with training were observed in the field:

- Data collection is done routinely and not used for decision-making purposes.

- Procurement and stock management of vaccines, ORS packages and chloroquine is not satisfactory.
- There is no systematic method of follow-up on children who have not had complete vaccine doses.
- Antenna chiefs and regional coordinators have not received any training as trainers or supervisors.

The PEV central team should consider these deficiencies and others, to be identified through an in-depth training needs analysis, in future training plans.

3. Training Strategy/Plan

PEV, like FONAMES and the Projet de Service de Naissance Désirable (PSND), has not adopted the strategy of decentralized training in regions. The training of the MCZs will take place at the regional level. Up to this point, PEV experience in decentralized training has been in ORT at regional training centers in Bukavu, Kinshasa and Lubumbashi. Similar ORT training centers are planned in other regions. The evaluation team suggests that these centers be used for training not only in ORT but in all three components of the program.

Pilot health centers with both curative and preventive health care could be created at the regional coordination level and could serve as training and demonstration centers where fee-for-service programs might provide partial financing.

Virtually no training plan other than that in ORT exists at either the central or the peripheral level.

At the zonal level, the training activity is left to the initiative of the MCZ. The regional coordinator should help the MCZ develop a training plan for the health center nurses and to follow up on that training. At the regional and subregional levels, training plan should involve the subregional medical inspector and FONAMES.

4. FONAMES

Presently, FONAMES conducts management training and attempts to provide overall coordination of training programs. Coordination with FONAMES is crucial, given that all other health projects and programs such as PSND, SANRU, Center for Planning and Nutrition (CEPLANUT) and FONAMES itself are eager to train MCZs in their respective areas of interest. FONAMES, in conjunction with the regional medical inspectors, should coordinate training for MCZs and health

zone supervisors to avoid overlaps. It is therefore necessary that the training plan of PEV/CCCD at the zonal level reflect agreement with FONAMES and the regional medical inspector.

E. Health Information System (HIS)

HIS relating to immunization programs is well-developed from health centers to zones and antennae to PEV/K. Both quality and quantity of immunization data reaching PEV/K have greatly improved in recent years. The completeness and reliability of ORT and chloroquine data have not yet attained the standard of immunization data. The computerized HIS at PEV/K is excellent and has been viewed as a model for other Africa CCCD programs.

The Immunization HIS furnishes data for accurate assessment of vaccine applications as well as outcome indicators (morbidity and mortality of polio and measles). This is not equally true for ORS as the quality of pertinent information is less developed.

The system gives good indication of progress and deficiencies in immunization coverage and to a lesser degree for ORT/chloroquine. Simultaneously, the system permits assessments of project impact on the population served by PEV.

Personnel at PEV/K are well trained and base program strategies (as opposed to under-funded implementation) on the HIS. Competency levels from the antenna level to the zones and health centers vary greatly in a descending fashion. Generally speaking, data are analyzed at the antenna; occasionally at the zonal level; and very seldom by health centers.

The present HIS is a highly useful tool for progress analysis and program planning. Its potential is not fully exploited due to lack of analytical training at the field levels and lack of funds to translate HIS-based strategies into actionable programs.

F. Operational Research (OR)

OR components are well thought-out and properly focus on areas of maximum CCCD concern, such as the effects of chloroquine treatment on pregnant women and the effect of perinatal AIDS on vaccination-induced morbidity. Results of that research are closely followed and will help restructure CCCD efforts, e.g. eliminate chloroquine treatment of pregnant women if it does not produce high birthweight.

1. PRICOR Project

PRICOR has conducted operational research in health education, though it was not aimed at PEV. There is no formal relationship between the two projects. In its

subsequent discussion of PEV's health education component, this report draws attention to PRICOR's capacity to assist PEV in this area.

III. SUPERVISION

Supervision is one of PEV's major deficiencies. This is primarily due to the lack of operating funds. This translates into lack of transport, petroleum, oil and lubricant (POL), spare parts, per diem, etc. Within their limited means, regional medical coordinators and antenna personnel do provide supervision and perform some travel duties. However the immobilization of supervisors goes beyond PEV. The MCZ and regional and subregional medical inspectors, in most cases, also lack the means for systematic supervisory activities. Similarly, the travel budget of PEV/K does not permit the number of trips that would render supervision proportionate to the existing area of PEV zones. Plans are frequently heard for means of transport, especially Landcruisers. Provision of vehicles without the funds to fully utilize them cannot be justified.

Nothing can replace visual supervision and personal contact with field operations and operators. Antennae prepare voluminous reports which are collated at PEV/K and permit monitoring of quantitative trends but give little insight into the qualitative aspects of activities.

Available data and information are used in determining training events and participants and in the setting of priorities for the allocation of funds and resources.

The Director General of FONAMES referred the team in connection with PEV-specific questions to an official who was out of the country during the entire period of the evaluation. Available information would indicate little contact between the two organizations except in matters of training courses. These are arranged and ably managed by FONAMES.

IV. SUSTAINABILITY

All health zones have had to reach partial or total auto-financing due to lack or inadequacy of GOZ support. In addition to profits from the sale of the two PEV-commodities, ORS and chloroquine (the latter is often distributed by other sources), health zones have had access to income from curative care, including generation by church-related expatriate organizations.

In contrast, PEV's recurrent expenses, largely unsupported by the GOZ, must be met with the profit margin from two items. However, sales proceeds have been frequently used for advances against unpaid GOZ salaries, thus decapitalizing revolving funds. Profits from such sales are the only ready sources of PEV income.

Research should establish the true cost of ORS production (in the past, UNICEF has contributed the ingredients) in Zaire and a survey be conducted of price sensitivity. The team's experiences in the field would indicate that a Z 50 sales price would not markedly reduce demand. PEV would greatly benefit if the GOZ would reinforce PEV's predominant and growing role in the supply of ORS. This, however, may conflict with FONAMES' plans to market all drugs through subregional depots. PEV's chloroquine prices are often not competitive, especially with UNICEF and church-related establishments. Donors and GOZ should agree on the sales price, especially for subsidized imports.

If, when and where health zones and centers reach higher levels of self-sufficiency, they may be able and willing to pay for some of the cost of PEV services, especially training and supervision and, in the distant future, for all or part of the vaccines. Aside from financial problems there is the philosophical issue of whether, just as in developed countries, PEV-type services are considered a legitimate governmental function and responsibility.

A. Integration of Project Activities into Primary Health Care Structure

Integration has proceeded well at the zone level and below; vaccination and ORT are part of maternal and child health. There is considerably less integration at the central level. This is FONAMES' mandate which, to date, has mainly been limited to the training component. There is no possibility for the present PEV configuration to conduct vaccinations and ORT outside of the existing health structure. A return to the previous approach, i.e. mobile teams, would invalidate the Project's basic concept and design.

B. Incentives to Continue Project Activities after PACD

Committed health personnel, both GOZ and church-related, will wish to continue the humanitarian purposes of the Project. Less motivated employees at the central and regional level will at least wish to preserve their positions. The GOZ will wish to validate the President's desire to see all children vaccinated. Beneficiaries will presumably exert pressure for continued services. It is assumed that PACD GOZ compensation scales will be equal to today's combined purchasing power of salaries and CPF primes. This would seem to presume a revived turn-of-the-century PACD.

C. Program Management and International Constituencies

PEV/GOZ maintained the willing support of donors, especially USAID, UNICEF and the Belgian Cooperation, even when the GOZ did not meet its full contribution. Polio

Plus, a Rotary initiative, can be considered a national constituency. The 1989/93 plans shows ability to identify problems and, at least, find theoretical solutions. Most daily issues are linked to larger GOZ budget problems that must be resolved at national and international levels. As previously pointed out, the failure of USAID and CDC to push computerization of PEV's operation continues to result in wasted management and staff time.

The team is unaware of any beneficiaries that are not at the delivery level. Zones and centers encourage the formation of local committees; none of those interviewed participated in the management of facilities and services as opposed to assisting with motivation, mobilization and physical improvements.

V. PROJECT MANAGEMENT BY USAID AND CDC

In terms of USAID and CDC administration and support, the Project is generally well monitored in substance, though there might be room for some improvement in style. PEV's maturity needs to be acknowledged and accorded the respect that a full partner is due. Financial arrangements should not assume PEV's routine agreement. The perceptions that the U.S. side is at times nonconsultative and rigid. Regular meetings by all three parties should help to address misunderstandings, avoid misperceptions and promote a cooperative climate.

There have been delays in commodity procurement but the files indicate proper follow-up by the project officer. The procurement of unsuited vehicles and bicycles has been corrected. The need of USAID and CDC to push computerization and a budget approach based on priorities has been discussed previously in this report. These matters were also mentioned in the last evaluation. The USAID controller employs private auditing firms for financial monitoring and has taken follow-up action on recent findings.

A. Extension

Budgetary indications are that preventive health has a relatively low priority among the GOZ's priorities. The continuing problems with the GOZ contributions under the PROAG would ordinarily call for a phase-out of A.I.D. support. However, this project deals directly with the lives of children and the Administrator has clearly stated that A.I.D. will "stay the course." A project like PEV is unlikely to become self-sufficient before the end of the century. It is a developmental and humanitarian effort. The latter appears to be the focus of UNICEF and Polio Plus, which never uses the word "development" in its \$250 million fund-raising campaign. The team believes that USAID should

continue to support PEV, but not substitute itself for the GOZ. Until and unless the GOZ meets its obligations, no new health zones or new recurrent expenses (vehicles) should be added. At the same time, the overall time table will have to be adjusted. Currency conversions should be updated quarterly. Inappropriate uses of revolving funds should be restrained by withholding corresponding primes. Special efforts should be made to mobilize other donors and channel UNICEF funds made available by Polio Plus contributions to PEV.

VI. RECOMMENDATIONS

These recommendations, together with a number of other suggestions, are discussed in detail in the relevant annexes which follow.

A. General

1. Unless the GOZ can meet its obligations under the PROAG, a moratorium should be imposed on the addition of further zones.
2. Existing marginal zones should be limited to cold chain/ORS/chloroquine supply activities.

B. Management and Operations

1. Commodities stored at PEV/K due to lack of shipping funds should be immediately distributed to the field. Costs should be funded with CPF (as an advance to be reimbursed when or if GOZ funds become available) and/or by UNICEF and/or by Rotary/Polio Plus.
2. Thirty Project-funded vehicles about to arrive should only be distributed upon evidence that PEV/GOZ can guarantee operating and maintenance funds as well as necessary per diems for supervisory uses. Otherwise, USAID should consider alternate dispositions for the vehicles.
3. USAID and PEV should promptly decide on distribution modalities, especially the funding of internal shipping costs, for the 1.6 million ORS packets that will arrive in January, 1989. To the extent that this USAID contribution represents a refloating of the revolving fund, USAID/PEV/MOH must rigorously prevent the use of sales proceeds for salary payments. Infractions should be administratively sanctioned and corresponding amounts of CPF primes withheld.

4. PEV/K operations should be automated, i.e. its financial, logistic and administrative records should be computerized in formats that can serve as ready management tools, including the conversion of the accounting operation from a cash to an accrual system. Short-term (local) expertise should be made available, necessary hardware and software procured, and training conducted.
5. PEV/USAID/CDC should jointly review advisory needs and determine whether and when long-term technical assistance can be replaced by specialized, focused, short-term consultancies.

C. Epidemiology

1. PEV should conduct a vaccination coverage survey in the 30 clusters from the 1984 study at Kigandu and Pai Kongila as described in detail in Annex I.
2. USAID and PEV should emphasize the need to standardize presumptive therapy for malaria and to continue prophylactic treatment of pregnant women with chloroquine until results can be evaluated.
3. PEV should increase stock and use of 750 ml ORS packets and concurrently emphasize other rehydrating fluids such as rice water and coconut milk.

D. Health Education

1. Conduct a needs assessment in close collaboration with PEV to define health education objectives. Using the findings, develop training and work plans for the various PEV levels.
2. Provide additional long-term or repeated short-term technical assistance to PEV's health education component.

E. Training

1. Conduct a training needs analysis for personnel at each level of PEV operations and use the results to develop training plans and calenders, including the training of trainers.
2. Develop two technical fiches for data collection/reporting and vaccine procurement.
3. Consider the creation of pilot health centers as training sites as opposed to urban classroom settings.

ANNEX I

Epidemiology

Review of Current Status

A. Vaccination Coverage

These data are well summarized in the 1987 annual PEV report. In 1987 a little over one million doses of vaccines were administered in Zaire with 73 percent of the vaccines given in infants under age one. Polio vaccine coverage for infants under age one ranged from 23 percent in Haut Zaire to 81 percent in Kinshasa. Most measles vaccine is given at nine months. Coverage of the estimated population of children under one year old ranged from 25 percent in Haut Zaire to 75 percent in Kinshasa. Measles vaccination coverage was better in cities.

What has concerned PEV personnel is the much more attenuated rate of rise in vaccination coverage in recent years. For example, OPV3 in infants less than one year old was 37 percent in 1987, an increase of six percent over 1987 data. National measles coverage was 41 percent in 1987, a two percent increase over the prior year. All of the 1987 coverage results fall short of the program goals of 45 percent for Polio 3 and 50 percent for measles.

Thus, the vaccination component of the Zaire PEV seems to be stagnant. The original concept of decentralization with the creation of health zones was a sound one. The rapid increase in immunization coverage in the first few years of the program certainly reflected not only new immunizations but the collection of data on infants that were already being immunized. These so-called easy zones have all been brought into the orbit of PEV, leaving more difficult areas where coverage rates are likely to be more difficult to achieve.

Several suggestions have been proposed to increase immunization levels, such as intensifying social mobilization and encouraging outreach activities. While each of these may help somewhat in increasing coverage rates, they do not focus on the more important constraints to PEV activities which are more related to salaries, supervision and health education.

Throughout the evaluation, team members noted the problems of salaries. This was particularly true of PEV antenna staff who had not been paid since February, 1988. From February-September, 1988 they were paid from the revenues derived from the sales of ORS and chloroquine or from the sale of PEV vehicles that were surveyed out. Such vehicles were sold for about Z 500,000. With the diversion of funds into salaries, little was left to support supervisory activities, local maintenance or vehicle repair. This was particularly important since field studies

confirmed that the quality of PEV work (hence vaccination coverage) was directly related to the quality of the supervision. This comment was made by all team members.

A second major problem was the lack of ORS stocks at the antenna level. This further reduced funds, as proceeds from ORS sales at the antenna, zone and health center levels are important sources of revenue. Profits from ORS and chloroquine sales at various PEV field levels must fund activities until and unless such funds are made available by the government on a continuing basis, a premise that seems unlikely as long as not even salaries are being paid. Unavailability of ORS significantly decreased receipts at the antenna and zonal level. Furthermore, PEV's ORS packets are priced below those sold in pharmacies, so that a regular and potentially increasing source of income would be available if sufficient packets were produced and distributed.

B. Cold Chain

The central PEV compound has three 20 cubic meter cold rooms, two at 4 C° and one at minus 20 C°. The rooms are easily capable of handling all PEV vaccines. The minus 20 C° freezer was not functional until April of this year when repairs were made. The rooms are well maintained and vaccine stocks are adequate.

Shipments of vaccines to the 19 vaccine depots (PEV antennae) in Zaire were done an average of four times a year. Fifteen of these depots are supplied by air and the rest by car. Vaccines are sent in cold boxes that are manufactured in Kinshasa and donated by UNICEF. There are problems in vaccine shipments due to insufficient shipping funds. This has had such negative repercussions as ruptures in vaccine stock at the antenna level.

All antennae that were visited during the field exercises have functioning refrigerators and freezers. Some are fueled by petrol and others are electric. All but a few zones have refrigerators and serve as depots for their health centers. Some of these are solar but the majority require petrol, which is obtained locally through a system of coupons that are paid in Kinshasa to the oil companies, a system which seems to work well. There are no repair technicians at the central or antenna level. In general, the cold chain works well throughout PEV.

C. Project SIDA (Acquired Immuno-Deficiency Syndrome--AIDS)

Established in 1984, Project SIDA is a national and international research unit to investigate the epidemiology and pathophysiology of HIV infection in Zaire. The work at Project SIDA is important to PEV activities because of the theoretical risks of giving live vaccines to infants born of HIV positive mothers. The unit is at Mama Yemo Hospital and has begun a longitudinal study of the natural history of infants born of HIV positive and negative women.

Measles

About 500 children born of HIV positive and an equal number of infants born of HIV negative women are being closely followed on a monthly basis. Several observations pertinent to PEV have been made as a result of this study. All children received vaccines according to the PEV schedule and to date there have been no instances of vaccine-associated morbidity in infants born of HIV positive mothers. Children born of HIV positive mothers responded normally to vaccines routinely administered as part of PEV.

Measles has proven to be a particularly virulent infection in infants born of HIV positive mothers. Of 500 infants born of HIV positive mothers 14 developed measles prior to nine months; seven of these cases were fatal whereas two of 17 infants with measles prior to nine months who were born of HIV negative mothers succumbed. Follow-up of vaccinated infants born of HIV positive and HIV negative mothers suggests good protection to date.

Poliomyelitis

To date there are no data that incriminate HIV positivity as a risk factor for poliomyelitis caused by wild polioviruses or by vaccine strains. However, poliomyelitis is an unusual event and there exists the theoretical possibility that HIV infection with resultant immunosuppression would increase the risk of poliomyelitis. The relationship, if present, between HIV positivity and risk of poliomyelitis needs to be better defined.

All cases of poliomyelitis occurring in Kinshasa are referred to a large rehabilitation center which has 11 satellite units scattered throughout greater Kinshasa. PEV and Project SIDA have begun a case control study whereby all newly diagnosed cases of poliomyelitis will be examined by a neurologist within ten days of being seen. If the case is clinically compatible with the diagnosis of poliomyelitis, stool and serum samples will be taken acutely and a detailed epidemiologic study conducted. Three controls from surrounding houses will be identified and blood and stool samples collected from this group. Revisits at 45 days would assess residual paralysis and obtain convalescent serum samples from cases. Stool samples would be cultured for poliovirus in Kinshasa and at CDC, Atlanta. All poliovirus isolates would be identified as wild or vaccine-like viruses according to standard laboratory tests. HIV antibody tests of serums from cases and controls would be done at Project SIDA.

This is an important study and has a high likelihood of furnishing important insights into the epidemiology of poliomyelitis in Kinshasa and determining whether HIV infection is a risk factor for poliomyelitis. The study as it has been planned is ambitious and the demands being currently made of PEV epidemiology staff are such that it may be difficult to insure that the study is supervised properly. A physician should be recruited to assume the day-to-day responsibility for this project. This would likely take up about half the time and the remainder of the person's time might well be spent developing a more comprehensive surveillance system for poliomyelitis. Funding for this study is being provided by Rotary and a request for supplemental funds should be promptly made.

D. Measles

One of the most important epidemiologic problems facing PEV is measles in Kinshasa. Extensive studies have underscored the following characteristics of measles in Kinshasa:

1. About one-quarter of cases presenting to health centers occur in infants less than nine months.
2. There is continued epidemic measles every two years despite stable immunization coverage of about 60 percent.
3. No shift in the age-specific attack rate to older age groups has occurred as a result of measles immunization. Nonetheless, it is estimated that over the 11 years of PEV between 500,000 to 800,000 cases of measles have been prevented.

In 1988, PEV invited the Immunization Branch of CDC/Atlanta to assist in a two-year project aimed at improving measles control in Kinshasa. This collaboration has resulted in several studies that have been completed this year. First, vaccine efficacy was measured using two methods:

1. A study of secondary attack rates in siblings 9-35 months of age of index cases recruited from hospitalized cases.
2. A determination of the percentage of index cases which had been immunized in relation to vaccination coverage from their areas.

Using both methods measles vaccine efficacy was calculated to be about 75 percent, with wide confidence limits. Thus, poor vaccine efficacy is unlikely to be an important factor in the failure to break the pattern of epidemic measles in Kinshasa. Measles immunizations have mostly been given through fixed health

posts. Theoretically, Kinshasa should be covered by 21 health zones, but only 10 are operational because of financial constraints. A new series of strategies have been envisioned over the next year. They are:

1. To open new vaccination posts (outreach).
2. To improve resources in priority health facilities.
3. To emphasize the immunization of sick children.
4. To improve training and supervision.

The overall measles coverage rate for Zaire is about 41 percent. In 1987, 110 sentinel reporting sites throughout Zaire reported 14,866 cases, a decrease of 5,000 cases from the previous year. Field visits often dramatically confirmed the relationship between high immunization coverage rates and the decrease, and in some instances the disappearance, of measles from communities.

E. Poliomyelitis

There is little question that the poliomyelitis situation in Kinshasa and Zaire has been favorably impacted because of PEV. Surveillance data from 20 cities have noted a fall in poliomyelitis cases from 363 in 1982 to 89 in 1987. This fall in cases has been achieved with an overall vaccination coverage in these cities of about 50 percent, an observation which has been previously made in other West African countries. Data from Kinshasa are even more dramatic, with a steady decline in case rates from 22 per 100,000 population in 1978 to one per 100,000 population in 1987.

A Polio Plus Project has been funded by Rotary International and local Rotary clubs of Zaire. The five-year commitment is about 1.7 million dollars, most of which will be spent for vaccines. The funds are also supporting a previously-mentioned study of poliomyelitis in Kinshasa. Local clubs expect to be actively involved in community mobilization, with primary emphasis on acceleration campaigns using fixed vaccination centers.

F. Neonatal Tetanus

Reported cases of tetanus have fallen slowly in Kinshasa for the last eight years. In October, 1987, Dr. Francois Gass from the World Health Organization (WHO) in Geneva reviewed several years of available data at Mama Yemo Hospital and the university clinics. He found about 50 cases per year and identified several geographic zones of higher risk, as well as an increased risk associated with delivery at private maternities. A case control study to further define these variables is planned for this year.

G. Control of Diarrheal Disease

The ORS center at Mama Yemo continues to be a focal point of treatment and training activities in the treatment of diarrheal diseases. Indicators such as a fall in the fraction of infants in the C category indicate that the center is having a good impact. Highly successful training activities continue to be held at Mama Yemo. A new ORT center at Bukavu is functioning and serves as a training site for that area.

Supply of ORS packets was a major problem noted during the evaluation. Frequent ruptures in stock were the rule at the antenna and zonal levels. There were several types of ORS packets that were available, which made training more difficult. However, there was a high degree of awareness of ORS and health center personnel invariably used ORS and not antibiotics to treat diarrheal episodes.

Visit to LAPHAKI

ORS is manufactured locally by the Laboratoire Pharmaceutique de Kinshasa (LAPHAKI). LAPHAKI is jointly owned by the GOZ and the Belgian Cooperation; the latter manages the operation. LAPHAKI operations are to be self-sustaining with a "social bias." ORS represents approximately five percent of LAPHAKI's output. A second machine for the production of ORS should become operational this month for a total capacity of 3-4 million units per year according to management. There is space for a third machine which would increase capacity to 5-6 million. (Note: The production capability estimates of different LAPHAKI officials varied considerably.) These machines can also be used to manufacture other, often more profitable, products.

ORS production is almost at a standstill. PEV, apparently, has a poor credit rating with the company and owes an overdue balance of Z 350,000. Prices of all LAPHAKI products are adjusted quarterly to reflect the devaluation of the Zaire versus the Belgian frank.

ORS raw materials to date have been supplied free by UNICEF. Management has no information whether this will continue. Current stocks are sufficient for approximately 2.4 million units, except for the supply of trisodium citrate dihydrate, which is practically exhausted.

Currently, the company sells ORS to PEV, its only customer, for Z 15, represently manufacturing costs and a small profit. Air freight and handling charges and roughly Z 8 for a total cost price to PEV of approximately Z 23 as of this writing. USAID has placed an order for 1.67 million units of ORS through A.I.D. for \$300,000 CIF. Currently, this equals Z 38 per unit plus handling and distribution, for a total of approximately Z 45 per

unit. Since the value of UNICEF's subsidy per unit has not been calculated, the prices cannot be compared. This aspect, i.e. imports versus local production, will be assessed shortly by a social marketing expert.

Two treated episodes per year in a target population of six million children under five years at a Z 10 mark-up would provide a profit margin of Z 120 million; even Z 50 million could finance much of PEV's recurrent expenses, though a significant percentage may be needed to pay for the higher price (due to 100 percent inflation) of re-orders. However, FONAMES' plans to distribute all pharmaceuticals, including ORS, through a network of countrywide depots, may affect the price and profitability of ORT by PEV. The Pharmaceutical Depot organization furnishes one of the GOZ's three directors on LAPHAKI's board. The lack of operating funds and the use of sales proceeds for salary advances have caused ruptures in the shipments of ORS. USAID and PEV have not yet determined how to fund the distribution of the one million ORT packages that will arrive in January, 1989.

H. Malaria

Chloroquine is generally used throughout Zaire as the main treatment for malaria. The official PEV policy is to give chloroquine at 25 mg in three doses of 10, 10 and 5 mg for three consecutive days. However, field observations revealed a surprising variability in the dosing of chloroquine ranging from 10 to 50 mg.

Operational research activities have studied the role of prophylactic treatment of pregnant women with chloroquine. Over 2,000 pregnant women participated in the study which compared the effect of monthly chloroquine at 1200 mg per kg to treatment of febrile episodes. Babies were weighed at birth for both the treated and untreated groups. The main problem with this study was the low follow-up rate of 65 percent. Plans have been proposed to repeat these studies with a greater emphasis on follow-up.

I. Mortality and Utilization of Health Services (MUHS)

The issue of child survival is central to CCCD. One of the specific objectives of the Project was to reduce infant mortality. In order to more precisely study the impact of CCCD on infant mortality and health services utilization, a study was done in two health zones covered by the Kikwit antenna, Kingandu and Pai Kongila.

The basic thrust of the effort was to measure infant mortality in two health zones, one where services were about to be developed and a second where services were not likely to be developed for a

period of time. The two areas chosen were Kingandu and Pai Kongila. The original survey was done under the auspices of CCCD in 1984 and the results engendered a great deal of discussion. Simply stated, the direct estimates of infant mortality were far lower than anticipated.

Furthermore, when indirect techniques were applied to the mortality data of the 1 to 4 year-old age group, a far higher infant mortality rate would have been expected. Discussions were held in Atlanta with consultant demographers and it was decided that a repeat study in six of the clusters should be done.

In January, 1985, a MUHS study was repeated in six of the Kingandu clusters. The study emphasized a detailed history of all pregnancies and the results yielded far different estimates of infant mortality. In fact, the most consistent difference between the first and the second surveys was that the first survey significantly under-reported perinatal deaths. The infant mortality rate calculated from the second survey was three times that of the first survey.

Nonetheless, the original plan was to repeat the mortality study after the program had matured and process indicators such as vaccine coverage, ORS use and presumptive therapy had reached levels likely to have an impact on mortality. In the absence of hard data linking process and outcome indicators, reasonable estimates of program maturity likely to be reflected in a decrease in infant mortality would be: 75 percent completely vaccinated under age one; 75 percent of febrile episodes in infants under five years old treated with chloroquine; 75 percent of pregnancies covered with weekly chloroquine prophylaxis; and 75 percent of diarrheal episodes in children below age five seen at health centers treated with ORS.

Report of Visit to Kingandu, Site of 1984-1985 MUHS Surveys

Kingandu and Pai-Kongila are rural areas located about 130 km from Kikwit. The area is largely agricultural and an important center for the production of palm oil. Kingandu is the site of a large, well-established mission hospital. Since the 1985 survey much has changed in the survey area. Shortly after the MUHS was performed, the two zones, which were the sites of the original surveys, were combined into a single zone called Kingandu. There have been several changes in the PEV antenna chief at Kikwit, who supervises the survey areas. In Kingandu itself there was no MCZ from July, 1986 to November, 1987. CCCD staff have not visited the area since the 1985 repeat survey.

The population of the zone is believed to be 107,000, of which 84 percent are covered by health services. The zero to 11 month old population is estimated to be 4,280 and the zero to four year old population 21,400. Vaccination coverage from reports forwarded from the zone are as shown below.

Vaccination coverage Kingandu (%)		
Antigen	Vaccination coverage	
	<12 mos.	0-23 mos.
BCG	49	78
Polio 1	35	50
Polio 2	29	45
Polio 3	24	44
DTC 1	33	48
DTC 2	28	45
DTC 3	21	42
Measles	21	43

The MCZ for Kingandu is new and is scheduled to be trained this fall. The supervisor has been at the zonal office for many years and he remembers many of the details of the 1984 and 1985 studies.

In 1984, Pai Kongila and Kingandu were separate zones, but they were combined in 1985. To this day, there is talk of renaming the zone Pai Kongila but keeping the zonal office in Kingandu. Since completion of the mortality surveys, PEV in Kinshasa has had relatively little contact with this zone. The last visit was reportedly made by the CDC technical officer prior to November, 1987, but no report documenting results of that visit was available.

Working with zonal staff the 30 MUHS clusters for both Kingandu and Pai Kongila were located. Each of the clusters was then matched with the health center that would have been responsible for the PEV work in that cluster. Results of this matching process are summarized in the chart on the following page.

Health Centers	Dates when training finished	Area	Cluster number
Sondji	January 1984	Kingandu	13, 14, 9
Kulung Nzadi	January 1984	Kingandu	16, 15, 18
Katenda	January 1984	Kingandu	11, 21, 12
Mbamba	January 1984	Kingandu	9, 8, 7
Kisamba	January 1984	Kingandu	4, 5, 6
Kingandu Hosp.	January 1984	Kingandu	23, 22, 20, 17
Sungu	January 1984	Kingandu	1, 2, 3, 10
Kimbekele	January 1985	Kingandu	26, 25, 24, 27, 30

Health Centers	Dates when training finished	Area	Cluster number (Pai Kongila)
Mayemba	October 1987	Pai	21
Kisumbu	October 1987	Pai	22, 29, 5, 18, 9, 1
Kimwalu	October 1987	Pai	25, 15, 28, 16
Kazamba Ngwan.	October 1987	Pai	11, 12, 13, 14
Kingola	October 1987	Pai	6, 7, 2, 3
Kimbalanka	October 1987	Pai	19, 8
Pai (Soeurs)	October 1985	Pai	26, 30
Kingandu (Kin)	October 1984	Pai	20
Kimbeleke (Kin)	October 1985	Pai	24, 27
Kulungu SF (Kin)	October 1985	Pai	17, 23

These data show that for the most part the original formulation of what was likely to happen in the zone was correct. Kingandu Health Centers were formed and personnel trained in 1984 and 1985, while much of the training in the Pai area did not begin until 1987. The sole exception was the vaccinations that were regularly done by the nuns at the Pai hospital. Thus, it seemed entirely likely that most of the immunizations done from 1985 to 1987 in the Kingandu zone were done in Kingandu and not Pai. Unfortunately, it was not possible to prove this hypothesis. Reports from the health centers were not available at the zonal level, as figures were taken, added, and the original discarded. Coverage data for 1987 are given in the chart which follows.

Antigen	Doses under 12 mo.	Percentage coverage*	Maximal coverage for Kingandu **
Measles	897	21	42
DTC 1	1417	33	66
DTC 2	1207	28	56
DTC 3	989	23	46
POLIO N	843	20	40
POLIO 1	1504	35	70
POLIO 2	1235	29	59
POLIO 3	1025	24	48

* Based on a total population of 107,000 which includes all of Kingandu and Pai Kongila (under 12 mo.=107,000 X .04=4280).

** Based solely on Kingandu population of 53,500.

To approximate what would have been the highest possible coverage, all vaccinations were conceded to have been done in the Kingandu population, which numbers about half of the 107,000 for the combined Kingandu/Pai population. Even under this assumption, the measles coverage is at best modest. A lot of measles vaccine is given to infants from 12 to 23 months old (963 doses in 1987). A review of measles cases at the Kingandu Hospital revealed that there has been little to no measles for the last three to four years, with about 100 cases since April of this year. The nurse who has been in charge of pediatrics for many years believes that measles cases and deaths are far less frequent than they were several years ago.

An attempt was made to gather more recent information on immunization activities by visiting three rural health centers. In two of the three health centers, the Infirmier Titulaire was new and relatively few data were obtained. In one health center no immunizations had been given in three months. The other centers had population census data and were vaccinating regularly. Too few 1987 data were available in any center to evaluate vaccination coverage. ORS is available and is the preferred method for treating infants with diarrhea.

Comments

- 1) There is little question that the site chosen for the MUHS survey is an excellent one. The expansion of health services was ideal for measuring a difference between Kingandu and Pai. Although access to the area is not easy, the support facilities on site are excellent.

- 2) CCCD personnel have not paid sufficient attention to the survey area. The absence of a MCZ for two years and the absence of regular visits by Kinshasa CCCD staff has weakened the effort. Fortunately, much of the work continued and the zonal supervisor has been present the entire time.
- 3) There are insufficient data at this time to assess accurately the vaccination coverage in Pai and Kingandu.

J. General Observations

Antenna Level

The quality of PEV staff at the antenna was, in general, good. Persons were informed, interested and technically sound. Some had more evident leadership qualities and there seemed to be a general correlation between leadership and good results.

Clearly the most important problem at the antenna level was money. Antenna personnel, in principle, are paid by the government and receive a subsidy (primes) from CPF. The subsidies are sometimes late but always paid. This is not the case for salaries. Antenna personnel were last paid regularly in February, 1988. They were instructed to pay their salaries from March through September by use of receipts from sale of ORS and chloroquine and/or from the sale of outdated vehicles. Most antennae sold at least one vehicle, usually for about Z 500,000 and put these funds into their general funds. All antenna personnel voiced concern as to salary support for the coming year.

Cold chain and logistics were well handled by the antennae. Ruptures in stock were not uncommon and were in two areas:

- (1) Failure to receive ORS packets.
- (2) Delayed shipment of vaccines from Kinshasa because of inadequate funds to ship vaccines.

Supervision varied widely. Some antennae did no supervision while others visited all zones at least once a year. Lack of transportation was a limiting factor in some antennae but the most pressing complaint was the absence of funds (POL and per diems) to be used for supervisory visits. Health education initiatives were virtually non-existent at the antenna level.

Zonal Level

Zones were also variable. Some were ably run by a well-organized, well-trained MCZ while others were weak. No zone was good without having a trained MCZ. In some zones there was

conflict between PEV needs and the amount of curative work that had to be provided by the MCZ. In these situations much of the supervision was left in the hands of nurse supervisors with variable success.

Every zone experienced at least one rupture in vaccine and ORS stock during 1987. The critical problem was the insufficient supply of ORS. Zones were variably supplied with needles and syringes but for the most part were unaware of stocks at the health center level. Often there were shortages at the health center with ample stocks at the zone.

Vaccination coverage varied as did the quality of disease reporting. Nonetheless, there seemed to be a clear-cut inverse correlation between reported measles cases and under one measles vaccination.

MCZs had all been processed into the GOZ computerized payroll system and regularly received their salaries. However, the waiting period until this processing could be done (in one case as long as 36 months) was unpaid. Hospital revenues covered their salaries during this time.

No MCZ had a clear idea of supervision. Only one used an instrument and it did not cover PEV activities adequately. Most MCZs did not leave supervisory notes and some redelegated supervision almost entirely to their nurse supervisor. Funds for supervision were generally inadequate. SANRU and UNICEF zones were given special allotments to pay for supervisory visits. Several zones taxed health centers from Z 500 to Z 1000 for supervisory visits.

Health Center Level

Not surprisingly, health centers were the most variable of the levels examined. At the health center level all salaries were autofinanced from drug sales and from clinical services. Some health center nurses had a clear idea of populations and had developed health center family registers to track immunizations in their populations. Coverage in such centers was invariably high. Others provided immunization services when asked but had a surprising lack of understanding for the need of second and third doses. When fiches techniques were present, they were for the most part not used by health center nurses.

All health centers changed needles with each vaccination but none used a single syringe per vaccination. Shortages of syringes at the health center level were the rule.

All health center nurses knew about and prescribed ORS but many had difficulty with the question of how much should be given and when. Chloroquine was universally used for presumptive therapy

for malaria but frequently the wrong dose was prescribed. The cold chain at the health centers was excellent. Vaccines were appropriately chilled and all nurses knew about the need for scrupulous care of vaccines.

Record keeping was variable but on the whole poorly done. Treatment registers were always present and it was possible to evaluate the care rendered for cases of fever and diarrhea.

A surprising number of nurses had not yet been trained, largely as a result of the turnover in health center nurses. In certain areas like Kivu trained nurses often left to work in Rwanda for better wages.

Health education was largely the responsibility of health center nurses who mainly used songs, repetition and dances. Mothers were individually counseled at the time of immunization or treatment of a diarrheal episode. However, when mothers were asked questions about reasons for diarrhea or the need for immunization there seemed to be little real understanding.

Community participation was also variable but an active village health committee was always associated with better services. This was particularly evident in rural health centers where villagers had rebuilt a health center or provided housing for the health center nurse.

RECOMMENDATIONS

1. MUHS Surveys

- a) Conduct a vaccination coverage survey in the 30 clusters used in the 1984 study at Kingandu and Pai Kongila. If measles vaccine coverage in children from 12 to 36 months is above 60 percent and if the Pai coverage is less than 25 percent, the mortality study should be repeated one year later. Any plan to restudy will require good input into PEV activities at Kingandu this year.
- b) If measles vaccination coverage in Kingandu is in the 40 percent range, concentrate training and supervisory efforts in the Kingandu area with the object of repeating coverage surveys in November, 1989 and 1990. Decisions on when to repeat the MUHS would depend on process indicators from these surveys.
- c) Initiate discussions now with Ann Pebley about her availability and interest in working more in Kingandu.

2. Vaccination activities
 - a) Single syringe per vaccination needs more emphasis.
 - b) Emphasize that no opportunity to vaccinate should be missed and that it is perfectly appropriate to open one vial of measles vaccine to immunize a single child.
 - c) Emphasize that presence of fever is not a contraindication for immunization.
3. Treatment of malaria
 - a) Presumptive therapy for malaria requires standardization.
 - b) Prophylactic treatment of pregnant women with chloroquine requires emphasis until results of research studies are available.
4. Treatment of diarrheal episodes with ORS
 - a) Continued effort needs to be made to increase the stock of 750 ml ORS packets.
 - b) As a general rule, only about one-third of women can appropriately prepare a salt solution to be used in the home for oral rehydration. These observations further emphasize the need for increased availability of packets and emphasis on other rehydrating fluids such as rice water and coconut milk.
5. Administration
 - a) Antenna personnel should be placed on the computerized payrolls under "Fonctions Publique."
6. Sale of ORS
 - a) To the extent possible, PEV should maximize sales and distribution of packets of ORS. Funds generated by these sales would support supervisory and other operational costs.
7. Supervision
 - a) Checklists for supervision at the antenna, zone and health center levels should be developed to standardize supervisory activities.

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ANNEX II

Health Education

The purpose of the health education component of PEV/CCCD is to create and disseminate information for health workers and the population of Zaire in order to realize project goals. As the 1985 evaluation recognized, the goals of the Project "will remain unattainable unless...specific attention is paid to the part of the Project devoted to health education."

The July, 1988 PROAG Amendment #5 stipulates* in sub-objective 11 that 100 percent of functional health centers should have personnel trained in vaccination, ORT, malaria treatment and health education (underline added) by 1986 and thereafter. Sub-objective 12 states that the percentage of functional health centers having received appropriate training materials should be at this same level. And number 13 states that 20 per cent of functional health centers should use an appropriate IEC system for vaccination, ORT and malaria treatment by 1989. (Trained health education personnel and training materials should now be in place in all functional centers throughout the country. An appropriate strategy should be in place in 20 percent of the centers.)

By PEV's own definition, the health education component of PEV/CCCD has been largely ineffectual since the last evaluation. Certain isolated tasks have been completed. However, while a good theoretical base exists at the central level, there is an inability to fully apply it. There is a lack of planning, structure, and strategy for the realization of the overall goals of the health education program. It is difficult, therefore, to effectively implement health education methodology at any level--central, antenna, zonal, health center or outreach. This problem was recognized by the PEV team, the MOH, USAID, and CDC. HEALTHCOM, a USAID Project contracted with AED, was invited to submit a proposal on health education and has recently placed a technical expert in the Shaba Region of Zaire. This person will help to design and implement health education strategies for PEV and other agencies. Additional assistance is needed.

PEV's health education accomplishments and attributes are worth noting. There is ample recognition, on paper, of the need for health education support: The IEC section consists of the Director of Technical Services, the IEC Chief of Service, and an assistant (presently vacant). There are other positions, as well, which are defined in the job descriptions as support

* In "Table I - CCCD Coverage Rate Sub-Objectives (%), In Project Priority Health Zones"

for health education, such as the Chief of Service of the Pool of Coordination. The IEC section has incorporated recognized health education techniques into the PEV educational materials. Knowledge, attitudes and practices (KAP) studies were done in 1987 as part of that evaluation. Materials developed prior to 1988 use a research approach to the knowledge, attitudes and practices of the population in Kinshasa, where they have been pre-tested. (These materials need also to be pre-tested in other areas of the country to determine the applicability of research done in Kinshasa. The regional diversity of Zaire may necessitate specific research in each area. The IEC Chief of Service is aware of this need.)

Staff knowledge and motivation are high. In the course of the evaluation individuals who would be charged with health education supervision (Chefs d'Antennes or MCZs) were asked "Why do you think coverage or return rates are low?" or "Is health education adequate?" Replies reflected ready recognition that more training and implementation were necessary in health education. There were also the desire and willingness to take on these responsibilities after receiving pertinent training.

There are positive achievements which should be noted and which provide for places from which to begin. Mama Yemo, the largest hospital in Kinshasa, is doing an excellent job of training nurses to train mothers in the treatment of diarrheal disease. There has been an enormous decrease in C level disease in children brought in by revisiting mothers. The percentage of deaths from diarrheal disease, according to the statistics presented to the team at Mamo Yemo, has been reduced from 14 percent to two percent at the hospital.

A few PEV antennae and health zones have shown impressive ability in carrying out health education activities. Particularly notable was Kabondo Zone in Kisangani. There, the MCZ has developed an excellent health education component. He has trained nurses to deliver innovative and interactive health education messages in all areas of PEV/CCCD. Every mother asked was able to relate why her child needed to be vaccinated, why ORT treatment was recommended for diarrhea, how to mix the SSS formula, when she needed to return for shots, what the growth chart meant, etc. Supervision of staff is scheduled and ongoing, and note is made of all supervision. A community outreach program is in place to insure a high rate completion of vaccine series. The return rates for third dose vaccinations in his region are between 81 percent and 87 percent - substantially higher than most areas visited. All nine of the health centers under the jurisdiction of this MCZ were supervised in the same fashion, with records kept of each supervisory visit. Worth noting is the fact that the MCZ received training specifically in health education techniques from the Project de Service de Naissance Desirable (PSND). He pointed to this as a good part of

the reason he has been able to create a viable health education program. A preliminary analysis of the situation would seem to indicate that training would make a substantial difference in the development of a cohesive health education program.

Overall, however, the division has problems. Few materials have been developed or distributed over the past year, and, in almost all of the sites, the materials are in French. Available materials were often used in a rote manner. Many centers have received no materials, and where materials have been distributed there was little understanding of how to utilize them. Few of the women questioned remember having seen or heard TV or radio announcements. Some recalled "some sort of program" talking about health issues but no one could describe any such program. (Some attempts, however, are ongoing on the part of both Chefs d'Antennes and MCZs to coordinate programs for mass media education programs.)

No operational research for integrating health education activities into the overall structure of PEV has been performed, although the capacity for such research and training in this area is available through PRICOR, the USAID operations research project with representation in Zaire. Few innovative approaches, such as theatre or small group work have been undertaken and practically no program has attempted to link other development strategies, such as community development or income generation, with health education schemes. Help is available through other health programs in Zaire, such as SANRU, which have explored these issues. Primarily because of the lack of training and health education, little supervision exists in this area.

The result is that most women could not describe the correct formula for SSS, explain the reason for diarrhea, say what the growth chart meant, relate why or when they were to return to the clinics, or describe steps to other preventive activities. The health education component is not properly represented in all areas of the CCCD/PEV program; planning, information gathering, materials development, distribution, training, project implementation and evaluation. This is of major concern given the importance of health education in helping the population understand the need for services - thus increasing demand and utilization - particularly considering the flattening rates of coverage.

A number of reasons for this state have been cited by the Chief of Service for IEC: First and foremost, he notes a lack of a description of tasks, responsibilities and communication channels for health education PEV. He notes as well a lack of personnel support at the Kinshasa level; a blockage in the release of CPF; other claims on the time of the two-person section; lack of an artist to produce materials; the cancellation of a trip by CDC/Atlanta health education personnel, etc.

A number of constraints have arisen over the past year. The delay in the release of CPF has, according to the financial division at PEV, been resolved and funds (of which a substantial amount remain for health education) should shortly be available again. During the evaluation, the IEC Assistant Chief left PEV for another position. The Chief of Service for IEC has spent considerable time participating in training at Mamo Yemo Hospital in ORS use. Some of the recent shortfall in managerial and technical support for the health education program has resulted from personnel and management changes and problems. The challenge of incorporating a comprehensive health education program into the PEV has not been met. It is clearly time for a new beginning. Structure and support for the health education program should be established and realistic goals and objectives adopted.

While the talent and motivation observed in the field not only exist but are abundant, concrete ideas, as well as action and support of activities is needed. This evaluation is charged with helping to identify the current situation and with making concrete and workable recommendations.

Organizational/Management/Operations Research

Because of the lack of supervision, salaries, and training in health education, it is of utmost importance to assess what can realistically be done to strengthen health education within PEV, what staffing and programmatic additions are necessary and feasible, how these changes should be implemented and what kind of coordination between organizations is possible, culminating in the development of a workplan for the central level. Health education should be coordinated in the context of the entire program, taking salaries (see "Revolving Fund/Self-Sustainability" in Annex III), lack of transport, communication difficulties, etc. into account. At present, any increase in demand stimulated by increased health education activities would overextend the delivery system and, possibly, the funding availabilities for direct services.

The study described above could be conducted by one or more consultants and a member of the PEV team, preferably the Chief of IEC. The consultants could be expatriates or local staff trained by PRICOR.

This study should take place over approximately a three month period - given consideration to the amount of travel needed and transportation difficulties, and should recommend specific staffing, support and salary actions, while also providing growth rate projections.

Training

Following this study and concurrent with the implementation of its recommendations, training in health education techniques is their next priority. After conducting a needs assessment of the antenna level to further understand the major health education problems and priorities, techniques presently used, and the applicability of available materials and training needs, work and training plans should be elaborated, and a series of workshops for the Chefs d'Antennae should be implemented.

The training should include survey techniques, the development of KAP studies, work plans and health education materials, communication techniques, proposal writing, community mobilization and evaluation. This training should occur centrally as well as regionally, but should initially include the Chefs d'Antennae so that, as expertise is made available at the zonal and center levels, there will be support for activities. Those individuals trained could then train Chefs de Zones, nurses, and community health workers, ultimately reaching the community level. Training should be coordinated with other donor agencies (SANRU, UNICEF, USAID, Belgian Aid, etc.) which sponsor training activities.

Staffing and Consultants

Presently, the central level staffing is one person short. Efforts are underway to fill the vacancy.

The Chef de Division Technique, the person responsible for supervising and guiding the Division of Health Education, is not comfortable with developing plans for this area. He would prefer a short- or long-term consultant to help initiate planning, training, materials development and the evaluation process. After an initial observation period, the consultant would return to the program office to help coordinate strategy, training, materials, etc. If funding is available, the Chef de Division Technique would prefer someone full-time for approximately one year. He is unaware of anyone in Zaire who is able to do this. It would be advisable for CDC to look into the feasibility of recruiting an expert for this task.

Other possible help might come in the form of CDC, HEALTHCOM, the Zaire School of Public Health, and Peace Corps, as well as trained PEV employees (at the central level and in such places as in Kobondo). HEALTHCOM has a representative in Zaire who will be working along with PEV staff at her base in Shaba. This is a chance to explore techniques with a view to adapting them later to other areas.

The Shaba-based HEALTHCOM representative will be busy with a number of issues, PEV being only one. With her original

mandates, and the immediate loss of her counterpart to study in Brussels, she will have difficulty accepting additional burdens on her time and energy. This reinforces the need for an additional CDC or HEALTHCOM consultant to be available to PEV/K. HEALTHCOM and CCCD will also be working in conjunction with the Zaire School of Public Health, developing courses specifically in health education. Many ideas are under consideration. Conceivably, short courses will be developed which will address some of the needs of PEV.

Possibilities do exist for Peace Corps involvement. There is firm interest on the part of the Peace Corps in being involved with health education, community, and economic development programs. Peace Corps is exploring the idea of extended training in these areas. This should be explored, whether with Peace Corps or another agency. Peace Corps is looking into possibilities for these types of activities in four zones where there is interest and support. Peace Corps Volunteers (PCVs) have been playing a supervisory role which, due to many factors, has been problematic. They should be placed at the community level. (See "Assessment of Peace Corps' Public Health Program in Zaire", available through OTAPS at Peace Corps, Washington, D.C., 1988) To be effective, volunteers should be well-trained in community development, health education, and communications, in addition to the PEV training they currently receive, and they should have counterparts.

Advantage should be taken of PEV employees capable of planning and conducting regional health education workshops. This includes the incoming technical officer.

There are other options. FONAMES, as the coordinating agency for training, has the mandate to help develop the links necessary for work with such agencies as PSND, church groups practicing health education, SANRU, etc.

All activities should fully involve the PEV Health Education staff. An internal evaluation of the progress of the staff and unit should take place one year after obtaining the necessary technical assistance.

RECOMMENDATIONS

1. Organization/Management/Operations Research

- a) Conduct a needs assessment in close collaboration with PEV to delineate health education objectives, focused on the following areas:
 - Staffing, funding and organizational needs
 - Roles of health education personnel
 - Hierarchical relationships

- Local resources (artists, for example), and programs which could aid this program
 - Work plans for the central level designed to set priorities and specific objectives (for ORT use, malaria treatment and vaccination coverage) and how these are to be addressed through education.
- b) Coordinate (operational) research to determine whether an increase in the quality and quantity of health education activities will increase the demand for services beyond PEV's ability to supply them.

2. Address Staffing Needs

- a) Provide additional long-term or a series of short-term technical assistance for health education to work in conjunction with the IEC Chief.
- b) PEV should hire an additional staff member with background in health communications.
- c) Peace Corps Volunteers working in conjunction with PEV should be placed on the community level except in exceptional cases, i.e. substantial background in health and supervision. Placement should be done on a trial basis with a few volunteers (approximately four).
- d) The new technical officer should help provide coordination for training programs in health education.
- e) An internal evaluation of health education activities should be conducted at the end of one year and make any changes in structure and/or staffing at that time.

A CDC or HEALTHCOM consultant should provide continuous programmatic support and should help to develop, in conjunction with the IEC Chief of Service, a strategy for health education, work plans, training plans, and materials. If it was decided that CDC would place the person, the mechanism could be through local hire (Zairian or foreign), or the use of a CDC Child Survival full-time employee. The resident HEALTHCOM representative should continue to work on the Shaba level with PEV and adapt the strategy and materials to other areas. PEV/K should conduct a continuous exchange of information with the Shaba program on materials developed, as well as with the HEALTHCOM representative on the courses currently being planned in health education with the School of Public Health.

PEV/K should continue discussions between PEV and the Associate Peace Corps Director/Public Health for the training and placement of Peace Corps Volunteers in PEV

activity. All PCVs should have counterparts. Activities should be coordinated with FONAMES, which should be kept informed of all training activities.

3. Develop training and work plans

- a) Conduct a needs assessment at the Chef d'Antenne level, to include:
 - Major problems encountered in providing health education.
 - Priority areas of service delivery
 - Techniques presently used in health education
 - Applicability of available materials
 - Training needs.

- b) Based on the results of the assessment, the IEC Chief of Service in collaboration with the CDC or HEALTHCOM consultant should develop a series of training workshops to take place over one year for the antenna level. Training subjects for use in workshops for the Chefs d'Antennae and personnel would include subjects such as:
 - Surveys and other information-gathering techniques (such as focus groups)
 - Development of one year work plans designed to set priorities and specific objectives for the antenna level (in ORT use, malaria treatment, and vaccination coverage) and how these are to be addressed through education
 - Materials development
 - Communication techniques
 - Nonformal education
 - Proposal writing to develop the skills necessary for procuring funds from outside donors for health education activities
 - Community mobilization and development
 - Evaluation.

Plans and workshops should be developed for all levels, but should initially concentrate on the Chefs d'Antennae to provide support for other levels. Training should be coordinated with programs and agencies (FONAMES, SANRU, UNICEF, Belgian Aid, churches, etc.). Training should be conducted at regional as well as central levels to assure realism. At the community level, workplans should be developed with community participation.

ANNEX III

Management

Steering Committee

The Steering Committee meets twice per year. The first meeting takes place early in the year to review the previous year's operations, successes and failures. The second meeting, at the half year mark, considers plans for the ensuing calendar year.

The two meetings per year are inadequate to achieve the systematic coordination of objectives, sub-targets and of the resources needed to attain them. Of course, there are additional meetings between PEV and other GOZ organizations, such as FONAMES and the various entities that determine GOZ budget contributions, as well as with donors. The two major Steering Committee meetings can only address overall issues and achieve broad agreements. The other meetings, mostly of an ad hoc nature, tend to address operational problems. Given the enormous lead time that A.I.D. and international agencies require to prepare, future meetings of the Steering Committee should be held in conjunction with the design of project identification documents and project papers or with the negotiation of project amendments, and not after decisions have been taken and actions have been agreed upon.

A.I.D. projections should be able to consider fully the plans of other donors and vice versa. To arrive at a more systematic coordination of the Project, meetings of the Steering Committee should be held at least quarterly and the chairman or executive secretary (to be named by the PEV Director) should be notified by the members whenever situations emerge that affect the Project as a whole. For example, the approval of funding changes by the GOZ and donors should be promptly communicated to the Steering Committee and if necessary, a meeting called to discuss the implications. This could range from reprogramming to acceleration or cutback in the program or of specific elements. It would also appear desirable to establish several working groups or subcommittees to follow specialized project components, such as training, supplies of capital equipment and expendable items, financing (including self support through revolving funds), and integration into other health activities. Recent theories of donor coordination advise against the creation of bodies which exclude the host country in order to avoid the perception of adversary relationships between a phalanx of donors and the host country. It would appear that the Steering Committee should serve the purpose of the Project Coordinator without the need to create a separate structure for the donor community.

PEV Program Internal Management Structure

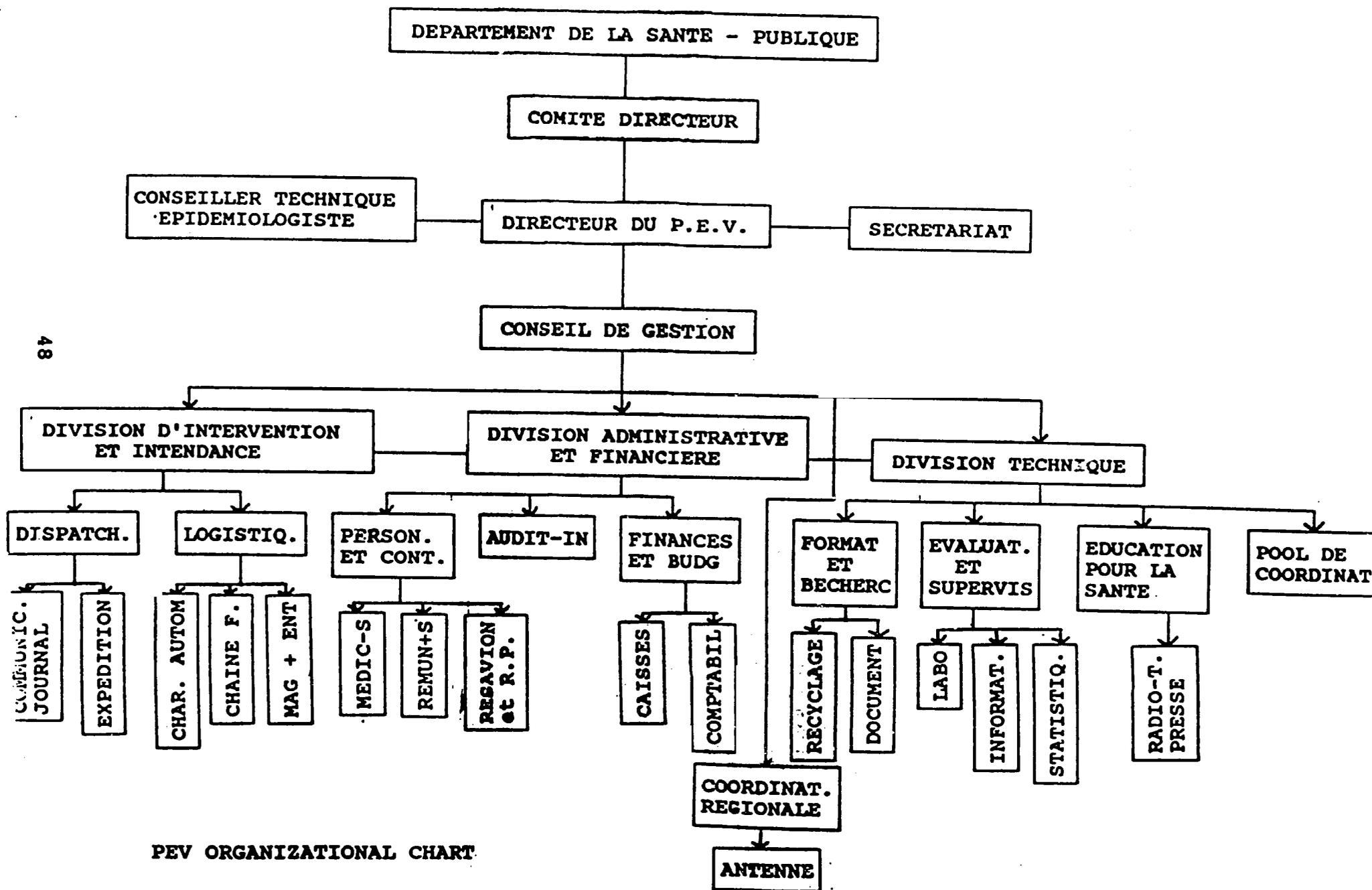
The new director revamped PEV's organization after taking office in early 1988. The previous chart showed two major divisions, Technical Services and Administrative Services. The present organization consists of three principal divisions. The new one includes essentially what USAID would call General Services (see organizational chart on the following page). In the wake of the reorganization, the former Technical Division inadequately controlled the cold chain and other logistic functions, while the Administrative Services contributed supplies and motor pool functions. There are sets of job descriptions outlining the functions and supervisory reporting line of each position at the division, office and section levels.

Some of the tasks are not clearly defined, and there appears to be overlap. Some descriptions, e.g. that of the position of the chief of coordination, sound somewhat esoteric. Just as in USG entities, a job description may occasionally be written around an incumbent or specific candidate. PEV is a Zairian organization and its director should have responsibility and authority to organize and staff his service as deems fit consistent with PEV's mission and GOZ rules and regulations. The 1988 reorganization is too recent to allow judgments based on comparisons with the former structure. Performance will be the criterion and might be assessed early next summer. It would be presumptuous for the team to predict the results of the administrative changes. PEV is a relatively small organization and its offices are close to each other. Thus, personal relations and operational understanding may be more important than formal job descriptions.

Above all, PEV is a GOZ organization which must work within the broader structure of MOH and GOZ ethics, norms and standards. These may differ from USAID values and methods. The decision to accept, modify or reject unsolicited advice is the prerogative of PEV, except when joint objectives are affected. PEV must strive as a Zairian organization in a Zairian setting.

The new PEV Director's creation of an internal audit arm is a very positive step and should provide this office with a valuable management tool. The organizational location of the internal audit staff should be considered by PEV management. The section is currently located in the Division of Administration and Finance, which is a traditional subject of audits. Management has recognized the potential for conflicts of interest and command influence by stating in the job description that the Chief of Section "though reporting organically to the Chief of the Administrative and Finance Division will in certain respects report directly to the Director." These "certain respects" are not defined.

ORGANIGRAMME DU PROGRAMME ELARGI DE VACCINATION ET LUTTE CONTRE LES MALADIES TRANSMISSIBLES DE L'ENFRANCE



RECOMMENDATIONS AND SUGGESTIONS

1. Preferably the Audit Section should be attached to the director's office as is normal practice for internal audit staffs.

If this not acceptable, the director may wish to consider either providing precise guidelines regarding reporting channels or transfer the section to the Evaluation Division, which would both in fact and perception appear a more neutral location than the Administrative and Financial Section.

2. The PEV's young Audit Section should interface where appropriate with the USAID controller to avoid duplications and achieve mutual reinforcement.

Primes

The 1985 evaluation recommended salary and per diem top-offs for highly professional positions. USAID at the time rejected this recommendation. In late 1985, USAID adopted a broad across-the-program system of primes for GOZ personnel directly linked to USAID-supported projects. Directive 306 of October 1, 1986, further systematized the scheme to assure its uniform application. In June, 1988, the prime schedule was revised upward to take into account the progressive devaluation and decline in purchasing power of the Zaire. Thus, the CPF may provide emoluments that attain three times the amount of the GOZ base salary. It should be pointed out that even the maximum ceiling for the total remuneration from all sources for the senior officials, at the official exchange rate, amounts to a approximately \$350 per month (including all benefits), or around \$270 per month at the current open market rate.

The large-scale reliance on USAID top-offs from the directors to messengers virtually guarantees social overhead projects such as PEV will not be self-sustaining for the foreseeable future, i.e. in this century. As of this writing the GOZ would have to double or triple benefits and in addition compensate for the annual rate of inflation, which currently runs at 100 percent. It should be noted that the 1985 evaluation's recommendation was directed solely at professionals with specialized training who had more lucrative employment possibilities than PEV could provide. These essential individuals, it was felt, must be assured of a minimum living standard to keep them in the Project.

It was not the intention of the 1985 evaluation to recommend a prime system for project employees who lacked employment alternatives and could be easily replaced. The authors of the 1985 report were aware that this approach would be considered unsympathetic. It was agreed at the time that the Project was

directed at vaccinations and not at providing jobs or better living conditions for project personnel. These were considered means to the end purpose of saving children.

Primes are now an integral part of many USAID-supported projects. Conversations in PEV/K and with GOZ field personnel have clearly evidenced considerable resentment at all levels at what is perceived as the insufficiency of USAID-set primes to provide adequate take-home incomes. There is a near total absence of appreciation for the supplement that USAID primes (legal title to CPF is vested in the GOZ) provide to GOZ salaries. GOZ employees are aware of the country's economic condition and thus, are less critical of the inability of GOZ salaries to keep up with the cost of living.

Per Diems

The GOZ/PEV has a simple three-tier per diem system ranging from Z 8000 for directors down to Z 5000 for mid-level officials and Z 2000 for chauffeurs. The full daily rate is paid for each day or part of day in travel status. Thus, for an overnight trip the two-day GOZ per diem may exceed the corresponding USAID rate.

Yet, while the GOZ/PEV per diem rate is one of the workable aspects of the GOZ's compensation system, USAID, at least for purposes of the evaluation, superimposed its system on PEV participants. This can only be confusing and undermine one of the few reasonably adequate GOZ pay elements.

RECOMMENDATION

USAID reimbursement of PEV travellers should be based on GOZ/PEV rates rather than the USAID scale which becomes inapplicable on the PACD.

Revolving Fund/Self Sustainability

The earlier evaluation and various cost recovery/auto-financing studies show the existence of great variations at different locations. There is generally a large degree of self-sufficiency at the health center and health post levels. Profits from the sale of drugs and medicines (including ORS and chloroquine) and income from curative treatments and vaccination cards provide funds for the payment of salaries and operating costs, sometimes supplemented by church-related or other subventions. At times, some health centers and posts are able to make contributions to the health zones for supervisory services and backstopping. In addition, health zones derive their own income from the above sources and links to hospitals. Yet many MCZ live at the margin (they draw no USAID primes), often receive their salary irregularly at best and are without transport and thus unable to provide supervision and training.

In some respects antenna personnel and the regional medical coordinators are better off. While GOZ salaries are less than an assured source of income, USAID/CPF primes are generally paid on time. Small amounts for operational purposes are also occasionally provided by PEV/K. At the same time PEV staff provide no treatments and have no vaccination-related income. Their only source of funds derives from the profit margin on the sale of chloroquine and ORS. These were originally supplied free by PEV as seed stock for revolving funds which are now practically decapitalized. As a general denominator, antennae and regional medical coordinators lack transport and operating funds for vehicles to carry out their supervisory and training mandates. The negative effects on clinical improvements and training for the PEV are discussed in other parts of this report. In the likely absence of early relief through adequate increases in GOZ contributions, the deficit will have to be met by outside resources, i.e. donors, presumably resulting in some combination of the following scenarios:

1. Stabilize and reduce the deficit by calling a moratorium on further expansion of the PEV program until the GOZ can meet its commitments.
2. Provide additional resources through:
 - An increase in CPF to compensate for GOZ shortfalls by either paying salaries or additional primes.
 - A refloating of the chloroquine and ORS revolving fund concept by furnishing seed stocks of these commodities.

RECOMMENDATIONS AND SUGGESTIONS

1. USAID and other donors should provide ORS and chloroquine to PEV which will initially furnish supplies free to decapitalized antennae.
2. PEV should set sales prices for antennae which will be authorized to retain a certain amount per unit of sales. (Once supply is adequate to satisfy the demand by health installations, PEV antennae could also supply commercial sellers, such as private pharmacies and small merchants, at increased prices.) The forthcoming visit of a social marketing expert should provide specific recommendations.
3. Uses for authorized retained amounts should be prescribed by PEV/K and be used, first of all, to satisfy needs of the operating budget, including supervision. Only then should unpaid GOZ salaries be considered. Payments of salaries in excess of this formula should be recuperated through subsequent prime withholdings. It must be remembered that in most locations antenna staff are the only GOZ employees

with access to primes (generally greatly in excess of their base salaries).

4. Sales proceeds returned to PEV/K would finance purchases from LAPHAKI (presently the only producer). This amount may not be sufficient to revolve the stock given the inflation rate and LAPHAKI's market-related pricing policies. However, the rate of decapitalization of the revolving fund, if any, must be carefully controlled.
5. A study should begin immediately to estimate by health zone the point of diminishing sales/returns of chloroquine and ORS. Team members, based on cursory inquiries, estimate that the average sales price of ORS might be raised to around Z 50. Chloroquine will probably remain at the present Z 2-4 zone given the multitude of suppliers. This simple survey could be designed by PEV/K, which recently hired two people with credentials in business administration, and conducted by the regional medical coordinators through the antennae.
6. It is important to keep alive and institutionalize the revolving fund, self-support concept rather than letting ORS and chloroquine sales become a slush fund that will constantly need replenishment by donors concerned about ORT and malaria.

PEV/CDC--The American Presence

Since the beginning of the Project, two American CDC advisors have been assigned to it and physically located at the PEV office.

Over the past six years, PEV has made great progress. It has created a functioning organization, staffed by professionals. Many of these have received extensive U.S. and other international advanced training, including MPH degrees.

Discussions with the CDC staff and a review of their job descriptions would indicate that the technical functions of the two positions have not changed over the past six years. PEV indicated that the present and former directors reviewed the candidates' qualifications. However, there apparently had been no consultations regarding the precise functions of the positions nor whether these were, in the opinion of PEV, still needed or desirable.

The team perceived that for PEV, the greatest utility of the incumbents and their predecessors was in the area of PEV/USAID relations and the reconciliation of differing administrative styles and procedures.

It is possible the bulk of these back-stopping/liaison functions could be assumed by USAID/Health, Population and Nutrition (HPN), though it might require the addition of a part-time employee. In any event, and in recognition of the advanced status of the Project, a development rather than a counterinsurgency effort, the host country partner should be fully consulted regarding the nature and configuration of U.S. assistance inputs.

These comments are made solely with respect to the CDC positions without reflection on the present incumbents. The newly appointed technical officer, in Zaire for initial orientation, overlapped with the team only for a few days. The epidemiologist was both knowledgeable and most cooperative. Both officers impressed the team as competent and dedicated professionals.

RECOMMENDATIONS AND SUGGESTIONS

PEV/USAID/CDC should examine the two CDC positions to determine whether and when the permanent U.S. presence might be replaced by short-term, specialized TDYs, both in scientific and management areas. Above all, long- or short-term functions should respond to needs as seen by PEV.

PEV/CDC Positions and USAID

The job descriptions make it evident that the incumbents serve three purposes:

- 1) Providing technical advice to PEV.
- 2) Providing operational assistance (OPEX) to PEV.
- 3) Performing functions with peripheral application to PEV's immediate priorities but of interest to CDC.

The positions are under USAID/Kinshasa administrative control. However, tasks are set independently and technical guidance is provided by CDC/Atlanta. The CDC officers keep their USAID counterpart abreast of their activities. These relationships might be reviewed as the Project shifts from regional to bilateral status. USAID, partly as the result of the recommendations of the last evaluation, supplies fiscal record keeping, disbursement and general controller functions.

Clearly, the organizational and hierarchical relationship between USAID and the CDC officers is different from that of a USAID direct hire or personal services contractor, but this should be no bar to closer liaison and improved communications.

RECOMMENDATIONS AND SUGGESTIONS

USAID, CDC and PEV should set regular, periodic meetings between and among themselves to arrive at closer, more structured working relationships, to avoid misunderstandings and to achieve mutual reinforcement in moving towards common objectives. At the same time, it should be remembered that the CDC positions are attached to PEV rather than to USAID.

USAID/A.I.D./W

Over the past three years, i.e. since the last evaluation, USAID/A.I.D./W relationships seem to have improved markedly. The abolition of AFR/RA and relocation of the Project into AFR/TR, and the placement of the remaining CDC officer (who serves under a reimbursable detail with A.I.D./W) under a senior A.I.D./W direct-hire medical officer, have largely effaced earlier perceptions of routine A.I.D./W deferral to CDC positions. The Project, on a day-to-day basis, is backstopped in A.I.D./W by a CDC health professional who has been associated with the CCCD activities for several years. The officer will soon transfer to new responsibilities. Her functions will presumably be assumed by an A.I.D. employee. This will complete the evolution to in-house oversight in Washington while management responsibilities will be largely vested in USAID/Kinshasa as part of the generalized decentralization of program administration.

Inventories

The storage areas of PEV bulge with commodities far beyond normal reserve stock requirements. All parties agree that these goods, from motorcycles to hypodermic needles, are urgently needed in the field. However, there is no money to pay for the shipments. This expense, according to the PROAG, was to have been met by the GOZ budget. (The insufficiency of GOZ contributions is discussed under another heading in this report.)

A list of undistributed goods which was prepared at the team's request was incomplete. For example, it does not show at least three motorcycles which arrived in late 1987; a number of refrigerators; many of the approximately 100,000 wrong-sized hypodermic needles that should be sent to hospitals for use in treatment of adults; and, possibly, other items that were noted by the team when visiting the warehouses.

The lack of a computerized inventory makes it difficult to determine the exact amount of funds needed to ship these commodities. Moreover, during the team's stay in Zaire, air freight tariffs more than doubled. The PEV warehouse administrator's rough estimate was Z 3.5 million (approximately \$16,600).

Some of the undistributed commodities were supplied by UNICEF. This organization and the local committee for Rotary International's Polio Plus action (see discussion under this heading) may wish to facilitate the moving of these goods. One million packages of ORS will arrive from the U.S. around the beginning of 1989. In addition, 30 vehicles are expected, most of which are destined for regional coordinators and antennae. It seems questionable whether the GOZ can or will underwrite the distribution of these commodities. The estimate for the ORS alone is in the Z 8-10 million (\$40-50 thousand) range; shipment of the vehicles by air and/or road will exceed this amount.

Undistributed Items* in PEV/Kinshasa Warehouse (Oct. 10, 1988)

<u>Item</u>	<u>Quantity</u>
Sterilizers	1,422
Bicycles	134
Thermos Bottles	800
ORS	60,200
Chloroquine	
Liquid (bottles)	46,752
Pills (bottles/1000)	1,449

* List is incomplete, e.g., does not include three motorcycles, many of the 100,000 hypodermic needles, and other items.

RECOMMENDATIONS AND SUGGESTIONS

1. USAID, in cooperation with UNICEF and Polio Plus, should immediately free the funds needed to permit distribution of priority supplies now sitting in PEV's storage facilities. Unfavorable press notices and pictures of these goods could affect broader aspects of United Nations and U.S. international assistance programs. CPF might be used with the specific understanding that the amount represents an advance against future GOZ (non-salary) releases.
2. Unless action has already been taken, the GOZ should be made promptly aware of its upcoming obligation under the PROAG to fund the distribution of ORS and vehicles, together with subsequent recurrent costs for maintenance, petrol, oil and lubrication. Particularly in the case of the vehicles, it would seem vital to take this action prior to their shipment.
3. Alternatively, USAID may consider whether the initial distribution of ORS and vehicles can be considered basic

capital investments (to be funded with CPF), provided the GOZ specifically agrees to make salary payments and to provide operating funds as per PROAG Amendment 5. In the case of ORS, this would ensure acknowledgment of the revolving concept inherent in this new "seed" contribution for the fund.

4. If the GOZ cannot validate its earlier commitment, USAID should either use the vehicles in other planned activities or release them to A.I.D. for shipment to other country programs. The liberated funds could be used for other purposes of the PEV Project or the USAID/Z program.

Polio Plus

Rotary International, through a world-wide action, hopes to eradicate polio just as earlier international health campaigns have eliminated smallpox. The "Plus" signifies Rotary's understanding that polio must be tackled as part of a broader range of childhood diseases. Polio, though, remains Rotary's focus.

For the five-year campaign, Rotary International has allotted \$1.72 million to Zaire. Much smaller amounts will be contributed by the country's 14 clubs, three of which are located in Kinshasa. In addition, members will participate in other as yet unspecified activities to mobilize and sensitize the target population.

According to Rotary's local Polio Plus chairman, \$80,000 has been allotted to these efforts plus another \$25,000 for various types of evaluations. The remaining \$1.615 million is being placed at the disposal of UNICEF/NY for the purchase of polio vaccine. This arrangement, according to the chairman, is accompanied by an understanding that UNICEF, which to date has provided required quantities of polio vaccine free, will use the liberated funds for other UNICEF activities in Zaire. No details have been communicated to PEV or Rotary/Zaire and, thus far, there have been no signs of additional UNICEF activities linked to the transfer of Polio Plus money. Similarly, the team was not able to elicit precise information on this subject at UNICEF/Z.

A team member, who happens to be a Rotarian, informed the chairman that due to funding shortages, PEV was unable to move priority supplies out of its warehouse into the field. The chairman emphasized that Rotary had not been aware of this matter and thought that the local Polio Plus Committee would be willing to use proceeds from a recent charity event to help resolve this situation. He also expressed willingness to meet regularly with PEV. The PEV Director is taking follow-up action.

RECOMMENDATION

To the extent that PEV/CCCD funding problems require unprogrammed assistance, USAID may want to encourage GOZ authorities to follow-up regularly with UNICEF/Rotary regarding the availability of funds liberated through Rotary International's funding of UNICEF's polio vaccine purchases.

Preventive Health Care as a GOZ Priority

The team was unable to obtain recent GOZ budget figures. Thus, it was not possible to determine the percentage of funds allocated to the MOH. The latest comprehensive MOH budget, that for 1986, was made available by PEV. It shows that the Executive Council allotted Z 309 million to the MOH. Of this, PEV was to receive Z 11.3 million (then approximately \$200,000). Assuming six million children under five years of age, this is approximately 3.3 cents per child. This figure would indicate that preventive health is not a priority among priorities.

GOZ Budget Contributions

As this report indicates, the single most important constraint to the effective implementation of the Project is the perennial shortfall in the GOZ's contribution. The problem is not limited to this; on the contrary, it permeates every facet of GOZ operations and affects most development projects. The causes are macro-economic issues being addressed in the larger context of the donor effort led by the International Monetary Fund to restructure and stabilize the economy. Year-to-year comparisons of the GOZ's obligations and actual contributions are difficult. They involve different exchange rates, are variously determined in Zairian currency or in U.S. dollars, are changed in mid-year through PROAG amendments and do not reflect differential effects of inflation on various budget components.

The GOZ budget distinguishes between the "budget ordinaire" (which, in turn is subdivided into salary and operating cost sub-components) and the "investment budget." The budget request starts at PEV, is reduced in several stages and eventually approved by the Executive Council, usually in an amount that bears little relation to the original request. Up to this point, the process does not differ from usual budget practices. The basic difference is the next step, which is the release of the amounts that were eventually earmarked for PEV. The record shows that releases are frequently irregular, sometimes omitted altogether and/or made in arbitrary amounts that are unrelated to the approved budget.

This situation is further complicated by the fact that the GOZ occasionally increases salaries or specific benefits. For example, the minimum basic wage was recently raised from Z 480

per month (currently \$2.30) to Z 1500 (\$ 7.15). These augmentations must be absorbed within the funds actually made available. In addition, PEV felt forced to reclassify some of its lowest-graded employees.

These factors cause shortfalls in the monthly payroll after all Kinshasa-based personnel have been paid in full in accordance with local custom. Consequently, field (antennae) personnel must do with what is left. This may take the form of partial or omitted payments.

The field, in turn, grants itself advances against unreceived salary payments from the receipts of ORS and chloroquine sales. This has led to the progressive decapitalization of the revolving funds that had been intended to restock ORS and chloroquine inventories, in addition to providing profits to fund operating and supervision expenses.

The following table was constructed from available data. While possibly not accurate, it does reflect the problem and magnitude of shortfalls in GOZ contributions (in Z millions):

	1987			1988			1989	
	a	b	c	a	b	c	a1	a2
Sal	60	11	15	60	41	11.8+	75	179
Operatns	33	8	-	34	33	6.3++	46	109
I.B.	12	5	5	40	5	-	104	249
Total	105	48	20	134	89	18.8	225	537
In US\$			357			141*		622
PROAG			353			518**		622

Explanations:

I.B. = Investment Budget

a = Amount Requested
b = Amount Allotted
c = Amount Released

a1 = Budget request for 1989
a2 = Budget request for 1989 using 2.38 inflation factor as directed by Plan

- * - As of September 30, 1988
- ** - PROAG Amendment #5 of June, 1988

- + - Annualized- monthly releases have been regular
- ++ - Annualized- however, no releases since May

Exchange Rates: (US\$: Zaire)
1987 - 1 : 56
1988 - 1 : 133

The favorable ratio in 1987 of amount released : PROAG is due to the conversion of the contribution (set in Z) at \$1.00 = Z 56 which was 50 percent lower than the official rate on January 1, 1987.

Subsequently, USAID has used the prevailing (highest legal) rate at the beginning of the year. Somewhat ironically, this virtually guarantees that GOZ contributions will be based on the lowest exchange rate for the next 12 months. Using a rate that will be devaluated conservatively by 100 percent in the course of the year (the Ministry of Planning, in its 1989 budgeting instructions, assumes a 2.38 inflation factor), and which already represents only 70 percent of the open market rate, indications point to a shortfall even if the GOZ contribution is made in full. It should be noted that the PROAG specifies that the GOZ contribution figure represent a minimum. (Note: CPF budgets, while based on the same exchange rate, in practice have been sporadically augmented during the year).

USAID, both orally and in writing, has brought the present funding crisis to the attention of the GOZ ministries concerned. Conversely, the file shows copies of letters written by the Minister of Health to the Minister of Planning as well as to the Prime Minister. Replies are still outstanding.

The 1985 report suggested that there be much greater involvement by all GOZ elements concerned in the PEV budget process. The signature of the Minister of Health involving financial obligations that he cannot guarantee might usefully be complemented by those of the ministries responsible for the approval and release of funding.

The impression exists that PROAGs are unilateral documents prepared in USAID. For example, PEV stated that it was given only 24 hours to study Amendment 5 prior to its signature by the Minister. USAID, on the other hand, pointed out that most figures, including contributions, had largely been supplied by PEV.

RECOMMENDATIONS AND SUGGESTIONS

1. Revise contribution tables quarterly to reflect economic realities (the business sector revises its prices constantly).
2. Involve PEV, the MOH and planning and budgeting officials in determining requirements and GOZ contributions to the PEV budget.
3. Recognize that PEV has little control over its budget ceilings and the GOZ's non-payment of salaries and other contributions. Remonstrations should be directed at the most senior GOZ levels. PEV officials are as unhappy about the state of affairs as USAID. Persevere at maintaining constructive working relations and pursuing budget solutions.

USAID Options

In a classic development situation, A.I.D. supplies the critical margin to high priority projects and reduces its inputs as the host government assumes them. By the end of A.I.D.'s involvement, a project should be completely institutionalized and capable of continuing as a government program.

The team met no one in Zaire who foresees the time when PEV will be fully assumed by the GOZ. In a country of the size of Zaire, beset by problems that occupy higher political priorities than a preventive health effort, it is debatable whether one can think in terms of six or ten year efforts in establishing sustainable social or health programs.

If a host government shows, for whatever reasons, insufficient commitment to an infrastructure project, the development of a text book, or a privatization effort, the donor may withdraw. A government's insufficient contribution to an effort to save its children from death or lifelong disabilities is an issue of another order.

PEV's record shows solid accomplishment. It has evolved into a competent organization staffed by qualified health professionals and has achieved many of the project's objectives. In that sense, it can be called a rather successful development project.

The funding impasse would not justify abandoning Zaire's children. This is the team's own conclusion and its interpretation of the A.I.D. Administrator's speech in Bellagio earlier this year. In State Department cable #270257, the speech was summarized as follows:

"The Administrator's speech communicated his desire that we remain committed to our focus on child survival...(as) the best means of keeping them well and alive. He expressed his belief in the need to stay committed to sustaining our child survival gains...The difficulties of this challenge should not be underestimated...This commitment must be sustained...A.I.D. is staying the course."

In this context, it is quite clear that A.I.D. considers CCCD as much a humanitarian effort as a developmental activity. So do UNICEF and Polio Plus. Words such as "sustainability" and "development" are infrequently mentioned by the former and never used in the latter's fund-raising efforts.

The team does not believe USAID resources should be simply substituted whenever there is a shortfall in GOZ contributions. No amount of donor effort can compensate for the lack of tangible host country commitment. (A team member witnessed the collapse of the West African measles vaccination campaign in the early 1960s when A.I.D. support was phased out; the activity simply could not command the necessary priority among the countries' other priorities.)

The team advocates a compromise between project phase out and additional donor assumption of GOZ commitments. What is proposed is a stretch-out of the current assistance level, resulting in scaling-down operations to a level that takes account of the GOZ's inability to even pay base salaries in many instances. At the same time, it is important to preserve the capacity required to maintain and consolidate the project's major achievements and to safeguard the framework (especially the cold chain) for expansion of the Project once the GOZ can support increased efforts.

RECOMMENDATIONS AND SUGGESTIONS

1. In view of the GOZ's inability to support the magnitude of the present effort, a moratorium should be declared regarding the addition of any further zones.
2. Zones which have been activated but are not yet fully functional or perform marginally should be limited to cold chain activities.
3. No vehicles or motorcycles should be distributed until they can be maintained and operated without decapitalizing the ORS and chloroquine revolving funds.
4. ORS and chloroquine should be repriced to permit a reasonable profit margin to finance operating expenses, including supervision.

5. PEV/K should categorically prohibit any recipient of CPF primes to draw salary advances from ORS and chloroquine sales unless they can be made from sales profits after provisions for stock replacements and operating expenses. Infractions, aside from any administrative sanctions, should result in withholding offsetting amounts from the antenna's primes.
6. Regional medical coordinators, where needed, should be given intensive training in (antenna) management and supervision with emphasis on stock administration, cash records and simple reconciliation of accounts and inventories.
7. PEV/USAID and other donors should jointly elaborate stand-by plans for project expansion/contraction that can be promptly activated in accordance with financial realities.

PEV Management

Planning Process/Five Year Plan

The planning document shows that PEV fully understands the theoretical aspects of program planning. The team's review of the 1989-1993 plan shows sound preparation of individual sections. While there was not time to examine the voluminous document in detail, it represents a major effort to translate program objectives into resource and budgetary requirements. The plan, though mechanically sound and internally consistent, is unrealistic. Aside from a likely underestimation of future inflation, a table showing anticipated resources based on PROAG provisions and an agreement with UNICEF leaves 59 percent of the projected costs uncovered for 1989; for 1990, the figure rises to over 66 percent.

It is a fact that the GOZ has not been able to meet its commitments; thus, reliance on programmed funds becomes already problematical. There is no suggestion in the document how planned deficits, 50-percent greater than available funding, can be balanced.

There is another aspect of PEV's planning approach that deserves greater attention: Inputs by the field are still inadequate though progress has been made, largely at the initiative of the new director. Some antennae responded to requests for submissions, others made either no contribution, claimed not to have received relevant communications or, as was evident during one of the field visits, felt unqualified to tackle the task. Additional guidance is needed.

RECOMMENDATIONS AND SUGGESTIONS

- 1) Future program budgets should be accompanied by "decision packages," ranging from assumptions of fully-funded requirements to worst-case scenarios. Each package should clearly show its internal priorities; this will provide contingency plans in case of changes during the budget year(s).
- 2) Regional medical coordinators need specialized training in antenna administration. They, in turn, should train and guide antenna personnel in the preparation of plans and budgets and, of course, review the submissions before transmitting them to PEV/K.

Administration/Financial Management

PEV has computers and trained operators. Yet, it still lives in the pre-computer age in all aspects of internal management. The last evaluation urged that prompt steps be taken to computerize its payroll, accounting records, budgeting procedures, inventories and procurement, operations planning and monitoring, vehicle control, etc. No progress has been made in these areas. This is difficult to comprehend as the last CDC Technical Officer has been described as a computer whiz and, in addition, an expatriate computer expert served under a two-year contract. Required hardware for programs (most are available over the counter) should have been procured in the three years that have lapsed since the last team was told that computerization was "just around the corner." This same statement was heard this time. The American side will have to accept responsibility for these deficiencies.

Financial Management

A recent audit pinpointed a number of shortcomings. Some of the findings are disputed by PEV. Discussions with USAID controller personnel indicate that the audit findings and recommendations are being followed up, including possible assistance by a short-term expert. The team is satisfied that the controller staff and PEV are cooperatively resolving these matters.

PEV apparently has not yet switched to an accrual accounting system. Financial status reports seem limited to showing budget provisions, liquidated expenditures and balances. Determination of items "in transit" (administrative reservations) requires item-by-item compilations. The PEV Financial Office has an amazing number of files with endless, detailed data covering both Kinshasa and the various antenna locations. However, these data are not organized into timely formats that can routinely serve as the basis for prompt management decisions. The key to assuring that these hundreds of papers are means to an end and not ends

per se is a simple computerized approach to the management of financial records. This may require some short-term assistance from a systems programmer. This expertise should be readily available in Kinshasa.

Personnel Incentives

As a result of the financial difficulties encountered by GOZ employees everywhere, PEV's staff morale is low. A simple program of incentive awards, ranging from letters of commendation to "Employee of the Month" type recognition and small cash awards should be considered. This program should cover both Kinshasa-based and up-country staff.

RECOMMENDATIONS AND SUGGESTIONS

1. Priority should be given to computerize financial, program, administrative and logistic records in formats that can serve as management tools.
2. Accounting records should be placed on an accrual basis.
3. A simple incentive award system should be set up.

USAID Program Management

The PEV/CCCD Project is backstopped in USAID by a personal services contractor in the Health and Population Division who works under the guidance of an experienced senior officer. Unfortunately, the former, who has a background in both health and management and has Zaire-specific experience in both disciplines, had to depart post on emergency leave when the team returned from the field. Various discussions indicate that there have been some major delays in the procurement of important commodities. A review of the files does show follow-up action and would indicate that these difficulties were peculiar to specific, unrelated procurement actions rather than due to deficiencies in the USAID procurement system.

Evaluations

The PEV Project has undergone an impressive number of evaluations and assessments. Though undoubtedly helpful and meeting bureaucratic needs, the results must be carefully considered in the light of the inordinate claims on staff, time, material and financial resources consumed by these activities at the expense of ongoing operations. The team strongly urges a moratorium on evaluations between now and the end-of-project evaluation.

Other

The dilapidated appearance of the PEV offices together with antiquated, inadequate and worn furnishings make for a poor working environment. In the absence of GOZ funds, some CPF should be made available to convert PEV headquarters into clean, functional offices, with the help of a coat of paint and a few scraper and grader passes across the yard. The present setting is not conducive to effective work.

ANNEX IV

Training

A. Training Instruments in EPI, Malaria and CDD

In 1983, PEV/CCCD developed a set of 12 training modules for MCZs and health zone supervisors. The modules covered various subjects such as health zone organization and planning, human and financial resources, management and the three components of CCCD. In 1986, FONAMES initiated another set of training instruments, drawing heavily on the PEV/CCCD modules. These materials focus primarily on management and cover other primary health care components to a limited extent.

Since specialized fields are addressed by programs such as CEPLANUT (nutrition), PSND (family planning), etc., FONAMES modules do not cover all the technical aspects of primary health care. PEV has retained three of the 12 initial modules for technical training. These modules are now being revised to include updated information on ORT and malaria. The French version of the malaria module written by CDC/Atlanta--already tested and available--should be adapted through trials with local populations and included in the PEV/CCCD core modules. Due to the different foci of the programs, the FONAMES management and PEV technical modules should be implemented separately.

The three PEV/CCCD modules are of high quality, as shown by the level of knowledge and experience witnessed in the field during the evaluation. Periodic revision to update the modules helps to retain the most up-to-date technical and methodological information. Clearly stated objectives, extensive technical content, training guides, and practical exercises are part of the modules.

Training materials for nurses consist primarily of a poster for the evaluation and treatment of diarrhea and a set of 45 technical data sheets (fiches techniques) that cover vaccination, ORT, and treatment of malaria. The methodology to evaluate program impact through a survey of 100 families is included as a supplement to the basic 45 "fiches techniques." Selected lab workers placed in sentinel posts for surveillance are trained in the zones by the PEV Chef de Section de LAP (malaria) on chemosensitivity using materials produced by WHO.

Except for Kinshasa, where the 100 family survey methodology is widely used, very few nurses in regions have demonstrated mastery of this methodology. The training given to nurses needs to focus more in this area. Furthermore, it is questionable whether the subject as written in the fiches can be easily understood by A3 nurses (lower level nurses who are normally found at the health center level). Even A2 nurses, when questioned, had difficulty

relaying the information. A simplified version is needed for A3 nurses.

Materials used by nurses to train other health workers include leaflets on SSS preparation, and a brochure designed as a guide for the training of mothers in ORT. These can be read and understood with minimal education.

While the quality of the material is good, the basic problem remains unsatisfactory distribution. Most materials are unavailable at health centers, and are therefore rarely used throughout the country. Few among the trained nurses had the reference fiches to use as a reference; none of the mothers seen at the health centers had an SSS preparation leaflet at home. Only the ORT posters were present in most health centers, and then only in an older version. One health center, less than 15 miles from its antenna, had neither version.

This brings up the larger question of flow of information between the PEV/CCCD central office, the antenna, the zone and the health center. "Fiches techniques," posters, leaflets, brochures and copies of the PEV/CCCD news bulletin can be found in large numbers at one level, while they are lacking at the subordinate levels. Some MCZs were unaware that they could at least request funds from PEV to organize training in their health zone. Others--both MCZs as well as those on the health center level--remain unaware of the specific PEV objectives. Special attention should be given to the distribution of information and supporting materials.

B. Sufficiency/Insufficiency of Training

The PROAG has called, since 1985, for a yearly symposium on CCD, for 40 MCZs to be trained, for 40 training sessions for nurses, and for two in-service training sessions for antenna chiefs in 1987 and 1988. In all cases, program achievements have fallen short of the objectives. Until 1986, when FONAMES became the overall coordinating agency, at least 100 senior level officers, 174 MCZs and 1,206 peripheral personnel had been trained using the PEV/CCCD modules. The subsequent changes in responsibilities and structure caused uncertainty among the PEV staff regarding their new role in training. As a result, there were no MCZs trained in EPI; training activity became largely limited to chemosensitivity and to ORT training at Mamo Yemo Hospital in Kinshasa and the Bukavu training center. Approximately six months ago, PEV and FONAMES agreed that PEV would resume the responsibility for technical training in EPI, CDD and malaria, although FONAMES would remain in charge of training coordination.

MCZs visited during the evaluation who had been trained in the three components, in turn, have trained some of their head nurses. The percentage of trained nurses ranged from

approximately 20 percent in Haut Zaire to 60 percent in Bas Zaire. There is a great deal of enthusiasm among the trained MCZs to train more nurses. However, two major constraints have hampered this effort:

- Requests for funds to organize training sessions at the zonal level often have remained unanswered. Moreover, when funds are granted, they are insufficient and released in two steps--at the beginning and at the end of the sessions. Given inflation and increasing costs in Zaire, amounts should be increased and paid in full at the beginning of each program.
- More generally, most of the planned health centers have not been activated due to lack of funds, equipment and personnel.

Clearly, much remains to be done in terms of training MCZs and particularly nurses. Looking at the positive side, however, the quality of the technical training given so far to the MCZs and to head nurses is good. The quality of the technical service they provide bears this out: The cold chain is generally well-maintained, the vaccines are well-kept and the instructions for sterilization and inoculation are, on the whole, respected.

There is no provision for systematic training of field teams and central staff in technical areas and management. The Training Division has tentatively scheduled a number of training sessions based on staff opinions. The schedule is not based on an analysis of training needs. Such analysis should be based on job descriptions, the possible gap between expected and actual performance, and on any important technical developments.

C. Training Strategy Plan

When the 12 PEV/CCCD modules were used to train MCZs, training was highly centralized in Kinshasa. FONAMES has adopted the more economical strategy of decentralized training; teams of trainers have been created in Kinshasa, Kisangani and Lulumbashi where MCZs are now trained. PEV is moving in the same direction. This new strategy is expected to begin in November, 1988 in Western Kasai. Decentralized training has already been tried by SANRU and PSND and has proved reasonably successful, despite logistical difficulties. However, it should be noted that in both cases, the training was carried out by doctors and other professionals with prior exposure to training of trainer sessions.

PEV also has some experience with decentralized training, i.e. in ORT, at Mamo Yemo hospital in Kinshasa as well as in Bukavu and Lulumbashi. So far, the results have been encouraging. These regional training centers could also be used for training in the other two components of the program. Pilot health centers with

both curative and preventive health care could be created at regional coordination levels and serve two functions:

- Provide training and demonstration of PEV/CCCD activities, e.g. how to follow-up on children with incomplete doses of vaccine.
- Contribute to the self-financing of regional coordination through fee-for-service plans to be paid by those utilizing services. It would be useful for research to look into this possibility.

At the zonal level, training activity is left to the initiative of the MCZ; he may or may not plan training activities for his nurses and other personnel at the health center. It should be the responsibility of the regional coordinator to help each MCZ develop a training plan for health center nurses and to follow up on that training.

At the regional and subregional levels, training plans should involve the respective medical inspectors and FONAMES, as discussed in the section below.

D. Relationship to FONAMES

As agreed upon between PEV and FONAMES, the present role of FONAMES is to conduct management training and to provide coordination of training programs.

Coordination with FONAMES is crucial, given that all other health projects such as PSND, SANRU, CEPLANUT AND FONAMES itself are eager to train MCZs in their areas of interest. Currently an MCZ may be solicited by two or more projects to attend different training sessions at the same time. It has also been noted that MCZs are spending too much time attending various training courses in Kinshasa. FONAMES, in conjunction with the regional medical inspectors, can coordinate training for MCZs and health zone supervisors to avoid overlaps and other conflicts. Training plans at the zonal level should reflect a consensus among PEV/CCCD, FONAMES and the regional medical inspector.

RECOMMENDATIONS AND SUGGESTIONS

1. Develop clear training plans for MCZs and assist them to develop plans for their zones.
 - a) Priority for training should be given to those MCZs who have been trained by FONAMES since 1986. Training plans for the three program components should be developed for them in conjunction with FONAMES and the regional medical inspectors.

The untrained MCZs should initially undergo the FONAMES management training and then take part in the more technically-oriented PEV/CCCD training. (FONAMES training provides basic techniques in planning and managing health zones.)

- b) Regional coordination and/or PEV antennae should clearly state what the coverage objectives are for each zone and, in conjunction with each MCZ, develop specific training plans for nurses and other health personnel.
 - c) Other health personnel at the health zones, such as doctors and nursing supervisors, should also be trained in the three PEV/CCCD components.
2. Conduct an in-depth training needs analysis for central, regional and outreach personnel and use the findings to prepare future training plans. Meanwhile, PEV should do the following:
- a) Design two additional "fiches techniques" that address data collection/reporting and vaccine procurement. The fiches techniques (leaflets with technical instructions) are now being updated. Deficiencies observed in data collection and reporting call for training in that area. The other fiche technique should teach the nurses how many vaccine doses to order in relation to the population served.
 - b) Arrange for regional coordinators, antennae chiefs and selected central staff members to participate in training of trainers workshops.
3. Create pilot health centers at one or more regional coordination sites.
- Pilot health centers could be used to serve training and, possibly, self-financing purposes. In addition to ensuring training and providing demonstration for PEV/CCCD, they could help to finance regional coordination by charging fees for curative care.
4. Produce training materials in sufficient quantities and ensure that they are distributed to all functioning health zones and health centers.

APPENDIX I

SCOPE OF WORK

ACSI-CCCD PROJECT/ZAIRE

A. Evaluation Purpose

This constitutes a mid-term project evaluation. Its purpose is fourfold. First, to determine the extent to which project activities are leading to the achievement of project goals and objectives; second, to assess ACSI-CCCD management and operations at the central, regional and peripheral levels; third, to measure the extent to which ACSI-CCCD activities have been integrated into the existing Zaire Primary Health Care structure, and the extent to which program central and regional functions could be supported and financed without USAID intervention; and fourth, to offer a series of concrete recommendations to improve the expansion, delivery and sustainability of ACSI-CCCD services (including training, health education and health information system development) and to accelerate their integration into the PHC delivery structure given ever present resource constraints.

B. Methods and Procedures

Each team member will review all pertinent project documents and amendments; study relevant reference documents at central and regional levels; visit selected service delivery units and other health institutions in rural and urban areas of a representative number of regions of the country; review survey data; and interview relevant project implementing agents.

C. Specific Evaluation Issues to be Addressed:

C.1. Expanded Program on Immunization (EPI)

C.1.1. Review program development in relation to established objectives, specifically in the following areas:

- Vaccinal Coverage: Comment on reasons for low coverage and current strategies for raising coverage
- Cold-chain and transportation network development (use of kerosene vs. solar refrigerators)
- Sterilization procedures and one needle/one syringe/one child strategy
- Respect of vaccinal calendar.

C.1.2. Assess appropriateness of objectives (over- or under-ambitious?)

- C.1.3. Using only available data, assess program impact in quantifiable terms. Identify constraints to assessing overall program impact, propose solutions.**
- C.2. Control of Diarrheal Disease (CDD)**
- C.2.1. Review program development in relation to established objectives, specifically in the following areas:**
- ORS accessibility (comment on implications for CCCD Project of private sector local production of ORS)
 - Percent cases treated
 - Percent cases treated correctly
 - Development and promotion of an appropriate home use solution
 - Mama Yemo Training Center: Efficiency/efficacy and role.
- Evaluation**
- Regional training center development and functioning.
- C.2.2. Assess Appropriateness of Objectives**
- C.2.3. Using only available data, assess program impact in quantifiable terms. Identify constraints to assessing overall program impact, propose solutions.**
- C.3. Malaria (MAL)**
- C.3.1. Review program development in relation to established objectives, specifically in the following areas:**
- Accessibility of chloroquine (and other anti-malarial)
 - Percent fevers treated
 - Percent treatment correct
 - Development and functioning of sentinel surveillance sites for monitoring chemosensitivity
 - Chemoprophylaxis strategy for pregnant women.
- C.3.2. Assess Appropriateness of Objectives**

- C.3.3. Using only available data, assess program impact in quantifiable terms. Identify constraints to assessing overall program impact, propose solutions.
- C.4. Health Information System (HIS)
 - C.4.1. Is system of data collection appropriate for obtaining information representative of project health zones?
 - C.4.2. To what extent does system allow for monitoring of progress towards achievement of program goals and objectives and assessment of program impact?
 - C.4.3. To what extent does system help management identify constraints to project impact?
 - C.4.4. To what extent is information from this used for decision making?
 - C.4.5. Assess overall usefulness of present system.
- C.5. Supervision
 - C.5.1. Is supervision adequate?
 - A) Field teams by central level
 - B) Health zones by field teams
 - C.5.2. Evaluate instruments used for supervision.
 - C.5.3. To what extent does supervision elicit information useful to monitoring progress towards goals and assessment of program impact?
 - A) By zone
 - B) For country program
 - C.5.4. To what extent is information from supervision used for decision making?
 - C.5.5. Define the most productive relationship of CCCD to FONAMES in supervision.
- C.6. Health Education
 - C.6.1. Comment on appropriateness/adequacy of IEC materials (printed, television/radio, interpersonal, and others) for EPI, CDD and MAL at both the health care worker and parent levels.
 - C.6.2. Assess innovation, or lack of thereof, in IEC.

- C.6.3. Comment on reasons for failures to meet established production deadlines.
- C.6.4. Determine whether sufficient testing/research of IEC productions is done during development stages to ensure effectiveness of finished product.
- C.6.5. Define and evaluate overall strategy used in development, distribution and evaluation of IEC materials.
- C.6.6. Identify areas of program weakness which could be improved by support from the HEALTHCOM Project; what is the most productive means of effecting the collaboration between HEALTHCOM and CCCD?
- C.7. Operational Research (OR)
 - C.7.1. To what extent are current research projects addressing the questions most relevant to project progress and impact?
 - C.7.2. To what extent are results of operational research used in program management?
 - C.7.3. Evaluate program research capacity; should this function be developed and expanded or shared with the School of Public Health, i.e., what level of OR activity is appropriate to the program?
 - C.7.4. Assess CCCD collaboration with the PRICOR Project; comment on usefulness of planned and proposed CCCD-related PRICOR research.
- C.8. Management and Administration
 - C.8.1. Examine effectiveness of program executive management structure (steering committee) as a decision making entity.
 - C.8.2. Assess level and adequacy of donor coordination; identify areas for strengthening.
 - C.8.3. Is program internal management structure (organigramme) appropriate/effective/efficient?
 - C.8.4. Are financial control procedures consistent with internal management structure?

- C.8.5. Are budget and accounting records of a quality/detail useful to management; to what extent are these records used as management tools?
- C.8.6. Is commodity distribution information of a quality/detail useful to management; to what extent is this information used as a management tool?
- C.8.7. Review and comment on five-year plan (1989-1993).
- C.8.8. Comment on quality and usefulness of long-term technical assistance and short-term consultancies.
- C.9. Sustainability
- C.9.1. To what extent are program recurrent costs financed by:
- A) Program beneficiaries
 - B) Government
- C.9.2. To what extent should the program attempt/expect to finance its activities through ORS/chloroquine sales?
- C.9.3. Identify alternative strategies for program central/regional level funding.
- C.9.4. To what extent have program activities been integrated into the existing primary health care structure; recommendations for resolving conflicts between attaining program goals as rapidly as possible and working through the existing primary health care structure.
- C.9.5. Determine whether incentives exist at both central/regional and peripheral (health zone) levels for carrying out program activities after PACD.
- C.9.6. Has program management demonstrated a capacity to:
- A) Develop both national and international constituencies
 - B) Identify and solve new problems
 - C) Mobilize both national and international resources
 - D) Use its time efficiently.
- C.9.7. To what extent are beneficiaries encouraged to participate in program management, at least at the delivery level?

- C.9.8. Is effective on-the-job training and continuing education at all levels a part of the program routine?
- C.10. Training
- C.10.1 Evaluate training instruments in EPI, MAL and CDD.
For various target groups:
A) Staff
B) Medecin Chef de Zone
C) Nurse/other Health Care Personnel
- C.10.2. Comment on sufficiency/insufficiency of in-service training in all program areas including management/administration for:
A) Field teams
B) Central staff
- C.10.3. Evaluate training strategy/plan, including comments on provisions made for ongoing in-service training on new developments, technologies and strategies.
- C.10.4. Define the most productive relationship of CCCD to FONAMES in training.
- C.11. Project Oversight
- C.11.1. Review level and adequacy of USAID and CDC administration and support to the project in implementation monitoring, commodity procurement, financial monitoring and provision of technical assistance, and assess adequacy of procedures established for project support.
- C.11.2. Determine whether an extension to the Project is appropriate and for how much time; discuss changes in current project agreement appropriate for an extension.

APPENDIX II

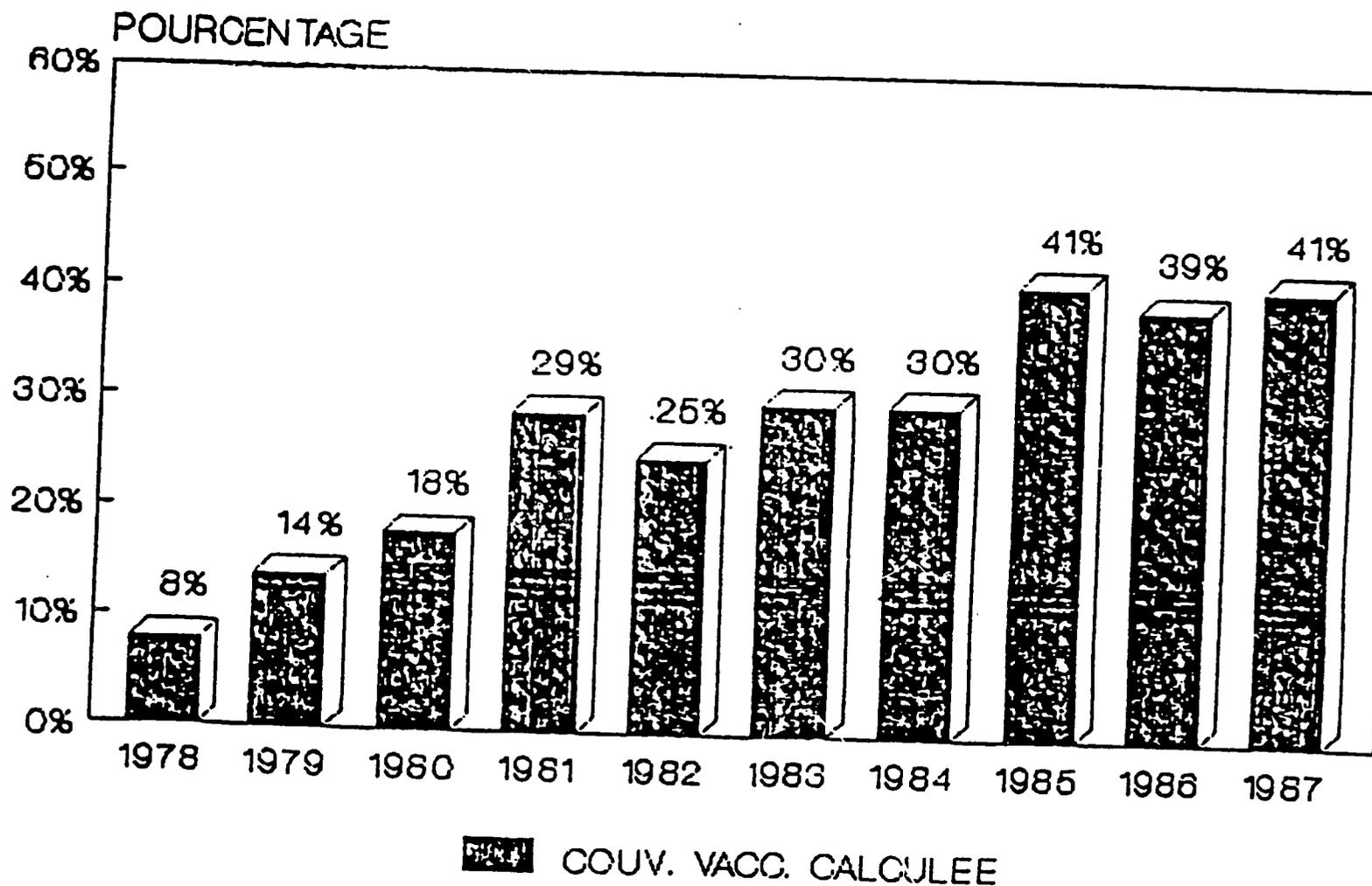
Vaccinations Effectuees, Zaire 1977-87

VACCINS	1982		1983		1984		1985		1986		1987							
	0-11	>1AN TOTAL																
BCG	461618	284743	746361	563613	300028	863641	562217	342268	904485	702233	315433	1017666	662681	299145	961826	702552	252773	955323
DTC1			441512			572185		342268	575700	638121	45150	683271	556617	204732	761349	628311	181163	809474
DTC2			312512			425061			461032	550465	104380	654845	485395	156997	642392	551128	145054	696163
DTC3			264017			360641			378151	453483	92401	545884	401803	145335	547138	469398	139425	608827
POL100										154338		154338	264684		264684	315500		315500
POL101			438326			565868			558488	607576	111984	719560	576146	206845	782991	635029	178261	813290
POL102			316726			432862			436473	493686	88251	581937	489506	159717	649223	553962	147418	701380
POL103			265649			373411			370870	410116	88251	490574	415177	160591	575768	467698	141748	609446
ROUSEBLE	211706	60564	543125	341573	304559	646132	349562	268620	618182	493947	80458	829894	492814	321163	813977	518043	387443	817486
TETANOS1			676932			786843			487755		335190	594959			496875			509009
TETANOS2									335574			439786			347291			340289
RAPPEL												20468			113483			162020

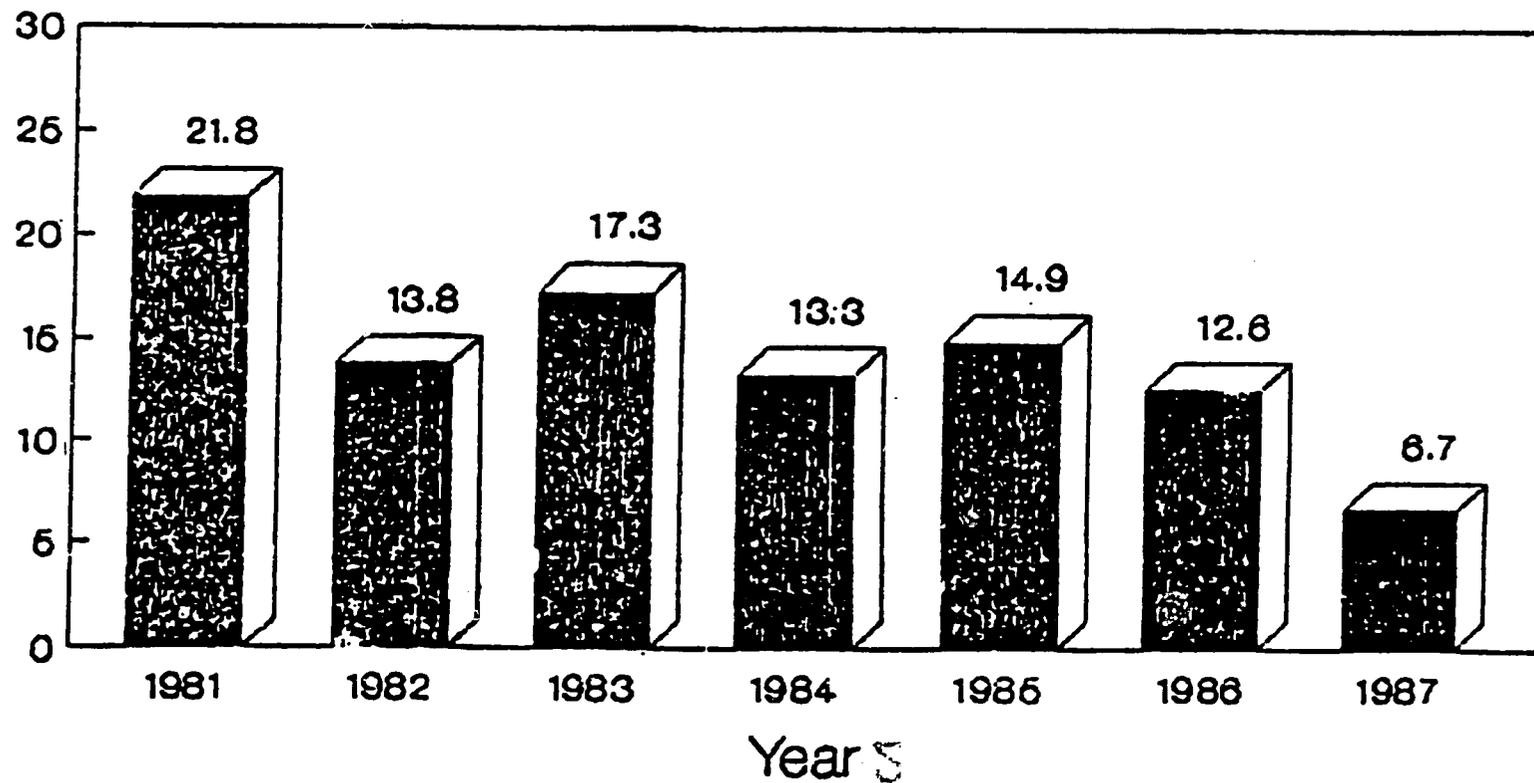
Couverture Vaccinale Calculee par Region en 1987

REGIONS	POP. TOT.	POP.<1AN	BCG	VAP1	VAP3	DTC1	DTC3	VAR.	VAT
KINSHASA	3136341	125454	107	87	80	85	78	74	93
BAS-ZAIRE	2127650	85106	62	62	44	59	42	47	44
BANDUNDU	3996514	159861	48	42	19	40	27	36	35
EQUATEUR	3656848	146274	50	49	32	49	34	40	41
HAUT-ZAIRE	4536109	181444	38	36	23	37	23	25	23
KIVU	5813002	232520	52	51	42	51	41	38	39
SHABA	4232903	169316	37	34	26	33	26	31	20
KASAI OR.	2584716	103388	61	52	37	51	38	37	50
KASAI OCC.	2377086	95083	51	41	24	43	25	40	40

EVOLUTION DE LA COUVERTURE VACCINALE ANTIROUGEOLEUSE ZAIRE 1978-1987

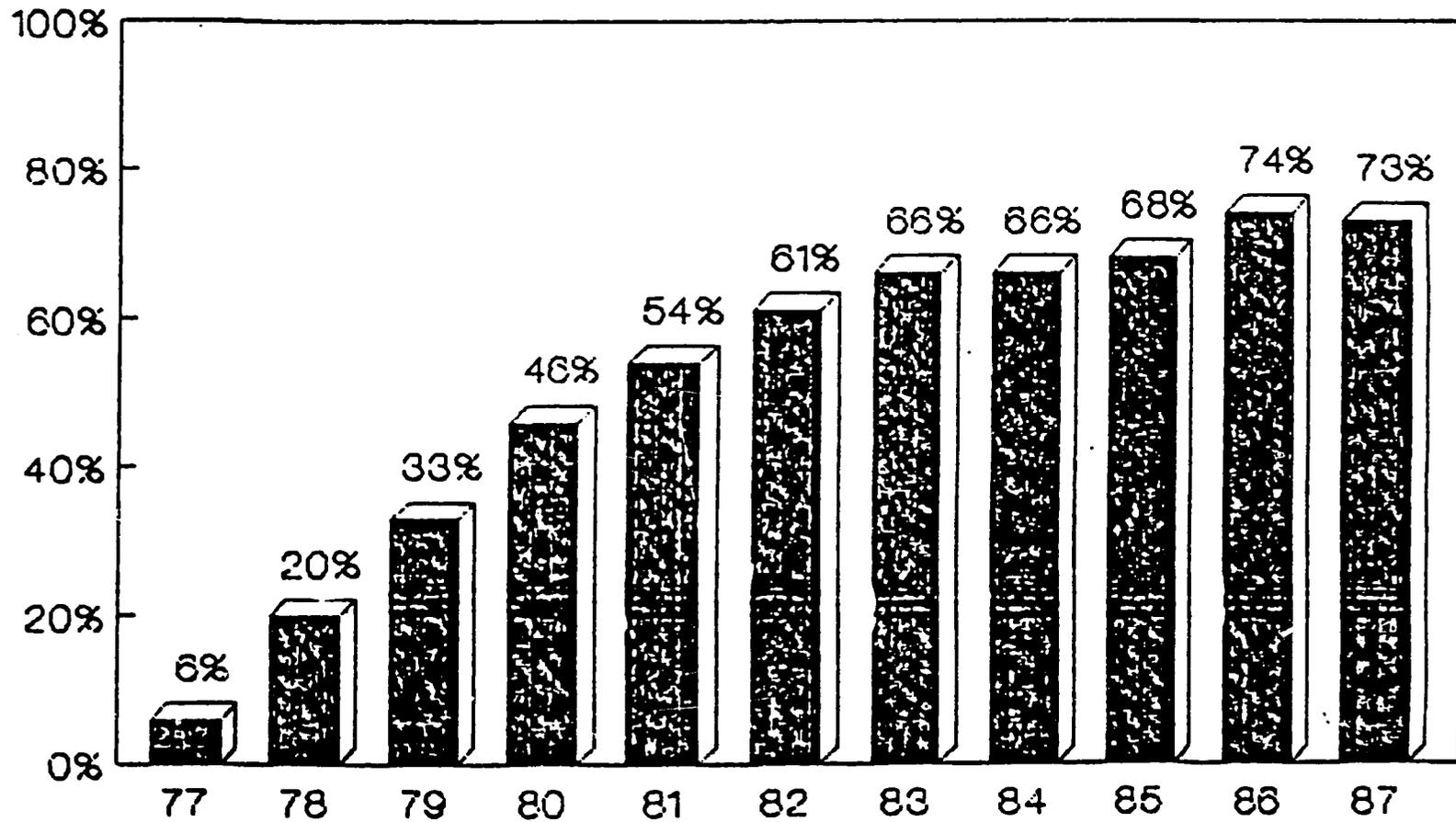


Reported Measles Case Rate, 1981-1987 Per 1000 Children Under 5 Kinshasa



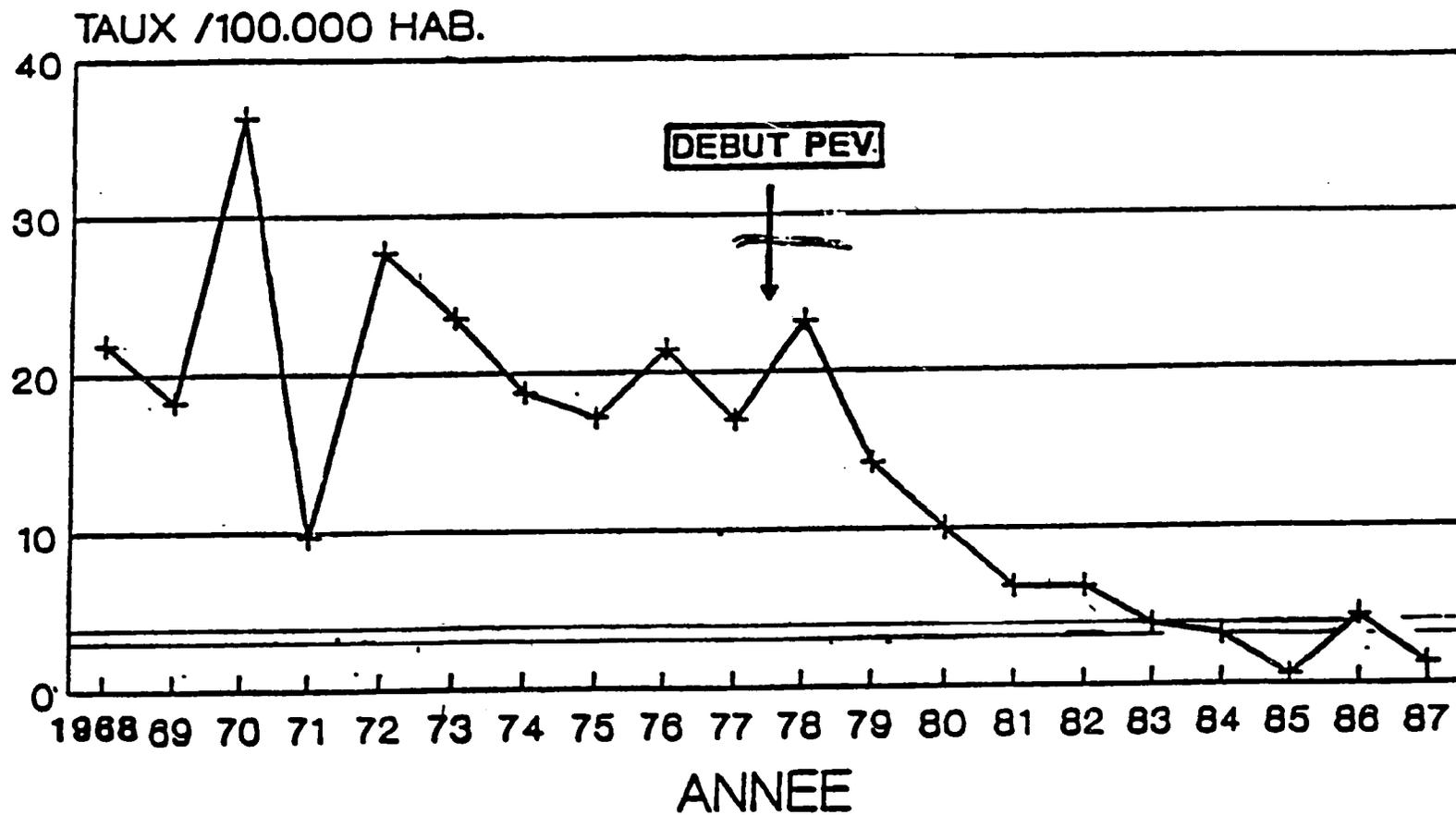
Sentinel Surveillance Sites

TAUX D'ACHEVEMENT POLIO 3 ENFANTS 0-23 MOIS ZAIRE 77-87



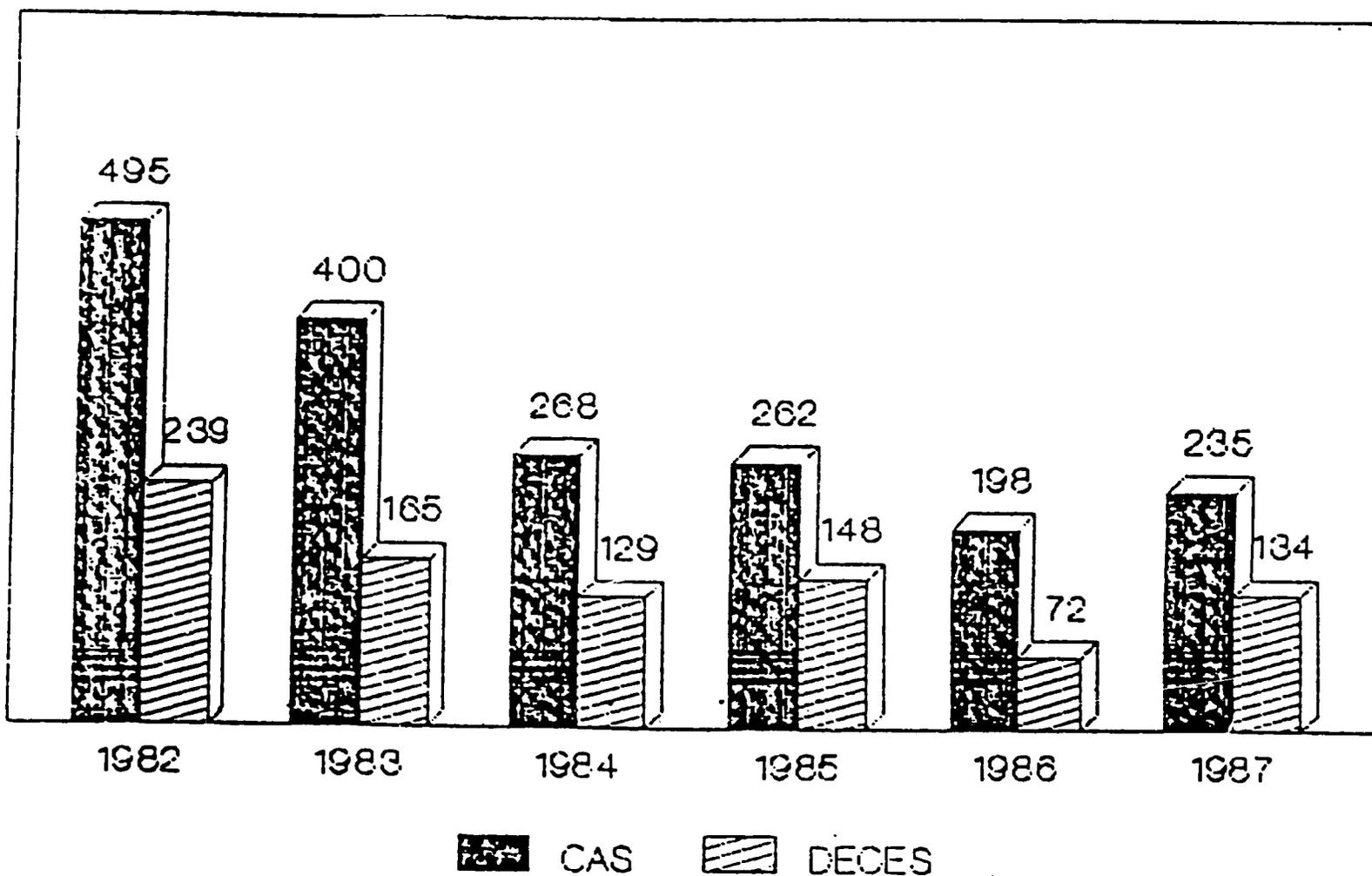
■ TAUX D'ACHEVEMENT - POLIO 3/ POLIO 1

TAUX D'ATTAQUE DE POLIO PARALYTIQUE KINSHASA, 1968-87(*)

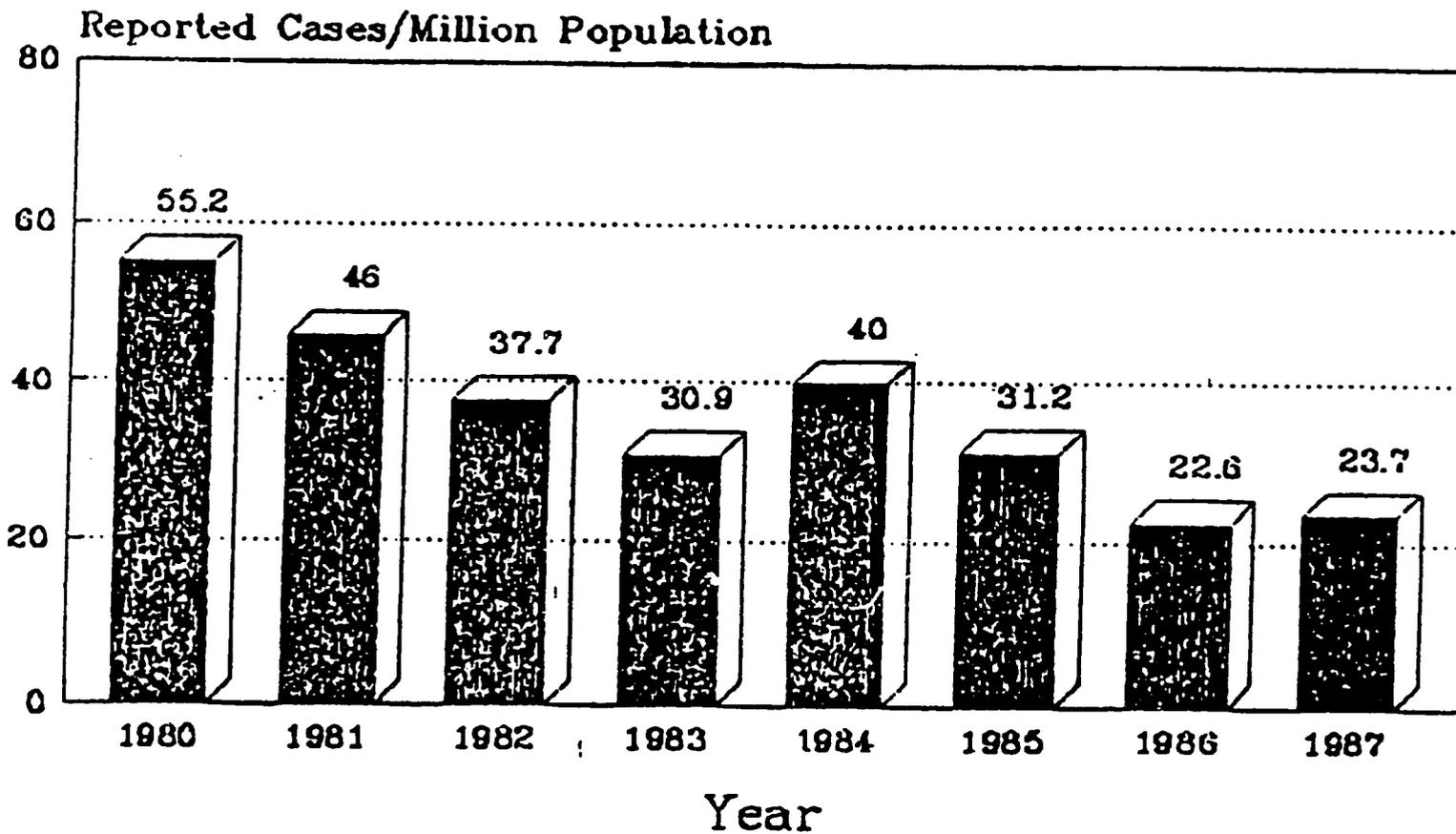


(*)SOURCE.DONNEES DU CRHP/GOMBE
POSTE SENTINELLE DU PEV.

MORBIDITE ET MORTALITE DUES AU TETANOS, ZAIRE, 1982-1987

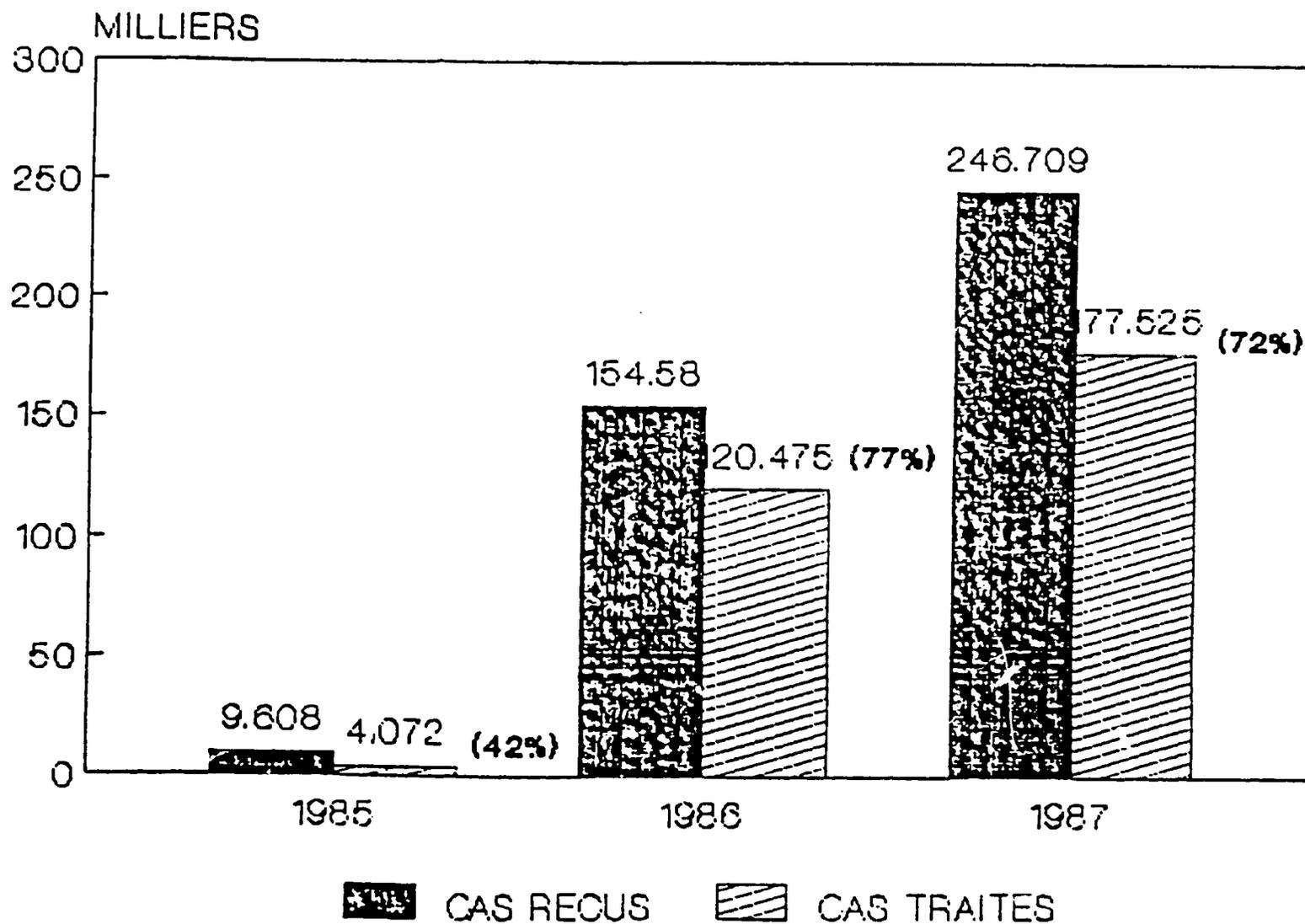


Reported Tetanus Rate in Kinshasa 1980-1987



Source: Sentinel Data/Persp.Demog.

COUVERTURE CAS DE DIARRHÉE PAR SRO ZAIRE 1985, 1986, 1987



IN-VIVO STUDIES OF CHLOROQUINE SENSITIVITY
ZAIRE 1978-88

ETUDES IN-VIVO. ENFANIS < 5 ANS, 1985-88

ANNEE	LIEU	NBRE ENF RECRUTEES	G.E. POS.	MEDICAMENT TESTE	NBRE. ETUDIE	REUSSITIES JOUR 7 (%)	REUSSITIES JOUR 14 (%)
1985	BWAMANDA	603	34%	C10	93	86 (92%)	-----
				C10	47	30 (63%)	-----
	KIMPESE	653	42%	C25	39	22 (56%)	-----
				C10	36	19 (53%)	-----
	KINDU	826	22%	C25	42	31 (74%)	-----
				C10	34	10 (29%)	-----
	KINSHASA	420	37%	C25	48	21 (44%)	-----
				A10	29	08 (28%)	-----
				A25	49	34 (69%)	-----
1986	KINSHASA	513	30%	C25	38	10 (26%)	-----
				C10	45	13 (29%)	-----
	LUBUMBASHI	1207	25%	C25	58	30 (52%)	-----
				C25	41	22 (54%)	-----
	KISANGANI	1829	33%	Q140	49	46 (94%)	-----
				P/S	48	46 (96%)	-----
1987	TSHELA	1012	56%	C25	36	07 (19%)	-----
				Q140	35	32 (91%)	23/31 (74%)
				P/S	45	44 (98%)	34/37 (92%)
				PS+Q60	36	35 (97%)	29/29 (100%)
	BANDUNDU	1585	34%	C25	36	20 (56%)	-----
				Q140	35	40 (98%)	-----
				P/S	39	39 (100%)	-----
				PS+Q60	34	34 (100%)	-----
	KANIAMA	666	72%	C10	41	01 (02%)	-----
				C25	39	02 (05%)	-----
1988	BWAMANDA			C25	66	30 (45%)	(34%)
				Q140	41	37 (90%)	(60%)
				P/S	49	39 (80%)	(53%)
				PS+Q60	24	18 (75%)	(100%)

APPENDIX III

ORAL REHYDRATION SOLUTION

I. Raw material requirements for the annual production of four million units (LAPHAKI estimate):

Sodium chloride	10,500 kgs
Trisodium citrate/chloride	8,700 kgs
Potassium chloride	4,500 kgs
Anhydrous glucose	60,000 kgs

II. Stocks* at LAPHAKI as of Oct. 10, 1988

Sodium chloride	6,200 kgs
Trisodium citrate/chloride	--
Potassium chloride	2,800 kgs
Anhydrous glucose	42,000 kgs

* All materials were donated by UNICEF..

APPENDIX IV
ANTENNA AREAS VISITED

Bukavu

Goma

Kananga

Kikwit

Kisingani

Lulumbashi

Matadi

Mbandaka

Mbuji-Mayi

APPENDIX V

EVALUATION AT ANTENNA LEVEL

Name _____
 Population _____ How determined?
 <1 Year pop. (pop.X.04) _____ <5 year pop. (pop.X.2) _____

1. Staff

	Yr. assigned.	Trained	Paid by (GOZ, Don, SF)
Medecin Coordinateur	_____	_____	_____
Chef d'antenne	_____	_____	_____
Secrtaire	_____	_____	_____
Chauffeur	_____	_____	_____

2. Work area

Is a map available showing zones?
 Number of zones _____
 Zones with MCZ _____ How many trained? _____
 Zones with PEV _____

3. Supplies

	Stock Register		Stocks Available	
	Yes	No	Yes	No
Vaccines	_____	_____	_____	_____
Needles	_____	_____	_____	_____
Syringes	_____	_____	_____	_____
SRO	_____	_____	_____	_____
Chloroquine	_____	_____	_____	_____

Are any of the vaccines outdated? _____
 Is SRO available? _____ Is chloroquine available? _____
 Interruptions in stock: Vaccine Y N ORS Y N Cloro Y N

4. Coverage

Year	-----< 1 year-----						-----Pregnant wom.	
	BCG	DTC1	DTC3	OPV1	OPV3	Roug.	VAT1	VAT2+Rap.
1985	_____	_____	_____	_____	_____	_____	_____	_____
1986	_____	_____	_____	_____	_____	_____	_____	_____
1987	_____	_____	_____	_____	_____	_____	_____	_____

5. SRO and Chloroquine

Year	No. SRO used	No. treated <5 years	No. cloro	No. <5	Treat Preg.
1985	_____	_____	_____	_____	_____
1986	_____	_____	_____	_____	_____
1987	_____	_____	_____	_____	_____

6. Reporting

Are 1987 figures available for the following?

	Yes	No
Vaccines used	___	___
ORS distrib.	___	___
Cloro distrib.	___	___

When was last monthly report sent to Kinshasa? _____

7. Cold chain

Is it functional?

Item	No.	Yes	No
Refrigerator	___	___	___
Freezer	___	___	___
Cold boxes	___	___	___
Accumulateurs	___	___	___

8. Transport

Type	No.	Working?	Spare parts?	Use limitation? (Fuel, parts, Zs)
Cars	___	_____	_____	_____
Motorbikes	___	_____	_____	_____
Bicycles	___	_____	_____	_____

General sustainability of transport? _____

9. Finance

Did you prepare a budget? _____ Is so how much? _____
 Did you receive a budget? _____ If so how much? _____
 Opportunity to comment? _____
 Amount of money received _____ Sal _____ Trans _____ Oth _____
 Were personnel paid? _____ On time? _____ In full _____
 If not how did one manage? _____

Incomes from sales of ORS	_____	Cloro	_____	TOTAL	_____
Expenses	_____			TOTAL	_____
	Salaries	_____			
	Transport	_____			
	Restock	_____			
	Other	_____			

Disposition of balance _____

Who checks your accounts? _____

10. Health Education

Does a health education component exist? Y N

Who does the education? Nurse Y N
MD Y N
ComHW Y N
Other Y N

How trained? Y N Supervised? Y N By whom? _____ Paid Y N

Which of the following are used? Word/charts _____; pictures _____;
flip charts _____; song _____; indiv counsel _____; health mod _____;
com. org. _____; group interac _____; non-formal educ. _____; repetition _____;
other _____.

Which is most important in the educators' eyes? _____;

Most practiced? _____

Languages used? French Y N; Local Y N

11. Training

Nurse _____ Other _____ Fiches techniques?

Demonstrable use of fiches? _____

APPENDIX VI

EVALUATION AT ZONAL LEVEL

Name _____ Location of antenna _____
 Population _____ <1 pop. (pop.X.04) _____ <5 pop. (X.2) _____

Med Chef Zone _____

1. Background

No. HC	HC c PEV	HC c SRO	HC c Cloro
_____	_____	_____	_____

2. Cold chain

Item	No.	Is it functional?	
		Yes	No
Refrigerator	_____	_____	_____
Freezer	_____	_____	_____
Cold boxes	_____	_____	_____
Accumulateurs	_____	_____	_____

3. Supplies

	Stock register		Stocks available?	
	Yes	No	Yes	No
Vaccines	_____	_____	_____	_____
Needles	_____	_____	_____	_____
Syringes	_____	_____	_____	_____
SRO	_____	_____	_____	_____
Chloroquine	_____	_____	_____	_____
Are any of the vaccines outdated? _____				
Is SRO available? _____ Is chloroquine available? _____				
Rupture in stock; vaccine Y N, ORS Y N, chloroquine Y N				

4. Coverage

Year	-----< 1 year-----						-----Pregnant wom.	
	BCG	DTC1	DTC3	OPV1	OPV3	Roug.	VAT1	VAT2+Rap.
1985	_____	_____	_____	_____	_____	_____	_____	_____
1986	_____	_____	_____	_____	_____	_____	_____	_____
1987	_____	_____	_____	_____	_____	_____	_____	_____

5. SRO and Chloroquine

Year	No. SRO used	No. treated <5 years	No. cloro	No. <5	Treat Preg.
1985	_____	_____	_____	_____	_____
1986	_____	_____	_____	_____	_____
1987	_____	_____	_____	_____	_____

6. Reporting

Are 1987 figures available for the following?

	Yes	No
Vaccines used	___	___
ORS distrib.	___	___
Cloro distrib.	___	___

When was last monthly report sent to Kinshasa? _____

7. Surveillance (number of reported cases)

Year	Measles	Polio	< 5 yrs Diarrhea	Fevers
1985	_____	_____	_____	_____
1986	_____	_____	_____	_____
1987	_____	_____	_____	_____

8. Comments

APPENDIX VII

EVALUATION OF HEALTH CENTERS

HC _____
 Zone _____
 Population _____ <1 yr. (pop.X.04) _____ <5 yr. (X.2) _____

1. Vaccination session

Yes No

Single needle/vacc.	_____	_____
Single syringe/vacc.	_____	_____
App. cold chain	_____	_____
Sterilizer	_____	_____
Correct age for measles (9 mos)	_____	_____

2. Treatment of malaria

Presumptive treatment of fevers in infants under 5		
Is dose correct? (25/K;10,10,5)	_____	_____

3. Treatment of diarrhea

ORS treatment		
Cost of ORS/sachet _____	_____	_____

4. Supervision

Last visit _____ By whom? _____
 Recommendations available _____
 Is the health education evaluated? _____

5. Finance

Did you prepare a budget? _____ Is so how much? _____
 Did you receive a budget? _____ If so how much? _____
 Opportunity to comment? _____
 Amount of money received _____ Sal _____ Trans _____ Oth _____
 Were personnel paid? _____ On time? _____ In full _____
 If not how did one manage? _____

Incomes from sales of ORS _____	Cloro _____	TOTAL _____
Expenses _____		TOTAL _____
Salaries _____		
Transport _____		
Restock _____		
Other _____		
		BAL. _____
Disposition of balance _____		

Who checks your accounts? _____

5. Health Education

Does a health education component exist? Y N
Who does the education? Nurse Y N
 MD Y N
 ComHW Y N
 Other Y N
How trained? Y N Supervised? Y N By whom? _____ Paid Y N
Which of the following are used? Word/charts _____; pictures _____;
flip charts _____; song _____; indiv counsel _____; health mod _____;
com. org. _____; group interac _____; non-formal educ. _____; repetition _____;
other _____.
Which is most important in the educators' eyes? _____;
Most practiced? _____
Languages used? French Y N; Local Y N

6. Training

Nurse _____ Other _____ Fiches techniques?
Demonstrable use of fiches? _____

APPENDIX VIII

LIST OF PRINCIPAL PERSONS CONTACTED

PEV/Kinshasa

Dr. Miaka Mia Bilenge, Director
Cit. Kapitaine Kanthaway
Cit. Kilundu Kisubi
Cit. Mabokuta Kaboto M.
Dr. Maliro Kayretya
Cit. Mikobi-Mimabu
Dr. Okwo Bele
Dr. Paluku Kalenga
Cit. Nkanda Rukirande
Dr. Andrew Vernon, CDC
Ms. Karen Wilkins, CDC

USAID

Mr. Dennis Chandler, Director
Mr. Joseph Goodwin, Deputy Director
Dr. Glenn Post
Ms. Hanaye Bisson
Ms. Rhonda Smith
Mr. John Bierke
Mr. Scott Demarest
Mr. Steven Vance

Field Contacts

Dr. Ndomgesieme
Dr. Nkolo
Dr. Akarasis
Pastor Maruzi Lumana
Dr. Mukadi
Dr. Ntumba Mukune
Governor Cit. Kisanga Kabongello
Dr. Mampuya-Kay
Sister Mercedes Izaguirre
Dr. Rugambua
Dr. Tschimpanga Mbuyi
Dr. Ebondo Ngoie
Dr. Ebutha Anangi
Dr. Etshindo Mbale
Dr. Chelo
Dr. Kinicongia
Dr. Liande

Other

Dr. Ngandu-Kabeya, Commissaire d'Etat
Dr. Matunda Nzila, Director General, FONAMES
Dr. Kalambay Kalula, SANRU
Dr. Kahozi
Dr. Frank Baer
Dr. Ludo Welfens, Representative, UNICEF
Dr. Jules Grandpierre
Dr. Robin Ryder, Project AIDS
Dr. Loren Greenberger, PRICOR
Dr. Joan Schubert, HEALTHCOM
Dr. Judith Brown, anthropologist
Dr. M.T. Houfwassou, WHO
Ms. Joan Spalding, Peace Corps
Cit. Lumbila Kasongo, Rotary/Polio Plus
M. Jan Ponet, Director LAPHAKI
M. J-P De Dobbeleer
M. Ludo Martens
Mr. Felix Awangtang, AID/W
Dr. Robert Clay
Ms. Wendy Roseberry

APPENDIX IX

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