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MALI RURAL HEALTH PROJECT (688-0208)

MANAGEMENT AND FINANCIAL EVALUATION

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OUTLINE

I. OVERVIEW

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- B. Information Systems
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- D. Financial Analysis
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I. Overview

The Mali Rural Health Project (MRHP No. 688-0208) was designed to demonstrate the feasibility of organizing on a national scale a low cost primary health care program emphasizing preventative and promotive health activities. A two dollar per capital annual ceiling was placed on the recurrent expenditures for the system with an additional dollar expenditure on drugs expected to come from the village beneficiaries of the system. Project implementation commenced in June 1978 with Harvard University serving as project contractor to the Malian Ministry of Health after a project agreement was signed between the U.S. Government and the Government of the Republic of Mali (GRM). This terminal evaluation follows a mid project evaluation conducted in April and May of 1980. The project is anticipated to end in June 1982.

The methodology of this evaluation is to consider current project performance as determined through interviews, review of project documents and field observation against the general recommendations of mid project evaluation and against the purpose of the project as stated in the project paper. The mid project evaluation considered five aspects of the project: training, social, health, management and financial performance. This evaluation report will make reference primarily to the management and financial (the De Geyndt and Vedder reports) evaluations since these are pertinent to this evaluator's scope of work. The project still has approximately six months implementation time left but based on past performance and current work plans a reasonable assessment can be made on the project status by June 1982.

A. Planning, Organization and Administration

The mid project management evaluation considered the project on four basic criteria (1) project performance in the two geographical areas of Koro and Yelimane, (2) project performance at the various administrative levels (arrondissement, cercle, region and central levels), (3) project performance in the areas of information systems, the drug supply system, transportation, medical equipment and supplies, training materials, and (4) technical assistance performance. In the two geographical areas the recommendations were basically to

- (1) increase horizontal extension i.e. more villages should be covered with the ultimate aim of covering each cercle, (the functional health administrative unit), with project activities;
- (2) increase vertical extension i.e. increase service elements being offered.

The two recommendations were predicated on other conditions stated in the report.

In regards to project performance at the various administrative levels it was recommended that the project commence integrating itself at the regional level which had until then been basically by-passed in order to reduce the bureaucratic layers involved in project execution and speed up project implementation.

Project problems in the following areas are briefly summarized.

Transportation Koro

- spare parts inventory minimal and not meeting 80% of needs
- control of gasoline consumption adequate
- control of vehicle use; acceptable under current conditions
- Yelimane: no information at this time.

Bamako

Vehicle logistics system acceptable with the only flaw being the fact that it was organized and managed almost exclusively by a Harvard administrator with no MOH counterpart.

Information Systems

Serious problems noted in the generation, transmission and storage of vital project data. No central repository for all information. Koro better organized in this respect than Yelimane although defects were reported for both cercles.

Drug Supplies

Procurement process and performance considered adequate at this time although no counterpart was being trained.

Medical Equipment

Procurement process was considered adequate. Some controversy on the appropriateness of sophisticated equipment requested by the MOH Koro in this kind of project was noted.

Technical Assistance Performance

An assessment within the context of AID's policy of host country contracting which "often puts a contractor between a rock and hard place" noted the following deficiencies in TA

- deficiencies in contractor planning, organizing and controlling of the project
- lack of detailed action plans
- deficient financial and service delivery accountability
- squabbling between HIID and MOH and within HIID team members
- high turnover rate of Harvard technicians
- lack of trust between Harvard and MOH
- breakdown in communications
- credibility gap in the competence and sensitivity of HIID to Malian needs

- Harvard advisor in Koro had won the confidence and respect of Malians

The foregoing briefly summarizes the status of the project seventeen months ago. A completely new team of Harvard technicians is now involved in the project. Improvements have been made in certain project areas, regression has occurred in others and overall management performance still inadequate in relationship to the original project purpose. Although the current HIID team is functioning better than the first team, lost time cannot be regained and decisions and activities whose institution was essential at the beginning of the project for ultimate project success have little impact when instituted at this late hour. The Project Paper, Project Agreement and HIID-MOH Contract repeatedly emphasize this project as a low cost demonstration primary health care project emphasizing prevention and health promotion. The generation and documentation of various kinds of data on project execution would permit the contractor to show the MOH how it could attempt to replicate the system at a national level. The preoccupation of the project documents with the foregoing objectives would suggest that the most valuable product of the project would be the various kinds of cost and operational data generated.

Perhaps the most critical planning neglect that has affected this project from the beginning, and continues to do so, has been the failure to develop an operational definition of the primary health care concept that is consistent with the Project Paper, the HIID contract, the Project Agreement and the MOH's own understanding of the PHC concept. Secondly, had such a mutually acceptable operational definition of PHC been expressed in terms of work plans (annual, semi-annual, quarterly) which are directly related to a budget and consistent with the financial objectives of the Project Paper a lot of confusion would have been avoided. Additionally, it was critical to have also determined at the beginning of the project those managerial and technical variables on which data would have to be collected during the life of the project and which would be essential in determining whether the project was replicable or not. The development of workplans and budgets which are relevant to the project purpose has been implemented as a regular activity only within the last 10-17 months. None of these workplans have yet been accepted by the locale AID Mission as adequate. There is evidence in project documents that some project consultants and technicians were confused on what the contents of primary health care are. In one project report, the U.S. definition of primary health care, the first patient contact with either a pediatrician, gynecologist, etc. of the health services system, is offered. In another document, there is a lamentation on what prevention really consists of besides vaccination. In general there has been considerable confusion on the contents of primary health care, prevention, community development, village health program, etc.

In advocating the PHC for developing countries, WHO proposed for locale modification the following eight basic elements

- (1) health education
- (2) nutrition promotion and education
- (3) water and sanitation
- (4) vaccinations
- (5) endemic disease control

- (6) disease treatment
- (7) drug procurement and distribution
- (8) MCH and family planning.

No evidence has been found to suggest that the contractor made an attempt to develop from this flexible definition a PHC program that responds to the following project constraints.

(1) Emphasis on Prevention Health Promotion: While there is no clear-cut distinction between curative and preventive activities in the above elements there is certainly a gradation from highly curative to highly preventive element. One would have expected the contractor to decide in the beginning which preventive activities would be emphasized.

(2) Project Paper: The project paper may have emphasized prevention but the budget did not contain funds for certain preventive elements such as provision of water and sanitation services which are a priority item in this Sahelian region. It was necessary in the beginning to screen out those PHC elements (preventive though they may be) that were emphasized but not budgeted for demonstration.

(3) Strategy for National Replication: This concern of the project would suggest that the contractor determine in the beginning the sequence in (time and place and training programs) which PHC elements could be most efficiently and effectively combined. For example are vaccination programs best combined with water and sanitation programs or with MCH and family programs? What is the best way to sequence vertical expansion of the service elements and geographical extension?

(4) Major Morbidity and Mortality Causes and Priority Age Groups: It would be assumed that in developing its own definition of PHC within the constraints of this project, the total effort would be directed towards resolving the basic health problems of the country.

The Brinkerhoff⁽⁵⁾ historical report indicates that project technicians spent significant amounts of time planning, developing strategy and organizing. The picture that emerges from available reports is that there were indeed a lot of meetings and discussions which took place. There was, however, no form or structure to this activity. The Project Paper, whose role has been questioned at various points during the implementation of the project, provides a logical framework and a critical performance indicator list which should have guided the technicians in developing an initial work plan. Vertical extension of the project has been haphazard in the absence of initial workplans and it is questionable whether any advice can be offered on how to vertically expand such a program at this time. MCH activities are only now being considered for incorporation into health centers. The failure to develop a comprehensive workplan for the project in the beginning has had negative ramifications for the entire project, ranging from the quality of the data collected to its relevance in achieving the project purpose.

Project Administration currently follows the same pattern noted during the midpoint evaluation. The central project office in Bamako relates to the Cercle Administrative Units in Koro and Yelimane through the regional medical offices which are respectively in Mopti and Kayes. Cercle medical

Officers send official reports directly to the Central Bamako office. In theory, the regional offices are supposed to get copies of these reports. Expense vouchers are usually sent through the regional office for review, verification and transmission to Bamako. Initially, bank accounts were opened in Kayes and Mopti for transmitting budget funds to the Cercle Medical Officers. Recently, budget funds have been transferred in several cash disbursements directly to the Cercle Officers. The regional bank accounts remain open.

Following a mid-project evaluation recommendation, there has been a move in Mopti, at least, to integrate the regional office technically into project administration. One project advisor is now resident in Mopti. While this move seems logical, its value for this project remains questionable. The regional medical offices are basically clearing houses which streamline and give coherence to the health activities of the regions. Functionally, however, the Cercle remains the autonomous unit. In Mopti, the regional medical officer integrates and coordinates the work of seven cercles. During the November 25, 1981 workshop held in Koro, it was evident that both the MOH and project advisors had some difficulty defining in concrete terms the daily activities of the HIID medical advisor based in Mopti. He currently spends about half of his time commuting back to Koro to implement a malaria prophylaxis program and epidemiologic survey initiated while he was based in Koro. The recurrent costs of the project associated with this arrangement would tend to be artificially high. It is difficult to place a high level medical advisor in a regional office catering to the needs of seven cercles and expect him to attend only to one cercle needs.

The project currently operates by a workplan that was prepared by the Bamako central office. The workplan covers the period up to June 1982 and addresses itself primarily to the tasks expected of the HIID technicians.

(The USAID Mission has to date not approved the plan because it considers it inadequate for the above reason). The preparation of workplans and budgets was instituted on a regular basis primarily with the arrival of the second HIID team. The process of preparing the workplans is, however, still problematic; central and cercle workplans are not coordinated. The HIID advisor in Koro is currently supposed to be operating on two different workplans, one prepared in Bamako without cercle participation and one prepared in the cercle without central participation.

Vertical and horizontal communication problems within the project organization have not been the source of most project problems. Minor delays have occurred in the preparation and transmission of budgets, vouchers and other materials. Bottlenecks in communication between cercles and Bamako can and have been easily resolved.

The most persistent and nagging source of management problems have been associated with the decision making process especially when it involves issues subject to interpretation. The decision making process implied in the project organigram and organization have been of little use. Five decision making centers have emerged in many controversial issues the project has had to deal with. These are:

- the Malian authorities

- the HIID technician
- EDC technician
- USAID Bamako
- Harvard Boston

Problems associated with operating efficiently with too many decision centers include the following incidents:

- Cercle Malian authorities accuse USAID/Bamako for making promises during joint meetings and not keeping them.

- USAID Bamako acting within its legal rights as set forth in the HIID contract and Program Agreement refuses to approve certain proposed expenses and workplans because it considers them inappropriate.

- EDC opens and controls its own project bank account in Bamako, separate from the HIID even though EDC is not officially in a contract to MOH. The HIID Chief of Party, as such, has little control over EDC expenses where an expense might be controversial.

- HIID technicians insist they have an obligation to the MOH and not to USAID Bamako and will submit documents to USAID only after MOH approval.

- Some HIID technicians refused in the past to recognize the project paper as a guiding document insisting that they will implement the project as described to them verbally by their employers at Harvard University.

- MOH officials out of exhaustion in trying to exert what they consider their decision making prerogatives confess their belief that USAID, the project financier, is the ultimate decision maker and will do what it wants to do.

- The MOH finds it annoying that AID allows Harvard to purchase generators for the personal use of its technicians while at the same time imposes impossible conditions preventing the MOH from purchasing these same generators for use in the same remote areas in health centers.

- Depending on what the issue at the time is, accusations of exaggeration, distortion, neglect, incompetence etc. have been made by all parties involved.

USAID projects in other countries have been implemented under this managerial arrangement with better success. During the first half of the project problems directly related to too many decision centers were at their maximum. There is evidence in project documents to indicate that the absence of technical and administrative leadership within the Harvard team contributed significantly to these problems. The current HIID team is better organized and more cohesive. The number of decision centers has been reduced but decisions requiring flexible interpretation of policies and the HIID contract still stir controversy between the USAID Health Office and the Harvard Team.

The project in Koro continues to represent the best activity in the entire project. Annual and quarterly workplans are prepared by the Malian Medical Officer and his HIID counterpart. Cooperation with local administrative officers is good and morale relatively high. MCH activities are currently being implemented at the Koro Health Center but little else is offered beyond the center at the other health facilities. The community development agent who also serves as general supervisor is still trying to figure out what in community development will be acceptable for funding within the terms of the project. Malaria prophylaxis and epidemiologic surveys in project villages are performed by the HIID technician resident in Mopti about 160 km away. A third medical technician based in Bamako visits Koro frequently to work with the team. Assistance is provided in the organization of workshops and training sessions and the review and analysis of budgets.

In Yelimane a young Malian physician has been assigned to this post after it was without a physician for about 5 months. No HIID advisor is based in Yelimane but frequent trips by the Bamako Medical Advisor are made to provide assistance to the new physician. The new physician has participated in several project sponsored workshops outside of his own area. With assistance from Bamako, two workplans and budgets have been prepared in Yelimane and submitted to the Central Office. The exercise has begun to produce form and structure to project activities although no HIID technician is resident there. Working relationship between the visiting Harvard Advisor is good and a constructive program is being organized at this late hour after the disastrous beginnings. The Bamako office indicates it will no longer station any Harvard Advisor in Yelimane because it wants to see how project activities initiated there will fare without Harvard technical assistance even though this will be provided only on a request basis. The four trips that the medical advisor has made to Yelimane since this year were not requested by Yelimane although they have been very useful in establishing the current positive spirit observed in Yelimane. Thus the "control zone" theory that has been used to explain the absence of an advisor in Yelimane is really not valid. It would appear that the real reason for the absence of a resident advisor in Yelimane is due to the fact that Yelimane is simply a very harsh environment to live in for the average western expatriate technician. In the meantime, a \$18,905 (9,452,690 MF) house built for the second Harvard technician with Harvard project funds in a second abortive attempt to field an advisor is rapidly falling into extreme disrepair. The Harvard Team leader says the MOH is supposed to repair and maintain the house and the MOH expects Harvard to do so. It is unlikely the house will be worth salvaging in the next six months.

Project staff in Bamako consists of the Harvard Chief of Party, one administrative assistant, two accountants and one secretary. They are cramped into a partitioned room about 18 ft. by 9 ft. The medical advisor and health education specialist who are both based in Bamako have no office space and consequently work in their homes. The Harvard Chief of Party consults with the Malian Project Director on administrative, management and logistic matters. The Bamako resident physician serves as medical advisor to the Malian Director and Harvard Chief of Party and also visits the two project zones frequently.

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B. Information Systems

The project paper states on page 44 on Research, Evaluation and Data to be Generated in the Project, that "the importance of careful assessment of baseline status (community diagnosis), activities within and utilization of health services, changes in the rural population's health, development, and nutritional status, and as far as possible the relationship between these changes and costs and inputs of the project, becomes clear when it is realized that the primary objective of this project is the demonstration of an effective low-cost rural health system that can be replicated by the Government of Mali over a much broader national area than that covered by the demonstration itself. The techniques for measuring change and the information systems designed to provide these measurements to MOH planners must be of sufficient clarity and accuracy to enable decisions to be made concerning the design of broader national system and the national training of health workers at all levels to staff it."(1)

It is evident from the above that the information generated from the project would be the most valuable end product of this project because it would constitute the basis on which recommendations would be made to the Government of Mali. The quality, adequacy and the representativeness of the data become critical if they are to be used as the basis for national expansion. The mid-project evaluation emphasized the inadequacies in the management and storage of information. Little was said about information that was not being collected because of the fact that the project was not operationally defined and workplans not established. The best information on the project continues to be generated at Koro. This information continues to be along the same lines as before the evaluation i.e. training transportation, supervision and other recurrent expenditures. There is little segregation of cost by the vertical elements of primary health care i.e., nutrition activities, MCH activities, vaccination, health education etc. Since there is no evidence that a conscious decision was made in the beginning on how to sequence these elements over time it is now difficult to segregate costs along these lines. It is recognized that vertical cost segregation under any circumstances is not clear cut and a difficult exercise because of category overlapping. Much has already been said about the inadequacies of the information of the baseline surveys. WHO recommends the use of concise and measurable indexes for the determination of community health status. The choice of measurement criteria or indexes was never clearly defined and should have been the same for Koro and Yelimane. The following excerpt from a project report illustrates the lack of central guidance on what information should have been collected.

"Regarding the policy question, the HIID Chief of Party stressed the need for decentralization, saying that since the field was close to PSR's task environment it was their responsibility to determine what was most appropriate to do and how and when to do it."(5)

This was, in effect, a green light from the project Chief of Party to field advisors to unilaterally adopt their own measurement indexes for all facets of the project which should not be the case for a demonstration project generating data which will be used to show the Government of Mali how to establish a system.

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The policy position implied by the first project director i.e. the Central Project Office does not constitute part of the demonstrative system continues to be a flaw affecting the generation and organization of information at the central level. The central project office is currently staffed and organized to respond to Harvard and AID financial reporting needs. Two accountants are currently employed to work on the Harvard account and the revolving fund established by AID and the MOH. To answer the question, "How much does the Central Project Office cost to run in relationship to the Regional and Cercle Offices?" is currently very difficult. Information has never been organized to address this essential issue and it will require many hours of segregating expense receipts from two accounts from the limited information available in the files.

Koro

For those facets of the system on which information is being collected Koro continues to excell in the collection, organization and storage of information. Supervisors collect health diagnostic data generated by the village health workers in the villages. This data is organized in Koro according to village files which also contain information on periodic drug purchases. Information also is recorded on gasoline use, the mobylette rent-purchase scheme and cash pick ups by Bamako on drug sales.

The quality of information generated in Koro seems to have changed little since the last evaluation but this appears to be related to the quality of personnel generating the data (VHW) and problems in the management systems adopted to collect and verify this information. These problems will be discussed in the appropriate section of this report.

Yelimane

Because of the many personnel problems experienced by the project in Yelimane, information collected in Yelimane continues to be deficient. The only reliable information available from the work of the first group of Harvard technicians is information on the numbers and kinds of health workers trained. There is virtually no other information available that will be useful in an analysis towards the fulfillment of the project purpose. Malian technicians in Yelimane complain that the situation would not have been nearly as bad if the Harvard technicians of the first team had returned copies of documentations they borrowed when they visited Yelimane from Bamako. This raises the question as to whether any policy decisions were made initially on the number of copies and distribution procedures of all essential project documents prepared.

Bamako

The mid-project evaluator pointed out the absence of a central repository for all project data. The failure of the first Harvard team to establish adequate concise and explicit variables along which data was to be collected meant that at mid-project, the second team, which did not overlap with the first, would have to make these decisions and salvage from what was left behind any useful information. This has not been done. As has been pointed out, the Central Office has been preoccupied with developing financial records that satisfy Harvard and AID's financial reporting requirements and in dealing with the Malian burcaucracy. The Central Office staff has made an effort to keep records that reflect primarily its own period of responsibility. Many project files contain a mix of documents that do not lend themselves for

easy sorting, much less analysis. Some activity cost estimates are hand scribbled on scrap sheets torn from notebooks of various sizes. One file contains information ranging from how to assemble a rocking chair to a study evaluating the training of VHW trained in Yelimane.

C. Logistics Management

The drug procurement, management and distribution system - this aspect of the project received a very positive evaluation during the mid-project assessment. At that time no delays or shortages in drugs were observed. The only significant recommendation made was that the Harvard team should start training a Malian counterpart who would take over management of the drug procurement and distribution. At this evaluation no delays or shortages have been observed either. However, the system can hardly be considered a model system for recommendations to the GRM.

Central Level

An inordinately large amount of time continues to be spent in clearing drugs and other project imported equipment (vehicles, medical equipment) which by agreement should be free from import taxes, Ministry of Health Officials have yet to work out a system with customs officials that facilitates the clearance of project materials at the airport. For each shipment, project technicians have to go to the airport and go through a tedious and complex clearance procedure. Drugs and medical equipment picked up at the airport are currently stored at a MOH pharmaceutical warehouse in downtown Bamako. The MOH central offices and project are about 2 miles away on a bluff overlooking the city. Temperature and humidity controls are nonexistent in this warehouse, making it unsuitable for storing temperature sensitive preparations. Project drugs (as well as drugs from other donors) are stacked on the floor and in cabinets which are locked.

A system exists for authorizing the release of drugs and medical equipment from the warehouse. All releases must be authorized by the Malian Project Director at the Central Ministry. The release form indicates the nature of materials or drugs, quantity to be released, and destination of the shipment. Release forms for previous transactions are maintained in a file at the central level.

There is, however, no system in place to monitor the drug and equipment stock in the central warehouse i.e. there is currently no inventory of the kinds and quantity of drugs and equipment in storage. It follows that there is no system in place to alert project technicians early enough to avoid shortages although shortages have not been experienced. It should be pointed out that the total amount of drugs and medical equipment ordered for the entire project is rather small and therefore the system in place has not been subjected to handling large volumes of material. The lack of a stock monitoring system may explain why 9,000 units of sulfacetamide sodium ophthalmic solution worth \$4,620 will have to be discarded because its useful life expired in November 1981 without anyone noticing the impending deadline. This particular batch of drugs was ordered in February 1979 and has been sitting in the warehouse for a long time. Only one of 23 cartons of this consignment has been opened and not all of its contents used. This raises the question as to why so much of this drug was ordered if the demand and use of it is so small. Storage instructions on the cartons of this shipment indicate that the drug be stored at a temperature between 35 and 46 degrees F. The cartons are inlaid with styrofoam insulation and each carton contains

a cooling pack. In spite of all these packing precautions and instructions this drug was stored in a room with no temperature control suggesting that the drug had probably deteriorated even before the manufacturers indicated expiration date.

Other medical equipment was also observed in the warehouse. The status of this equipment is unclear. With no inventory it is hard to tell whether the Bamako office is aware of its existence and the need for it in project dispensaries.

The best system for monitoring drug stocks is in Yelimane in spite of all the other problems encountered in this project area. This "system" consists of a hard cover notebook which is organized according to type of drug. Under each drug type a double page table with five vertical columns indicating date, stock, arrival, departure, current stock, receipt no. and origin of request. For each transaction, the quantity value and date of the transaction is recorded.

All medicines received from Bamako are inventoried and added to the stock on hand and the new quantity and value totals computed and recorded. From this book, it is possible at a glance to determine:

- which medicines need ordering before they are completely used up
- the cash value of the stock on hand
- which medicines have been in storage for too long (check on expiration date)
- the amount and value of the previous transactions to VHWS etc.

The book is stored in a file cabinet about four yards away from the cabinet containing medical supplies.

Koro lacks such a monitoring system; the attendant did not know and could not easily determine how much of each drug he had in stock and there was no inventory although he had records on the amount of drugs last delivered to him. In Koro and Yelimane some problems exist on the management of drugs beyond the cercle capitals. All VHWS are given an initial stock of medicine for sale in the village at no cost to the village when they finish their training. In Koro the value of the initial stock has varied from 43,000 MF to 60,900 MF. For each subsequent purchase the VHW is supposed to receive a 15% discount which is supposed to go into a village account separate from the revolving drug account. There have been problems in implementing this idea. In Koro, the 15% is given in the form of drugs reflecting the different proportions of drugs and agent is purchasing at the time. The agent then takes the whole lot and stores it in his drug cabinet. From then on, it is not possible to calculate and segregate the 15% remittance. In Yelimane the chief nurse in Tambacara, who has been on the job for only 5 months, admits he has never really understood the purpose of the 15% remittance. He believes it was a remuneration to the VHWS.

In Tambacara 15% of the cash an agent presents is calculated by the nurse and returned to him in cash. He is then given drugs with a value of

85% of his initial capital as opposed to the Koro system where the agent leaves with drugs worth 115%. In Yelimane the VHWs most of whom are illiterate, are not expected to compute the 15%. If a literate VHW in Koro were to attempt to calculate the value of 15% it would be extremely confusing because the new drugs are mixed with old stock. Although the Yelimane system is easy to manage, it is important to note that the system progressively reduces the value of the initial free allotment and in time the agent can be expected to have no cash or drugs in the revolving fund. It is suggested that 15% of the cash on hand be remitted to the agent but he be given drugs with a value of 100% of the cash he brought in. In this way, the value of revolving fund is maintained.

An evaluation⁽⁸⁾ of the village drug accounts in Koro in October 1981 by a MOH pharmacist revealed that major problems still exist in translating the discount concept into a functioning system. Table 1 is reproduced from this report and indicates that 13 out of 16 pharmacies surveyed were operating at a deficit when the 15% remittances are considered as a portion of total sales. These deficits range from 3040 to 65.025 MF.

Of importance is the fact that causes of problems in the system are being identified and corrective action planned. Some problems identified so far include:

- poor supervision of the VHWs by visiting nurse supervisors
- the VHW, and some supervisors for that matter, have not properly understood the 15% remittance and revolving fund concept.
- a mixing up of the two accounts involved in the system, one for the drug revolving fund sales and the other for the 15% remittances.

These corrections have to be made in both Koro and Yelimane.

The concept of primary health care implies a broad based pyramidal organization at the base of which ambulatory and preventive services are emphasized. Within the cercle organization, the (MOH administrative functional unit) the health center at the cercle headquarters in Koro and Yelimane should ideally be receiving a proportion of difficult medical cases that cannot be treated in the villages by VHW and at the dispensaries by the nurses. The rest of these progressively intensive care patients requiring hospitalization should ideally be sent to Mopti and Bamako. When project performance is considered only within the Cercle, it would appear that little consideration has been given to dispensary personnel, equipment, drug needs and their role within the system. If VHWs who operate at the periphery should perform well, one can expect to see more patients at the dispensaries referred by the VHWs. (This has been reported). The dispensaries can be expected to refer more patients to the sole physician in Koro. In establishing a demonstration system the project has yet to address the following issues:

- (1) What are the minimum dispensary requirements in space, equipment and personnel as a function of
 - the number of VHWs a dispensary supports
 - the population of the arrondissement

TABLE 1

**TABLEAU RECAPITULATIF POUR MADAGASCAR ET
ARRONDISSEMENT CENTRAL DE KIRO**

VILLAGES	Médts en Stock				V.M. en F.M	Argent en Caisse	Valeur Actuelle Ficie	Remise 15%	Valeur REELLE	SITUATION	
	C	A	P	S							
GOTENE	111	258	25	3	10 045	41 925	51 970	4 490	65 390	- 13420	
AYE - PEULH	306	111	31	3	9 910	32 825	42 735	3 360	62 630	- 1995	
AYE - DOGCH	259	101	277	0	33 005	21 195	54 200		01 59 250	- 5050	
AMA	62	393	356	4	44 550	4 260	48 810	300	59 550	- 10740	
ANKANDA	61	188	400	10	50 570	13 685	64 255	4 860	64 110	+ 145	
ANTECOUROU	193	277	303	3	39 520	13 840	53 360	2 650	61 900	- 8540	
AMEROU	01	480	158	11	29 500	32 410	61 910	1 105	60 435	+ 1475	
OCMA	113	166	84	0	12 735	23 305	36 040	7 710	66 950	- 30920	
KARAKINDE - P	01	80	273	8	33 900	21 000	54 900		01 59 250	- 4350	
BOINOSOGOU	215	955	248	0	41 035	13 295	54 300	1 875	61 125	- 6835	
BOUDIOU	302	502	92	9	27 815	26 880	54 695	13 610	74 510	- 19515	
ADIANGA	01	01	01	0	0		4 200	4 200	8 325	69 225	- 65025
POMORO DODIOU	265	233	73	11	23 210	40 910	64 120	19 025	79 925	- 15305	
PLATIN	498	01	01	0	11 9 960	50 100	60 060	2 200	63 100	- 3040	
BONO	342	21	56	6	16 665	30 245	46 910	16 400	77 300	- 30390	
DANGIATENE	462	304	01	1	13 740	83 630	97 370	35 545	96 445	+ 925	
KARAKINDE - D.											

H. S. V ADSECT

- NOTA :**
- C = Chloroquine
 - A = Asprine
 - P = Penicilline
 - S = Sulf cotarida Collyce
 - F.M. = Francs Malions

SOURCE - REF. (8)

(2) What are minimum dispensary needs and what should their activities consist of in the areas of

- MCH and child spacing
- vaccination (vaccine types, cold chain requirements)
- health education (material needs and costs)
- nutrition activities
- endemic disease control
- disease treatment
- water and sanitation

Some complaints have been expressed that the project has tended to equate the VHW program with a primary health care or rural health care system and ignored the material needs of dispensaries on whom the VHW depends. The point here is that if the project is to achieve its purpose of establishing a demonstration system which will be a model to the GRM the above issues will have to be addressed. VHW training and supervision has been the facet of the system that has received the most attention.

Transportation

Until about 5 months ago, Yelimane and Koro were each assigned two landrovers for project use. In efforts to reduce project recurrent costs, one of the vehicles from each of the cercles was withdrawn to Bamako. With proper maintenance it would appear that one vehicle is adequate for project needs. There are six project vehicles currently in Bamako and two new 404 pick-ups have just arrived. There will thus be a total of 8 vehicles in Bamako and two in the project zones making a total of 10 project vehicles. If the project had succeeded in 3 cercles as planned in the project paper, 3 vehicles would now be considered necessary for optimal operations in the project zones leaving seven based in Bamako. With seven or eight vehicles in Bamako, it seems there is a surplus of vehicles in the project even if only half of them are in good condition. It is difficult to control or reduce recurrent costs associated with transportation when there are so many vehicles at the central level where few project activities are taking place.

Could some of the vehicle funds have been used to procure kerosene operated freezers and refrigerators (Harvard technicians have these in their homes) to install in cercle dispensaries or health centers to provide cold storage for vaccines and other drugs?

The high cost of transportation was noted in the mid-project evaluation and steps have been taken to reduce these costs in regard to both vehicle and mobyette transportation.

Vehicle Use in Bamako - With so many vehicles in Bamako, it is difficult to predict how many vehicles will be recommended to the MOH for central use and on what basis such a recommendation will be made. The only data currently kept on vehicle use is data on gasoline consumption by vehicle. Trip purpose, distance and destination are not recorded. It is difficult at this time to segregate transportation recurrent costs associated with project and non-project vehicle use.

In Bamako, Yelimane and Koro, vehicle supervisors have given up trying to get drivers to record mileage data on all trips. A good number of the drivers are illiterate and can barely speak French. Bamako vehicles are used in the following manner: one small "deux chevaux" serves as an all-purpose errand vehicle, one other vehicle is assigned to the Malian project director, a Peugeot 504 is used by the medical director for trips to Mopti and Koro. The rest of the vehicles, when they are in running condition, are used on an as need basis.

A new policy has been adopted wherein all "major" vehicle repairs for all project vehicles are done in Bamako in the UNICEF-SEPAU garage. Cercle project budgets regularly contain funds for minor repairs of the two landrovers in Koro and Yelimane. An arrangement has been made with the UNICEF garage wherein all vehicle spare parts are stored in the UNICEF garage. There is a well organized system for monitoring and accounting for the use of spare parts. An inventory of parts is retained in the Central Project Office in Koulouba. Each time a request is received from Koro or Yelimane a release authorization is prepared. The inventory is revised to reflect the new demand and the release authorization taken to the warehouse which is about 3 miles away. In the warehouse, all parts are coded and stored neatly in cubicles. Information on current stock is stored on index cards. A check of five items revealed that the information on the index cards is current and easily verifiable.

The one landrover in Koro is under the supervision of the Malian medical officer. Data on gasoline consumption are kept. The notebook containing this information also contains information on date of issue of gasoline and purpose of trip. The medical officer has responsibilities over all seven arrondissements in his cercle while project activities are currently only in five. The landrover is used for all cercle health transportation needs including medical evacuations. Occasionally the local administrative officer (commandant) uses the vehicle when he has transportation problems. All Malian administrative officers have the right to requisition vehicles in this manner and when this occurs they are supposed to provide their own fuel. Gasoline is procured in 55 gallon drums from Mopti.

A few spare parts are kept in a cabinet under lock and key. The sanitation agent is responsible for supervising this stock. Spare parts tend to be requested from Bamako when there is an emergency and not before it occurs. This agent perceived his role as one of executing orders passed down to him. He needs to be encouraged to take the positive steps of determining with the driver a list of frequently needed parts which can be procured from Bamako through the medical officer.

In Yelimane, no records exist on vehicle use and gasoline consumption. A few spare parts are contained in a cabinet. The Yelimane medical officer is now required to prepare workplans and budgets (and is provided assistance in doing so) and it is expected that with the new optimistic and constructive relationships now prevailing in Yelimane, there will be more organization and generation of requisite information.

The radio communication system is a convenience which may have had some negative effects on the development of a sound logistics system. With the exception of Yelimane which has a sound monitoring system with an advance alert potential the tendency in logistics management seems to be to "radio in" when supplies are needed and not before.

Mobylettes

Supervisors depend on project subsidized mobylettes to visit the VHVs. These mobylettes were initially delivered to the project zones without an organized plan on how to implement and control the "rent-buy" scheme. The nurses or technicians buying the tax free mobylettes at 120,000 MF were expected to make monthly payments of 5,000 MF over a 24 month period. The mobylettes were delivered from Bamako to Yelimane and Koro with apparently no contracts or forms on which the installments could be easily recorded. By Malian labor laws, it would not have been possible to automatically deduct these payments from the nurses salaries. Currently documentation on mobylettes is incomplete and it is difficult to account completely for all mobylettes that were bought by project funds. The following summarizes the mobylette status:

- fifteen mobylettes were initially delivered to Koro.
- contract statements were designed in Koro and twelve participants in the rent-buy schemes signed these contracts
- one is unaccountable for.

Payments on the rent-buy scheme are made to the medical officer. These funds are then deposited in the mobylette account. As is the case with the drug funds, information exists in Koro which indicates when a cash pick-up occurred, who picked up the cash and signatures acknowledging receipt of the funds. As far as the Koro medical officer is concerned, all outstanding mobylette payments have been made to Bamako. In Bamako it is not easy to verify payments or trace payments. The accountant was able to identify a certain bank deposit in a log book because he remembers personally picking up this money. There is no record on who brought in money from where and to whom it was delivered. Since there is a separate mobylette and drug fund it would have been helpful to establish hard cover notebook logs that can be used to track the movement of funds especially when they are handcarried in the form of cash.

In Yelimane, three mobylettes were delivered from Bamako under the same conditions as in Koro, i.e. no contracts or forms that could be used to record payments.

Three other mobylettes are recounted to have been diverted to a non-project zone by a Harvard consultant who subsequently had to repay for these mobylettes from the IDC account which existed at that time. The distribution of mobylettes and execution of the "buy-rent" scheme was poorly

managed from the beginning with the result that the current Harvard team leader is not sure whether the funds present in the mobylette account represent the amount that is supposed to be in that fund. The same goes for the drug fund cash movements.

Mobylettes Maintenance Support

Transportation recurrent costs have been high in this project because certain elements of these costs were pegged at an unrealistically high level in the beginning of the project. The current Harvard team has just adopted the third in a series of strategies that have been designed to reduce recurrent transportation costs. Beginning with the third strategy, the actions are:

- Elimination of the current 15,000 MF monthly mobylette maintenance allowance. This decision was taken in November 1981. The new policy is to increase supervision per diems from 1,000 MF to 2,500 MF instead of the flat monthly maintenance allowance. The new per diem will be paid only after it has been verified that the supervisor performed the assigned supervision.
- The 15,000 MF mobylette maintenance allowance had been adopted when the project technicians realized that a free indiscriminate maintenance policy would cost far too much.
- The initial maintenance program was centralized and at no cost to mobylette owners.

During the November 1981 workshop held in Koro, the project technicians and observers including chiefs of villagers participated in a self-evaluation which determined that one of the main project problems is inadequate supervision of VHW by the nurses who receive transportation subsidization. Action has been taken (new detailed activity forms to be filled by supervisors to increase the quality of supervision and enhance its educational role for the VHW. The current technicians have to cut back on supervisor benefits and simultaneously try to improve their productivity. In a financial situation where government salaries are delayed for three months it is difficult but not impossible to achieve these objectives. Obviously, it would have been better management to start transportation benefits at a very low level and progressively increase them.

D. Financial Analysis

Assumptions for Financial Analysis

A mid-project financial analysis (Vedder Report) recommended an economic analysis of the project with few other practical recommendations for project implementation. The Gray Report⁽²⁾ on establishment and recurrent cost analysis was completed in June 1981 i.e. five months ago. The report distinguished between capital or establishment and recurrent costs of the "system" as it existed at the time of the analysis and makes the components of the recurrent costs derived very explicit. They are costs associated with:

- (1) the supervision of VHWs and TBAs by the Assistance medical staff
- (2) occasional (biannual) training costs to replace VHWs and TBAs lost to attrition
- (3) overhead associated with the above activities.

In summarizing its achievements in Koro in the past three years, the project listed the following items:

(1) Baseline Studies

- epidemiologic studies, general disease patterns, malnutrition, malaria and schistosomiasis
- demographic studies
- mapping of the arrondissements

(2) Training VHW and TBAs

- six training sessions for VHWs and 2 training sessions for TBAs
- 119 VHWs are operating in the field (35 have been retrained); these agents are supervised regularly (monthly for most and bi-monthly for the more effective ones)
- 46 villages (64,000 pop) participate in the project, 30 villages have no VHWs, 14 villages have both VHW and TBAs and 2 villages have only TBAs

(3) Community Development

- building of a dam in Koro with CARE financing
- digging of a well in Goursinde and Boudo Tena (CARE financing)
- 3 vegetable gardens in 3 villages
- digging of a school latrine in Koro

For the remaining year, the project technicians cite the following as activities to be accomplished:

- (1) produce an efficient model of primary health care for Mali (from the central to peripheral level)
- (2) produce a training curriculum for VHW and TBAs
- (3) produce teaching aides for health education in the rural areas
- (4) in the MCH area, improve the performance cercle health personnel through on the job training

(5) evaluate the possibility of community action at village level

(6) inform concerned agencies of these activities

A review of these past and projected achievements of the project indicates that the implied definition (none was established at the beginning of the project) of a village based primary health care excludes fixed center or infrastructure associated costs. The health centers and dispensaries in Koro constitute the "knobs of the wheel" that are expected to sustain the VHW and TBAs in satellite villages once their performance has been judged acceptable. A mid-term evaluation by external AID/GRM evaluators and a recent self-evaluation by project technicians and observers concluded in general that while much had been accomplished in Koro in establishing the indispensable supervision system which constitutes the technical and administrative back-up life lines to the VHW and TBAs in villages, the system was not operating at an acceptable level. Administrative and technical problems (see drug distribution system) have been identified and still have to be resolved. Essentially this means that the system of village based primary health care however defined (with the inclusion or exclusion of fixed center and infrastructure recurrent and capital costs) has yet to be firmly established. In view of the fact that horizontal expansion of the project continues and has yet to be completed in one of the MOH's designated functional units of (the territory) Mali (cercle) and in view of the fact that vertical expansion continues in a haphazard manner with some essential service elements (vaccinations) not considered, this evaluator considers it inappropriate to talk about the recurrent or unit costs of "the system". Further more, this evaluator is of the opinion that recurrent fixed center costs in relationship to vertical service elements (MCH, nutrition, vaccination, prescription drugs, health education, etc.) should be considered part of the total recurrent costs of the system. In this context the Gray Report constitutes an indepth analysis of recurrent costs associated with only two elements (training, supervision and associated overhead costs across the vertical service elements) of the system which hold the line while a model system is being established.

Indispensable recurrent fixed center and administrative overhead costs that have yet to be considered include dispensary line item costs such as personnel, stationary, furniture, general repairs, equipment and fuel costs (if it is determined necessary to install in each dispensary a kerosene operated refrigerator for storage of vaccines and other heat sensitive drugs. Recurrent and administrative overhead costs that are difficult to establish at this time would include supervision and referral personnel, costs at the dispensaries that will be better appreciated once the VHW and TBA's start performing at an acceptable level of efficiency. In addition to these two categories of recurrent fixed center costs are fixed center capital investment costs they may be deemed necessary for establishing the framework of the system. A determination of whether new dispensaries and equipment are needed to establish the framework of the system would have to be made. These costs and needs would have to be determined for the next higher and referral level of the system above the dispensary. This next level is the health center which, in this case, is associated with a maternity. The objection might be raised that capital and fixed center recurrent costs were not explicitly agreed to in the project agreement. This may be true, but they were implied in the project paper and are commonly considered costs associated with a village-based PHC system. When defined in the context of the CILLS concepts of recurrent

and non-recurrent expenditures (non-recurrent costs are all those expenditures incurred in connection with establishing a model system) the capital and recurrent costs discussed above are indeed establishment costs to the extent that the purpose of the project was to establish a model village-based primary health care system which can be replicated on a natural basis.

Definitions aside, it will be recalled that it was noted that the MOH had requested moveable equipment for the cercle dispensary at Koro. This equipment consisted, inter alia, of a hydraulic surgical table, a portable x-ray unit, autoclaves, artificial respirators, a generator and air conditioning units. AID Bamako rejected this equipment list on the basis of its inappropriateness to the problem. However, AID Bamako has recently agreed to the expansion of the maternity at Koro with project funds suggesting that AID is not against financing "recurrent" and capital costs that are intended to establish a demonstration model system. No information currently exists on these recurrent costs. Harvard University has apparently not considered this as an essential element of the system.

The absence of theoretical projections of fixed center and overhead administrative recurrent costs based on the currently functioning VHVs and TEAs trained raises the question as to whether the project will have any recommendations pertinent to a primary health care system. Gray's recurrent cost estimates associated with training and supervision are in a broad sense establishment costs since the project has so far been dealing only with facets of a system which both the MOH and project technicians openly admit is barely functioning properly. This problem has been discussed with the current and past MOH project director and the current Harvard team members. The reaction of the first Malian project director is that the current status is not surprising since the first 12 months of the project were essentially without any concrete activity. He believes the purpose of the project is noble and is still worth pursuing but the management systems used to implement the project are inappropriate. The current Malian director and Harvard team members for their part, admit they will be able to make good recommendations only on certain aspects of what was supposed to have been a system.

Recurrent Cost Estimates

Available partial recurrent cost estimates have been prepared by Gray in his June 1981 report and are based on the Sissoko-Kelly report and on a more recent report prepared by Dr. Claude Letarte. These analysis reveal the following consistent trends. Transportation is a heavy expenditure item in the recurrent cost estimates.

KORO	Sissoko-Kelly Report	Letarte Report
Transportation	74%	69%
BAMAKO	Goodrich Summary Report	Callahan Estimate
Transportation	69% (cumulative Oct. 80)	71%

Note - The Callahan figures are based on Bamako budget figures from May 1981 to November 1981. See Table 3.

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Problems exist in making cross comparisons between the cercle recurrent cost estimates (Sissoko-Kelly and Letarte Reports) generated over time in Koro alone because of different categorization systems. Letarte, for instance, includes salaries for the Harvard House night watchman in his overhead costs (this is not a true cost if the MOH were to take over the system) which are made up of transport costs within and outside of Koro. Furthermore, vehicle depreciation costs are not included in the Sissoko Kelly Report.

Once again this problem illustrates the poor planning that preceded project implementation.

The Gray Report gave the following estimates under the Phase II strategy adopted for reducing transportation recurrent costs (i.e. open-end liability for mobylette repairs replaced by 15,000 FM lump sum payments) assuming 48 person-sorties monthly:

Fuel	80,000 MF
Per Diems	48,000 MF
Mobylette Lump Sum Payments	<u>120,000 MF</u>

248,000 MF per month

These costs worked out to approximately 3 million MF (2.98 million) per year for transportation recurrent costs for Koro. Under the new cost reduction strategy, the above costs will be replaced with a 2,500 MF per diem and fuel costs. Assuming 48 person-sorties per month this works out to 1.44 million MF annually thus yielding a reduction in transportation costs of 2.17 divided by 2.98 or 20.4%. If this reduction is achieved between now and June 1982 with appropriate adjustments for horizontal extension and increased marginal overhead costs for the distant arrondissements this will be evidence that the current "partial recurrent" cost projections by Gray (thorough as they may be) are based on too generous a transportation scheme that is unrealistic for the Malian financial environment. It remains to be seen whether this planned reduction can be achieved simultaneously with planned improvements in the quality of supervision. The current Harvard medical advisor in Bamako expresses the opinion that in view of the poor decisions made at the beginning of the project they have no choice but to try and implement these cuts.

Per Capital Cost Estimate Comparison

<u>Cost Category</u>	<u>Project Paper</u>	<u>Phase III*</u>
Transportation	14	92
Personnel	20	77
Equipment/Supplies	90	8
VHW Replacement	-	5
	<u>124 MF</u>	<u>183 MF</u>

*Phase III defined by Gray as complete horizontal extension in Koro Cercle with current elements of the system.

The current per capita cost of the project is 95 MF and is projected to just about double to 183 MF when the current program is expanded into all of Koro districts. These figures are well below the 2 dollar per capita recurrent cost (adjusted for inflation this would be about \$3.6 or approximately 1600 MF) indicated in the project paper. Gray's analysis indicates that even these recurrent costs of a partial system cannot fit within the MOH and GRM current financial picture which has steadily deteriorated since the project was conceived in 1976.

The differences in recurrent cost elements realized in the project as opposed to projections in the project paper are worthy of further comment. The differences in transportation and personnel recurrent per capita costs may represent a true under estimation (adjusted for inflationary fuel prices) by the project paper especially when one considers the consistency noted in transportation costs in the Letarte, Sissoko-Kelly, Goodrich and Callahan estimates. The same cannot be said, however, for the differences in observed and projected per capita equipment and supplies recurrent costs. The vacuum that currently exists in fixed center recurrent costs, referral and supervisory overhead associated with fixed centers (and even some legitimate capital costs indispensable for a model system) would suggest that the 77 MF and 8 MF per capita costs for personnel and equipment respectively are underestimated. The magnitude of underestimation is unknown. One can therefore, say that a projected 183 MF per capita recurrent cost is an underestimation for primary health care system for the Koro cercle. The source of this underestimation is not Gray's computation but from the failure of project technicians to properly identify the elements of the system at the beginning of the project and collect appropriate data on all the important elements.

The current 95 MF per capita recurrent cost estimate for the Koro system is accordingly an underestimate which has been adequately demonstrated to be out of line with Malian financial reality. The question then arises as to whether it is worth the effort and resources to continue the search for representative total recurrent cost estimates. To the extent that this was intended to be basically an applied research project, the answer is yes but this becomes an unrealistic academic exercise since highly placed Malians in the MOH and Finance have been reported to say no one can reasonably expect them to pick-up the recurrent expenditures identified so far. The social goods (difficult as it may be to measure because of poor project implementation) being delivered to the population in Koro is, of course, a benefit that the Malians appreciate in this financially unrealistic experiment which they would, nevertheless want to keep.

In the meantime, efforts continue at reducing per capita cost through more efficient management although it is doubtful that this alone will bring costs down to a level that the GRM can absorb. Cost recovery mechanisms to subsidize supervision beyond the drug system are the only other alternatives although it is questionable that the GRM wants to take the political risk involved in some of the identified alternatives.

The Top Heaviness of the Project

This 3.7 million dollar project was planned to operate in 1 cercles. Currently one could say it is operating in one and one half cercles.

Gray notes that as of December 1980 FID had spent \$1.6 million while the re-imbursable MOH revolving account expenses were estimated at \$160,000. During calendar year 1980, the project in Koro spent about

\$19,000 while HIID spent \$687,000, the \$19,000 represents only about 2.7% of the project budget. Current Koro budget costs primarily form the revolving fund and constitute only about 3% of the total current expenditures. Stated otherwise, about 95% of the project resources are spent outside the project areas.

In Tables 3 and 4, a comparison is made between similar cost categories between the Bamako and Koro offices. Because the time periods are different the monthly averages are used for comparison (Bamako averaged over 7 months and Koro over 5 months). It is also appreciated that certain Bamako costs may actually be Koro costs especially with the new policy of performing all major vehicle costs in Bamako.

It should be emphasized that the Bamako/Koro budgets are not clear cut but it is obvious from Table 5 that Bamako expenses are extremely high. The low ratio in category 4 (indemnités) needs further clarification. Indemnities in Koro in this case are actually supervision, transportation, and per diem costs while indemnities in Bamako where no field activities occur are salary bonuses paid out to a variety of MOH officials participating in the project. In Koro only the medical officer receives a monthly bonus of 20,000 MF. Thus the true bonus ratio would be:

$$\frac{151,200 \text{ (Bamako mean over 7 months)}}{20,000 \text{ (the monthly bonus for Dr. Amar)}}$$

This gives a ratio of 7.56. With the exception of office supplies, Bamako outspends Koro in four budget items by about 6.5 times.

$$(7.54 + 5.31 + 7.56 + 5.9 \div 4) = 6.5 \text{ times}$$

Central support of the project is for two of 46 cercles in the country and this ratio would appear to be unacceptably high.

From Tables 3 and 4 one can also note the following differences in Bamako and Koro budgets for the "Contingency and Others" categories. In Koro this category constitutes 13.8% of total expenses while the equivalent figure for Bamako is 24%, almost twice as much. When Dr. Ahmar's bonus is considered a personnel expense the Bamako/Koro personnel expense ratio can be approximated by the following formula:

$$\frac{\text{Bamako bonuses + salaries paid from the project}}{\text{Koro bonuses + salaries paid from project}}$$

The best estimate of this ratio from available sources is 1,174,000 : 20,000 or 58.7, an extremely high central/cercle personnel cost ratio.

This ratio represents only the month of November 1981 for which figures were readily available. The figure is likely to be lower for previous months as there were fewer employees at the central office on project payrolls and fewer MOH officials receiving bonuses.

USAID along with other donors in Mali have a policy of paying out of project funds bonuses to top level local officials. In this project this

TABLE 3 - BAMAKO COSTS MAY 81-NOVEMBER 81

	<u>Pièces Autos et Réparations Véhicules</u>	<u>Carburant</u>	<u>Fournitures de Bureau</u>	<u>Indemnités</u>	<u>Autres</u>
Mai 81	273.660	23.250			
Juin 81	341.305	135.560	18.000	25.000	17.500 (rep. climatiseur + 659.215 = 676.71
Juillet 81	960.857	51.215	8.100		4,500 (rep. circuit el. + 673,975 = 678.47
Août 81	646.715	16.750		383.000	= 96.86
Septembre 81	1.219.864	3.599.300	7.600	208.000	= 190.00
Octobre 81	1.263.790	170.300		110.000	= 104.00
Novembre 81	255.995	69.160		30.000	1.006.82
TOTAL	4.962.186	4.065.535	33.700	756.000	2.754.70
Average	708,883	580,790	11.233	151.200	459.11

TABLE 4 - KORO COSTS MAY 81 TO SEPTEMBER 81

	Réparation Mobyette Voiture	Carburant	Fourniture Bureau	Formation	Indemnités	Community Development	Autres
May	123,840	11,000	26,000	-	70,000	73,500	45,160
June	124,800	102,000	14,985	-	472,000	-	110,611
July	30,000	241,800	21,300	-	650,000	-	137,510
August	127,800	88,050	16,500	-	25,000	-	34,790
September	63,600	103,700	36,500	-	56,000	-	60,120
TOTAL	470,040	546,550	115,285		1,273,000		388,195
Average	94,008	109,310	23,057		254,600		77,639

TABLE 5

Ratio of Bamako Expenses to Comparable Koro Expenses

	<u>Bamako</u>	<u>Koro</u>	<u>Ratio Bamako/Koro</u>
Car and mobylette repairs	208,883	94,008	7.54
Gasoline	580,790	109,310	5.31
Office Supplies	11,233	23,057	0.48
Indemnities	151,200	254,600	.59
Others	459,117	77,639	5.90

financial incentive has been very welcome by MOH who have not been paid for over 3 months.

In the Central Ministry four persons received bonuses, in Mopti three persons received bonuses until November when this was reduced to two and in Koro one. In considering whether the project can be replicable within the Malian financial environment, these bonuses (helpful as they may have been to the recipients) are a confounding variable whose effect cannot be quantified in relationship to the current level of project performance. Stated in other terms, the question is whether current project performance would have been achieved without these bonuses to senior officials and the generous supervision benefits currently being reduced. The answer appears to be no.

E. Replicability of Project

Adequate evidence now exists to suggest discarding the notion once and for all that this project in its current form or much reduced cost form could be duplicated at the national level. Since the Gray Report in which it was noted that workers had not been paid for a month, it is worth adding that some MOH officials have not been paid for three months. The financial stringency plan continues and this evaluator was informed that MOH cercle material budget allocations had again been reduced by 25%.

The grim financial reality which discourages consideration of national, regional or cercle budgets as sources for possible financing is illustrated by the following comparison between project and cercle budgets for the same period in Koro.

TABLE 6
1st Quarter 1981 Project Expenditure for Koro
(5 Project Arrondissements Only)

<u>Category</u>	<u>MF</u>
Transport (Mobylettes, Landrover, Fuel)	418,800
Office Supplies	70,100
Training	364,675
Bonuses (Per diem etc.)	379,000
Others	<u>248,765</u>
	1,481,340

The ratio of the project quarterly budget to the MOH Koro budget is approximately 13:1 (see Table 7) and on an annual basis a higher than expected ratio of 17.4:1 (since the MOH fourth quarter material expenditures are reportedly disallowed).

This comparison is admittedly between what can be considered the capital or establishment budget for the project and Koro's MOH non-drug materials recurrent budget. A comparison between the estimated project

"recurrent budget" of 95 MF + per capita and the MOH's equivalent of 2.4 per capita gives a ratio of 39.5 + a much less comfortable disparity.

TABLE 7

Koro 1st Quarter 1981 MOH Expenditures
(7 Arrondissements)

<u>Category</u>	<u>MF</u>
Transport, Gasoline, Landrover Repairs, Oil	61,500
Office Supplies	20,500
Sanitation Services	20,000
MCH Services	<u>11,000</u>
	113,000

The search for alternate financial sources has led to the consideration of additional taxes or levies on project beneficiaries. Gray again determined by an analysis based on scanty data that the partial per capita annual recurrent costs identified so far could be absorbed by the average family in the project area from its annual disposable income. Senior Malian officials consulted (they may not have been official spokesmen for GRM policy for such matters) have indicated their interest in exploiting ways of local financing outside of GRM budgets at all levels, thereby implying their support for a continuation of this unrealistic financial experiment.

This evaluator believes that this show of interest in exploring ways of user financing should be translated during the second phase of this project (which is recommended) into policy decisions by GRM which allow limited and well defined trials at implementing the user financing mechanisms now identified. If well planned, the political risks to the GRM should be limited but the action will provide needed justification for continuing support of a project which would be otherwise difficult to justify on the basis of the prevailing "establishment versus recurrent cost philosophy of development assistance. In the second phase of this project, therefore, an attempt should be made at implementing user charges either through the drug sales (the planned drug study may produce some enlightenment on how best to proceed with this) special levies or taxes as a means of trying to finance the recurrent costs of the project. There must also be a concurrent effort to reduce the recurrent costs identified so far and those yet to be identified.

F. Problems, Summary, Recommendations

The Mali Rural Health Project was an overly ambitious project that has been poorly implemented. However, better implementation of the project with all its original flaws would have produced better results than are currently available or will be available in June 1982. Contractor performance in providing technical guidance and implementation of the project has been far from satisfactory. Originally planned and budgeted for implementation in three demonstration cercles, the project is operational in only two cercles and a model village based primary health care system can hardly be said to exist in the best performing cercle. At best, the project will make good

recommendation only on some facets of a primary health care system (training, supervision, curriculum). The failure to make important technical and administrative decisions essential for ultimate project success at the right time has resulted in lost time that cannot be regained. Inadequate planning of project implementation stands out as the one deficiency that has hurt the project most.

Of all the technical advisors in the first team only one completed his full term of assignment. The rest resigned their positions or were fired over some dispute with one or another of the five decision centers identified in the project. Poor or misleading contractual arrangements between Harvard and its field technicians contributed significantly to the inability of the group to work as a team.

- Technicians arrive in Mali with contracts indicating they will be based in the regions instead of the cercles.
- The MOH is not informed about a contractual arrangement between a wife and husband team which apparently would have been otherwise acceptable. This arrangement predictably ends up being another issue to resolve.
- A case can be made as to whether the contractor was genuinely interested in achieving the objectives of the project when they fired the one contractor who laid the groundwork for all the successful work in Koro. The MOH maintains it wanted this technician retained.
- There was no overlapping between the first and second teams to ensure project continuity.

The drug procurement and distribution system leaves much to be desired. Problems range from inappropriate drug ordering to inappropriate storage and stock monitoring. The recent loss of drugs worth about 5,000 dollars is indicative of problems associated with the current system. At the village level VHW need more education on the management of the village pharmacies which are currently operating at a deficit. Better controls have to be instituted to reduce the misuse of funds.

More controls are needed in the use of gasoline and vehicles in Yelimane and Bamako. The current surplus of vehicles in Bamako risks increasing central level transportation recurrent costs even higher. The Bamako office continues to function as if it did not constitute part of the health system. No budgets or financial control systems exist for this office thus leading to the high estimated cost of operating the office and the high contingency expense of 24% of its budget.

Problems associated with calculating recurrent costs are directly the result of poor initial planning and organization. Procedures for recording expenses were never established so that two successive consultants in Koro present their data in different formats from each other and from the central level. The failure to identify the elements of the system also means some recurrent cost elements have been overlooked. Too many generous bonuses and allowances have been authorized in the project making it financially unrealistic in a country whose financial situation has been steadily deteriorating since the conception of the project.

Recommendations

Depending on the continued availability of funds the following recommendations are offered.

(1) Current project activities in Koro should continue until the completion of the cercle functional unit. It is recommended that fixed center needs in regard to activities that emphasize prevention (vaccination, MCH) should be defined. Additionally, revolving drug funds should be established in all dispensaries and their stock of drugs should emphasize essential prescription drugs in addition to the non prescription drugs currently received by VHW.

(2) The management controls to reduce the current high supervision recurrent cost should continue.

(3) The project office in Bamako should implement controls to reduce its recurrent costs to a level proportionate to its central planning role and to the fact that it is backstopping only two out of 46 potential cercles.

(4) Because of time loss associated in breaking in a new team, it is recommended that the current field advisors be retained under different contractual arrangements if the project is to be extended.

(5) Three positive developments in Yelimane lead this evaluator to recommend that the project be continued in this region in spite of the many disappointments encountered initially.

The current Bamako based medical advisor has established good working relationships with the Yelimane group. More importantly, the essential exercise of establishing workplans and budgets which are directly related is taking root in Yelimane.

Significant investments have been made in training the current MOH physician in management. It would be inappropriate to withdraw the support just when he is beginning to appreciate its significance.

The new rural wells project responds to a priority need in Yelimane. Village participation in this program is promising to be very high proving that people in Yelimane are not that negative. The wells project should be closely integrated with the VHW program and health committees in villages where these activities coincide. It will be of interest to see whether in a drought prone area, the VHW program performs better when it is integrated with a well.

Financial and management accounting controls should be steadily instituted in Yelimane.

No foreign advisors should be based in Yelimane but the current supervision pattern of occasional visits should continue.

(6) Because the project is financially top heavy and has a surplus of vehicles, thought should be given to providing support to an additional cercle. Such support should avoid the "model system" approach designed

into the current project and emphasize select vertical service elements that are consistent with AID development priorities. Should such a third circle be considered in the continuation of this project, it should be close to or on the way to Koro so as to simplify logistic problems. The current Mopti-based advisor might be better used for this purpose.

MAJOR DOCUMENTS CONSULTED AND CITED

- (1) USAID: Mali Rural Health Services Development Project Paper January 1977. Project No. 688-11-590-0208.
- (2) Gray, Clive, Sankare Nouhoum: Notes Towards and Economic Analysis of the Mali Rural Health Project (draft) June 1981
- (3) De Geyndt: Management Evaluation Report. Mid Project Evaluation.
- (4) Vedder J. N.: Financial Evaluation Report. Mid Project Evaluation.
- (5) Brinkerhoff D.W. - PSR: A History and Analysis of Nineteen Months of Operation. Harvard Institute for International Development. Education Development Center.
- (6) Project Grant Agreement Between the Republic of Mali and the United States of America.
- (7) Host Country Contract Between the Harvard University (HIID) and the Government of the Republic of Mali (Ministry of Health).
- (8) Doumbia Ousane PSR Evaluation des Pharmacies Villageoises du Cercle de Koro. Ministere de la Sante Publique - Octobre 1981.
- (9) Other Project Documents on File in Mali.

REPONSE A L'EVALUATION
FINANCIERE ET GESTIONNAIRE
DU PROJET SANTE RURALE
NOVEMBRE 1981

MINISTERE DE LA SANTE PUBLIQUE
ET DES AFFAIRES SOCIALES
KOULOUBA

PROJET SANTE RURALE

REPOSE A L'EVALUATION.
FINANCIERE ET GESTIONNAIRE
DU PROJET SANTE RURALE
NOVEMBRE 1981

Ce document est présenté afin de clarifier les positions prises et les déclarations faites dans le rapport d'Evaluation du Projet Santé Rurale (688-0208), présenté par Monsieur Felix N. AWANTANG en Novembre 1981.

Le rapport en question contient plusieurs erreurs qui doivent être signalées afin d'avoir une idée juste du PSR pour les évaluations finales.

Nous aborderons ces erreurs et ne discuterons pas les divergences en matière d'interprétation.

1. Page 4, paragraphe 2, Monsieur AWANTANG écrit que le projet n'a pu donner une définition opérationnelle du concept des Soins de Santé Primaires.

La position du PSR a toujours été que l'un des produits de ce projet pour le Mali, doit être des soins appropriés peu coûteux et que l'on peut reproduire. Un examen des rapports du PSR, des budgets et plans de travail, indique clairement qu'il y eu un effort concerté afin de définir un projet de soins de santé primaires pour le MALI.

2. Page 6, paragraphe 1, Monsieur AWANTANG écrit que des comptes bancaires du projet furent ouverts à Kayes et à Mopti...pour la transmission des fonds du projet. Le projet n'a jamais ouvert de compte bancaire à Mopti et Kayes. Un compte fut ouvert récemment à Mopti pour servir dans les procédures de comptabilité, mais il n'a jamais été utilisé.

La décision qui consiste à ne pas utiliser les procédures bancaires au niveau local, a été prise afin d'éviter les grands retards dans le transfert des fonds, retards qui porteraient un préjudice aux activités sur le terrain. Le système financier adopté maintenant par le projet est conforme à celui du GRM/MSP-AS. Le système consiste à donner les fonds aux cercles et aux régions en espèces et/ou sous forme de chèques certifiés payables à l'ordre des Directeurs Régionaux et/ou des Médecins-Chefs.

3. Page 6, paragraphe 2, Monsieur AWANTANG se demande s'il est nécessaire d'avoir un Conseiller pour le Projet à Mopti. Les raisons données pour le transfert d'un Conseiller de Koro à Mopti doivent être comprises afin d'évaluer les rôles de ce dernier. Le changement est intervenu pour les raisons suivantes :

- a) Définir les moyens d'intégrer les bureaux régionaux au projet.
- b) Evaluer les performances des équipes maliennes formées en l'absence du Conseiller expatrié.
- c) Faciliter les relations avec l'équipe basée à Bamako.

4. Plus loin, dans le même paragraphe, le coût du Conseiller est appelé coût périodique du projet. Il semble que ceci est un coût de l'Assistance Technique et non pas un coût périodique du projet.

5. Page 6, paragraphe 3, l'auteur écrit que les plans de travail dressés au niveau central et ceux dressés au niveau des cercles ne sont pas coordonnés.

Les plans de travail sont coordonnés et mis sur pied en collaboration avec les homologues maliens au niveau des cercles, des régions et au niveau national.

Les plans de travail dressés à BAMAKO mettent l'accent sur le rôle de l'Assistance Technique tout en s'intégrant aux plans de travail des cercles. Le Conseiller au niveau de Koro travaille sur les plans élaborés mutuellement en vue de satisfaire les besoins d'activités opérationnelles, de documentation et d'études.

Le rapport se contredit lui-même plus tard quant à la manière et le style d'élaborer les plans de travail à la page 8, paragraphes 1 et 2.

6. Le dernier paragraphe de la page 6, continuant page 7, mentionne cinq centres de décision.

Le projet fonctionne de façon quotidienne comme l'indiquent les budgets et plans de travail. En cas de divergences, les avis du personnel sur le terrain et ceux de l'assistance technique sont présentés au Directeur malien du Projet, qui, à son tour discute avec le représentant de l'AID et souvent avec d'autres représentants du Ministère.

Les décisions prises par le Directeur malien en collaboration avec l'AID sont celles que l'on applique.

7. Page 7, paragraphe 4, le rapport mentionne que EDC a ouvert et géré son propre compte bancaire à Bamako et que le Chef de l'équipe HARWARD a peu de contrôle sur les dépenses EDC. EDC n'a plus de compte bancaire à Bamako. Il n'y a eu aucune difficulté entre HARWARD et EDC à Boston ou à Bamako pour le contrôle des fonds.

8. Page 8, paragraphe 2, ligne 16, Monsieur AWANTANG écrit que le Conseiller Médical ne fut pas invité à se rendre à Yélimané et par conséquent Yélimané ne peut être considéré comme une zone de contrôle. Cela n'a aucune différences avec les visites du Conseiller Médical à Koro et d'autres membres de l'équipe à Bamako participent à l'élaboration des plans de travail avec l'équipe de Yélimané. Les visites effectuées par le Conseiller Médical sur demande ne constituent pas du tout un handicap dans la collecte des informations en comparant le modèle de Koro et celui de Yélimané.

9. Page 8, paragraphe 2, lignes 18 à 22, le rapport stipule que "la vraie raison de l'absence d'un Conseiller résident à Yélimané, est due au fait que Yélimané est simplement un endroit difficile pour les techniciens expatriés en général".

La décision de ne pas affecter un technicien expatrié à Yélimané a été prise conjointement par HARWARD, l'USAID et le Ministère de la Santé. L'on a tenu compte du coût, des problèmes de recrutement et aussi la décision de bâtir sur ce qui avait été déjà réalisé à Yélimané. L'équipe de Yélimané, composée uniquement de maliens, a continué à fonctionner suivant les directives du projet à l'absence d'un Médecin-Chef et d'un conseiller expatrié. L'intérêt local fut maintenu. Il a été reconnu que c'était l'occasion pour nous d'offrir au GRM et au Ministère de la Santé, un modèle différent de soins de santé rurale au coût réduit. L'on espérait présenter un projet plus adapté aux réalités du Mali avec l'arrivée et la formation d'un nouveau chef et en tenant compte de l'intérêt et le dévouement de l'équipe actuelle de Yélimané.

10. Les inexactitudes de la page 9, concernant l'analyse économique du PSR, peuvent être redressées en examinant les rapports du Projet et en prêtant une attention spéciale au rapport présenté et mis à jour par Clive Gray.

11. En se référant au premier paragraphe, page 10, les dépenses du bureau Central peuvent être facilement définies à partir du fonds de roulement qui tient une comptabilité pour les frais périodiques, côté GRM, et HARWARD qui enregistre les coûts de l'assistance technique. Les données peuvent en ce moment être combinées là où l'évaluateur pense qu'il y a chevauchement ou interprète les dépenses différemment.

12. Le point concernant l'absence de centralisation de toutes les données à Bamako (Pages 10 et 11) n'est pas juste. Un système de classement a été mis en place. Tous les rapports et toutes les données existent en plusieurs copies suivant le système établi par le bureau du projet, le bureau à Boston, le bureau de l'USAID à Bamako, et dans les dossiers du Directeur malien du PSR, ainsi que les bureaux au niveau régional et au niveau des cercles. Les responsables nationaux et d'autres ministères reçoivent les copies des documents quand ils sont concernés. Le système de classement à Bamako est ouvert à tous ceux qui le désirent après autorisation du Directeur malien.
13. Page 11, paragraphe 5, l'évaluateur écrit qu'il n'y a pas d'inventaire des types et des quantités de médicaments et de matériel en stock. Si l'évaluateur veut dire qu'il n'y a pas d'inventaire au bureau Central, il n'a pas raison. Un inventaire existe ; il est maintenu et mis à jour. Si l'évaluateur veut dire qu'il n'y a pas un inventaire à jour au niveau du magasin de stockage, il n'a pas raison. Il y a un inventaire de tout le matériel. Les chiffres se trouvent au niveau des sites du projet et les doubles sont dans les archives à Bamako.
14. Concernant la détérioration de 9 000 unités de collyre sulfacotomide, signalée à la page 11, paragraphe 5, le PSR a fait de son mieux pour s'intégrer au système de stockage existant. L'équipe actuelle du PSR a vu que le collyre était longtemps périmé à cause de la chaleur et de l'humidité et n'a pas voulu prendre de risque en utilisant pas le médicament. Le système de gestion des stocks n'avait aucun rapport avec ce problème.

15. La discussion concernant l'utilisation des véhicules, pages 15 et 16 dans le chapitre TRANSPORT, n'est pas juste dans les domaines suivants :

- a) Il y a deux Land Rovers à Koro, et non pas une comme le dit l'évaluateur. Une Land ne peut être réparée.
- b) Il y a une Land Rover à Mopti, attendant d'être réparée, bien qu'elle ne fut pas citée.
- c) Il y a huit véhicules à Bamako. L'on n'envisage pas d'utiliser plus de trois à la fois à Bamako. Trois, (une 3CV, une R-12, une 504) sont utilisées à Bamako comme l'évaluateur le signale. Cinq sont hors d'usage parmi lesquels deux nouvelles 404 bâchées, retenues par les règlements maliens et les exigences du service des mines. Ces véhicules seront répartis de la façon suivante :
 - Une bâchée pour Mopti pour être utilisée au niveau régional, l'autre à Bamako.
 - Les trois autres véhicules sont des Land Rovers retirées des sites quand leur état montrait que l'entretien régulier ne se faisait pas et/ou ne pouvait se faire.

Ces véhicules étaient ramenés à Bamako afin de réduire les coûts, d'assurer la réparation et l'entretien, de mettre en place un système de roulement des véhicules, et aussi améliorer les capacités d'entretien et de réparation au niveau de Bamako.

16. Page 15, paragraphe 5, l'existence des réfrigérateurs à pétrole au niveau des cercles et les dépenses faites pour l'achat de pétrole pour faire fonctionner ces réfrigérateurs n'est pas claire. Les budgets préparés aussi bien à Koro qu'à Yélimané présenteront cela comme un élément du budget. Les rapports financiers des cercles font état de la dépense. Ceci nous amène à nous poser la question de savoir combien de frigidaires et de congélateurs peuvent être absorbés par le système.
17. Page 17, paragraphe 2, l'information fournie est incomplète. Les requêtes transmises par RAC sont suivies de celles écrites et approuvées par les autorités au niveau du cercle et de la région.
18. Page 17, paragraphe 4, l'évaluateur écrit qu'il n'y a pas de renseignements sur qui prend ou dépose l'argent dans les comptes médicaments et mobylettes. Ceci n'est pas juste. Les premiers rapports de Dr Baudouy et Mr. Touré adressés à Koro et Yélimané contiennent cette information. Des rapports antérieurs indiquent la situation de l'inventaire comme vérifié plus tard par Mr. Touré.
19. Page 20, paragraphe 4, l'évaluateur en parlant de la nécessité d'un meilleur contrôle en vue de protéger les fonds... implique que des fonds ont été mal utilisés. Si la maison construite à Yélimané et les colis de médicaments perdus sont considérés comme exemples de mauvaises utilisation des fonds, ceux-ci ne constituent au total une perte inférieure à 0,1% des fonds du projet. Le problème au niveau du village est complexe et ne doit pas être considéré comme une mauvaise utilisation volontaire. L'utilisation de ces fonds est comprise par les chefs de village. Dans plusieurs cas, les 15% étaient utilisés pour des priorités fixées par les responsables villageois, ce qui parfaitement acceptable dans le contexte culturel.

20. Page 23, paragraphe 5, l'évaluateur aurait dû dire que le projet avait prévu de mener des activités dans trois cercles et travaille actuellement dans deux cercles.
21. Page 30, paragraphe 4, les 24% du budget pour les dépenses imprévus, jugés trop élevés par l'évaluateur, et imputables à une mauvaise planification, n'est pas juste. Le fonds de roulement initial a été mis en place de cette façon à cause de la nature expérimentale du projet suivant accord entre l'USAID et le GRM/MSP-AS.
22. Le coût énorme du transport (véhicules) n'est pas discuté en détail, page 30, paragraphe 4 ou ailleurs dans le document. Ceci est un aspect critique et peut être presque insoluble suivant nos constatations, même à la lumière des innovations que nous avons élaborées et sommes en voie d'appliquer. L'évaluateur a également omis de discuter des efforts entrepris par le PSR visant à coordonner le transport avec d'autres Ministères, agences et/ou entreprises du GRM, comme moyen de réduire les coûts grâce à la coopération.