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Pricing for Cost Recovery in Primary Health Care in Guinea

CCCD/Guinea
August - September, 1986

Resources for Child Health Project

REACH



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TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
I. INTRODUCTION.....	3
A. Background	
B. Objective	
C. Methodology	
D. Key Information Sources	
E. Recommended Follow-Up to this Study	
F. Organization of Report	
II. OPTIONS FOR SYSTEMS OF PAYMENT.....	6
A. General Considerations	
B. Specific Options	
1. Payment Per Visit	
2. Payment Per Episode	
3. Payment For Consultation and Medicine Separately	
4. Single Payment for Consultation and Medicine	
5. Pre-Payment for Services	
C. Complex or Simple Price Schedules	
1. Complex Prices	
2. Simple Pricing	
III. MODEL FOR ANALYSIS OF COST-RECOVERY OPTIONS.....	14
A. Description of the Model	
1. Fixed Recurrent Costs	
2. Variable Recurrent Costs	
3. Calculating Equilibria Prices and Quantities for Primary Health Care	
Demand Characteristics	
Policy Choice Variables	
4. Financial Flows Through the Health System	
B. Illustrative Results	
1. Assumptions	
2. Simulations	
3. Policy Implications	
IV. OTHER QUESTIONS.....	25
A. Cross Subsidization	
B. Bank Accounts	
C. Coordination of Implementation for Tests of Cost-Recovery Systems	
1. Curative Services	
2. Preventive Services	
3. Cost Recovery	
4. Special Steps to Prepare for the Test	
5. Test Area	
6. Interim Pricing of CCCD Services	
D. Possible Private Sector Involvement	
E. Recommendations	
1. Additional Health Financing Consultancies	
2. Evaluation of CCCD Project Progress in Cost Recovery	

TABLE OF CONTENTS (Cont.)

Appendices

A	Decisions to Make in Setting Prices for Curative Care.....	34
B	Fiche Recapitulative: Resultats de l'Etude de Financement des Zones de Sante au Zaire.....	35
C	Total Annual Visits to a HC in Continuous Operation.....	36
D	List of Documents Consulted.....	37
E	List of People Contacted.....	38
F	Scope of Work.....	39

LIST OF ACRONYMS

BCG	Tuberculosis Vaccine
CCCD	Combatting Childhood Communicable Diseases Project
CDP	Prefectoral Development Contribution (local head tax)
CIE	International Childrens' Center
DTCoq/DTP	Diphtheria, Tetanus, and Pertussis Vaccine
EPI	Expanded Program of Immunization
FG	Guinean Franc
GOG	Government of Guinea
HC	Health Center
MOH	Ministry of Health
OMS	World Health Organization
ORT	Oral Rehydration Therapy
PEV	Expanded Program on Immunization
PHC	Primary Health Care
SSP	Primary Health Care
UNICEF	United Nations Childrens' Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

This report provides the analytical foundation necessary to establish a cost recovery program for USAID's Combatting Childhood Communicable Diseases (CCCD) project in Guinea. The Government of Guinea (GOG) has expressed its commitment to establishing a fee-for-service system for primary health care, using CCCD as the preliminary vehicle for what could become a nation-wide health finance system. Towards that end, the GOG has endorsed the following financial principles which underlie the system's design:

- 1) The national government will pay the salaries of health personnel at all levels of administration (national, prefectural, and health center);
- 2) The beneficiary population will pay for all other operating costs of the system; and,
- 3) Receipts from beneficiary payments for curative care will pay the costs of preventive services.

Building from these principles, this report provides the analytical basis upon which the GOG can make decisions regarding the implementation of a cost recovery system. Rather than imposing a specific set of decisions on the GOG, this report seeks to facilitate the GOG decision-making process by clarifying the issues component to a cost recovery system for primary health care. The primary issues addressed are: the advantages and disadvantages of alternative payment structures, the analytics of determining prices for curative services, and other topics related to the implementation of the system and a preliminary test of the system.

The decisions surrounding the choice of a payment system are fundamental to establishing a fee-for-service system. This study spells out the basic options available to the GOG regarding payment structures: payment per episode vs. payment per visit, a single payment for both medicine and consultation vs. separate payments for medicine and/or consultation, pre-payment for services, and complex vs. simple price schedules.

The report presents the advantages and disadvantages of each payment system in terms of: 1) efficient resource allocation, 2) equitable distribution of the financial burden among the beneficiary population, 3) financial risk both to individuals and to the system, and 4) administrative burden. There is no unambiguously superior choice among these options. The report seeks merely to clarify the trade-offs imposed by these options, and to specify the relation of these choices to one another.

The report also applies a micro-computer health finance model to the task of determining the features of a sustainable pricing (and subsidy) system for primary care. The presentation of the model and some illustrative results explain the analytical issues involved in pricing for cost recovery. The basic components of this process are analyses of: 1) the fixed and variable costs of operating the system, 2) the nature of

demand for services, and 3) demographic characteristics of the population. In explaining the model's structure, the report explains the analysis underlying the determination of a pricing strategy designed both to recover costs and to maximize the proportion of the population covered by the primary health care system.

In the absence of empirical data regarding various demand parameters, the model's calculation of prices for curative care are necessarily illustrative. Yet, the model demonstrates the implications of alternative hypotheses regarding the demand for health care and the cost of providing that care. The model also permits analysis of the financial implications of a range of policy options that the GOG may choose to incorporate in its cost recovery system. These choices include: the use of a portion of local head tax revenue to support health centers, providing free care to those unable to pay for care, retaining a portion of health center receipts at the centers as a motivational payment for health center staff, subsidizing fixed costs at various administrative levels, and setting a price for curative care.

The fourth section of the report covers a set of topics related to the establishment of a cost recovery system within the context of the CCCD program. These topics include cross-subsidization among health centers, and the requirements for coordinating a test phase for the cost recovery system. Cross-subsidization among health centers may be a necessary consequence of demographic and other factors determining demand for services. If uniform prices are charged by all health centers, some will make losses while others generate surpluses. The system as a whole breaks even, yet the surplus generating health centers may need to cross-subsidize those making losses.

Another significant topic covered in the final section describes how the GOG and donors could coordinate the implementation of a test phase of the cost recovery system. The GOG, CCCD, UNICEF, and WHO are called upon to provide inputs and to coordinate their activities with one another. A fair test of the system will require that all the elements of fully-functioning preventive and curative services be in place in the test area.

Other topics treated in Section IV include: the physical management of funds within the system, possible private sector involvement in primary health care, and recommendations for follow-up activities. Two additional health-financing consultancies are recommended. An alternative to strict adherence to the project agreement provisions for evaluation of progress in cost recovery is proposed. The report also provides a sequential checklist of the decisions the GOG will need to make in order to establish a cost recovery system.

I. Introduction

A. Background

The Project Agreement for the Combatting Childhood Communicable Diseases (CCCD) project in Guinea was signed June 22, 1985. It calls for the Government of Guinea (GOG) to have "completed a study of a fee-for-service system that will assist in covering recurrent costs in areas covered by the project" within the first twelve months of implementation. The Project Agreement annex, which describes the project in detail, calls for the Africa Regional CCCD Project to supply technical assistance to the GOG for the above-mentioned study, which this report constitutes.

The present study provides the basis upon which the GOG can make decisions regarding the implementation of a fee-for-service system. The Project Agreement annex explains that the current project constitutes an "initial test phase" of CCCD in Guinea, which was designed "carefully considering the political and economic constraints of both USAID and the Government of Guinea." Progress made toward the institution of the fee-for-service system is one of the five major points to be jointly evaluated by CCCD, USAID, and the GOG after eighteen months of project operation.

The eighteen-month evaluation is to determine whether progress made warrants extension of the project. The ability of the GOG to finance an increasingly large share of the recurrent costs of the project through auto-financing is described as "a major factor to be evaluated." The evaluation is currently scheduled for January 1987. (N.B. With regard to the mid-term project evaluation, we recommend that the GOG not be held to the requirement that the cost recovery system be in place by the end of 18 months. We find this goal to be overly ambitious, particularly in view of the late delivery of inputs and continual difficulty in gaining access to promised funds encountered by CCCD/Guinea. Some set of intermediate benchmarks toward the establishment of a cost recovery system should be identified for the upcoming evaluation.)

The GOG has taken several steps necessary prior to the implementation of a fee-for-service, or other cost-recovery, system. It has endorsed the following financial principles which underlie the system's design:

- (1) the national government will pay the salaries of health personnel at all levels (national, prefectural, and health center);
- (2) the beneficiary population will pay for all other operating costs of the system; and
- (3) receipts from beneficiary payments for curative care will pay the costs of preventive activities.

Slightly at variance with point (3), the Expanded Program on Immunization (EPI) program began charging a 50 FG fee for child vaccination cards in Conakry in September 1986. The fee is insufficient to cover even variable costs of vaccinations, so the remaining costs must have other sources of funding.

Further, an MOH Arrete of May 29, 1986 set a schedule of fees to be charged at public and private health facilities throughout Guinea. As of

the time of this report this schedule has not yet been implemented. (See section II below for an analysis of what implications the fee schedule would have on the self-financing of the health system.)

The MOH's policy statement and development plan for the period 1987-1991 [Ministere de la Sante et des Affaires Sociales, "Politique Generale de la Sante et Plan de Developpement Sanitaire (1987-1991)," juillet 1986] underscores the GOG's intention to address the question of finding sustainable financing for operating costs. The policy statement calls for:

- (1) health actions to be compatible with domestic economic conditions;
- (2) participation of communities in paying operating costs within their means; and
- (3) the design, implementation, and evaluation of projects to include budgetary analyses of capital and operating costs and available funding sources for them.

B. Objective

This report aims to give the GOG the information needed to choose a (set of) cost recovery option(s) to test in the CCCD project area (Conakry, Kindia, and Telimele). The report examines information gathered in previous studies with regard to recurrent costs of primary health care (PHC) in Guinea; demonstrates the amounts necessary to charge users to assure self-financing under a variety of assumptions; discusses the advantages and disadvantages of various types of payment systems; and comments on some special topics, including cross subsidization among health centers, coordination of the test of the cost recovery system, and various considerations related to pricing for services.

C. Methodology

The methods used in this study are:

- (1) consulting existing documents and studies on the health system and economy of Guinea;
- (2) interviews with important actors in the health system, including personnel of the Ministries of Health and Social Affairs, Plan, Decentralization, and Finance; major donors, including USAID, UNICEF, and the World Bank; and health delivery personnel (see appendix A for a complete list of people contacted);
- (3) data gathering by visiting health facilities;
- (4) consulting documents and studies from other African countries which have some prior experience with cost-recovery systems; and
- (5) construction of a spreadsheet model of price determination, to be used to evaluate the implications of policy decisions on the level of prices needed to make the system self-financing.

D. Key Information Sources

Two studies, carried out in collaboration among the MOH, other Ministries, and donors, have treated the problem of recurrent costs and cost recovery. UNICEF organized the studies that resulted in the planning document for implementation of EPI and PHC services throughout the country

by 1990 [Ministere de la Sante et des Affaires Sociales/Ministere du Plan/UNICEF/OMS/CIE/USAID-CCCD. "Plan National PEV Integre aux SSP, 1986-1991," mai 1986] (we will call this document PEV/SSP). PEV/SSP estimates the non-salary recurrent cost of a PHC system, including EPI, oral rehydration therapy (ORT), pre natal care, malaria treatment, growth monitoring, and essential drugs. Costs are estimated at the health center, prefectural, and national levels. PEV/SSP also estimates the mix of curative cases at an average health center and necessary essential drugs to treat them.

The World Bank organized a series of workshops and seminars as a part of the process of planning the proposed Labe Health Project. The first draft project document [Banque Mondiale, "Projet Labe," 1986] (we will call it Projet Labe) estimates recurrent costs, exclusive of salaries, of putting a PHC system, similar to that envisioned by PEV/SSP, into operation at the health center, prefecture, and national levels. The Projet Labe estimates differ somewhat from those of PEV/SSP.

Two studies from other African countries provide important information about how fully-functioning cost-recovery systems work. A study of successful health financing systems in Zaire [Bitran, Munkatu, et al., "Financement des Zones de Sante au Zaire," Departement de la Sante Publique, SANRU, Departement du Plan, Sante Pour Tous, octobre 1986] and a report on a pilot PHC project in Benin [Alihonou, et al., "Le Financement Communautaire des Soins de Sante Primaires en Afrique de l'Ouest: des Lecons Tires d'une Experience du Projet de Developpement Sanitaire de Pahou, Republique Populaire du Benin, 27 mai 1986] provide concrete information about service utilization and pricing in currently operating systems.

Data collected on service utilization and curative case mix at the Madina Dispensary and Maternity and the Coronthie Mother and Child Center in Conakry provide a small sample of information about centers currently operating in Conakry.

A survey of household consumption carried out in Conakry in 1984 by the Ministry of Plan [Ministere du Plan, "Enquete Legere sur la Consommation des Menages de la Ville de Conakry," mars 1984] provides an idea of what Guineans (at least those living in the capital) are accustomed to paying for health care. (There is no data of this type for rural areas.) Numerous interviews also indicated that unofficial payments for medical consultations and access to drugs have been widely practiced in Guinea for some time.

E. Recommended Follow-Up to this Study

This report presents and analyzes a range of options available to the MOH in its efforts to establish a cost recovery system. We recommend that, following consideration of this report, the MOH consider requesting two additional health financing consultancies. The first would assist the MOH in choosing among the options outlined in this report by clarifying and evaluating proposed decisions. This consultancy should only occur during a period when key decision makers are present and ready to make decisions. The second consultancy would correspond to the preparation for and implementation of the test of cost recovery systems in the project area.

F. Organization of Report

The remainder of this report is organized into three sections. Section II describes the advantages and disadvantages of a range of potential payment systems; III describes and uses the model developed for the analysis of cost-recovery options; and section IV treats a variety of other questions regarding the testing and implementation of a cost-recovery system.

II. Options for Systems of Payment

A. General Considerations

Within the context of cost recovery a variety of options exist with regard to specific payment structures. These options include: (a) payment for each visit to the health center (including re-visits for a single episode of illness); (b) payment per episode of illness (with no additional charge for re-visits for the same episode of illness); (c) payments for consultation alone (with medicine either included in the consultation charge or purchased by patients separately); (d) payments for medicine alone (with consultation and other fixed costs covered by a margin charged on medicines); and, (e) pre-payment of a fixed amount for health coverage in case of illness. Figure 1 displays these various options in the form of a "decision tree." Tracing the tree's branches from left to right shows how these options relate to one another and illustrates the sequence of decisions necessary to choose among these options.

These various payment systems each carry certain advantages and disadvantages. They differ in the incentives they convey regarding use of health facilities, the ways in which they distribute the burden of fixed costs among the population, their effect on the financial risks facing beneficiaries, the financial risks to the system as a whole, and the administrative requirements necessary to operate the various systems of payments.

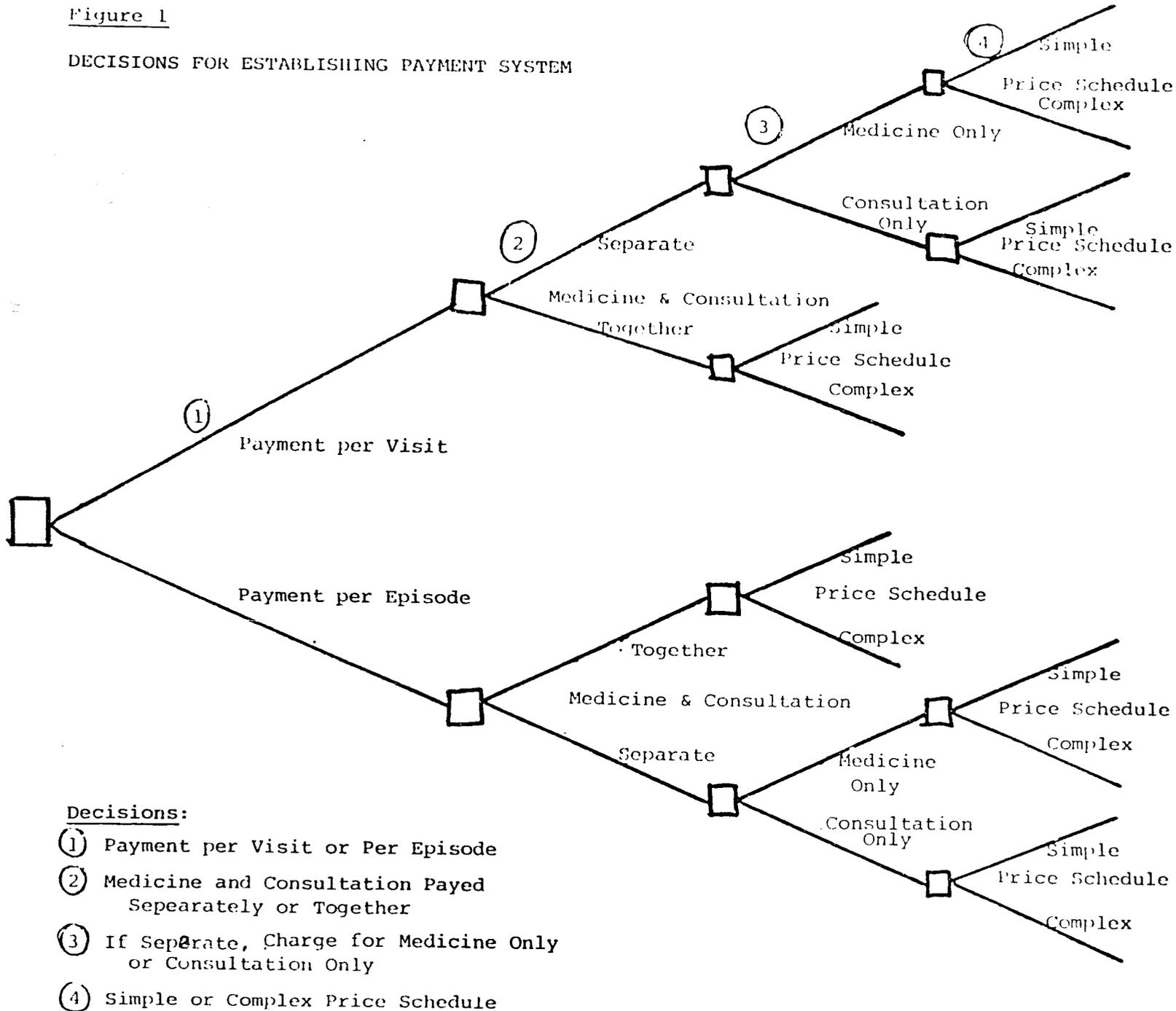
If some services are offered free or at less than full cost then there will be some tendency for them to be "overused," reducing the efficiency of the system and raising costs. Since the whole population benefits from the availability of health services, whether or not they have to use them, financing mechanisms that lead to the costs being more equally shared among the whole population are more "equitable." Similarly, systems that lower the probability of some individuals having to make large payments for a costly treatment would be considered more fair, since it is largely by chance that illness or accidents befall individuals.

The more that a system requires that each specific service is paid for by users, the lower is the financial risk to the system as a whole. When a system attempts to determine an average cost of a variety of services and sets prices according to the expected average cost, there is financial risk in guessing wrong about what mix of services will actually be consumed. If the consumed mix is more expensive than expected, the system will make a loss; if it is less expensive, a surplus will be made.

The more complicated a system is, the more difficult it is to administer and manage. More staff time has to be devoted to record keeping and the chances for mistakes and mishandling grow.

Figure 1

DECISIONS FOR ESTABLISHING PAYMENT SYSTEM



Decisions:

- ① Payment per Visit or Per Episode
- ② Medicine and Consultation Payed Separately or Together
- ③ If Separate, Charge for Medicine Only or Consultation Only
- ④ Simple or Complex Price Schedule

Figure 1

It is important to note that whichever of the variety of payment structures is chosen, the underlying costs of operating the health system remain essentially the same (though the administrative costs associated with different payment systems may vary slightly). The prices set for the system of payments chosen must be adequate to cover the same total expenditure for the system as a whole. The following section compares and contrasts alternative payment structures in these terms.

B. Specific Options

1. Payment Per Visit

One option is to charge patients a fee for each visit to a health center. MOH data from 1983 [presented in World Bank, "Guinea Population, Health and Nutrition Sector Review," 1985] show 2.7 re-visits per initial visit for an episode of illness. Data gathered at the Madina dispensary in Conakry showed 1.5 re-visits per initial visit in 1985. In Zaire [Bitran, Munkatu, et al., 1986] 2.3 to 3.3 re-visits were found. In a payment per visit system prices would be set by dividing the average cost per episode of illness (including or excluding the cost of medicines, see section IV.B.3. for discussion) by the expected total number of visits to find the amount to charge patients each time they entered the health center.

Among the various options, charging on a payment per visit basis would motivate the most efficient allocation of health center resources. Under such a system, patients would be required to pay for the marginal cost of their use of the system (less the cost of salaries), thus reducing the incentive to "overuse" health services through unnecessary re-visits. Patients would use the system only to the extent that they would be willing to pay.

A system of payments per visit would require that the process of receiving and recording payments, and physically managing the funds, be repeated each time a patient re-visits the center for a given episode of illness. This might be easier to manage than the alternative, however, since payment per episode with re-visits free of charge would require verification on each re-visit that a fee had been paid previously and that the visit did have to do with the same episode and not a new ailment.

There would be some financial risk to the system as a whole when payment per visit is first introduced and both the average number of episodes and average number of re-visits are not known. In setting prices an estimation would have to be made regarding these two numbers. An underestimate of either would lead to higher than necessary pricing and a surplus; an overestimate would mean setting prices lower than necessary and a loss. In either case, the risk would be limited primarily to the first period of the system's operation, since adjustments based on early experience could be made continuously in future periods.

None of the costs of health services under a payment per visit system would be borne by the population which has the good fortune not to need health care. Among those who do need care, those whose conditions require more visits would pay a greater share of costs. One benefit to individuals of paying per visit would be that each payment would be less than would be required of a single payment for the same total amount. This would even out the demands on individual cash flow.

2. Payment Per Episode

Another option is to charge for the full cost of an episode of illness at the first visit, after which there would be no additional charges for re-visits. Price per episode would be set by dividing total cost (including or excluding medicines, see III.B.3, below) by the expected number of expected curative cases.

Payment per episode could motivate a less efficient allocation of resources than payments per visit. Under a system of payment per episode, patients would not face the marginal cost of their use of health services: the incentive may exist to make more re-visits than necessary, since there would be no additional fee. Yet, this incentive to "overuse" the system would be mitigated to the extent that time and transportation costs comprise a significant portion of the cost of a visit.

Again, those not using health services would pay no part of the costs of having services available. In this system, though, all those who used services would pay the same share of costs per episode, so the burden would be more equally shared than under the payment per visit system.

The risk of individuals having to make large payments would be reduced by the payment per episode system, since no one would have to make repeated payments for a condition requiring multiple visits. The financial risk to the system as a whole under this system would arise from inaccurately forecasting the number of curative cases per health center and thereby setting prices either too high or too low. As stated above (section III.B.1) the health center staff would have to make fewer transactions under this system than under payment per visit, but verification that an episode had already been paid may cause greater complication.

3. Payment For Consultation and Medicine Separately

Under either the payment per visit or per episode methods medicines may be included or separated from the payments for consultations. This section first considers separate payments for medicines and consultations. Under this system, consultancy fees would be calculated by dividing fixed costs by the expected numbers of visits or episodes, as above (Sections III.B.1 and 2). Medicines would be priced at their cost (including delivery charges). With medicines priced at their costs patients would pay their full marginal costs, so there would be no tendency for overuse.

Since the cost of the particular medicine needed would be borne by the individual patient there would be no sharing of costs beyond the sharing under the system used for paying the consultancy fee. This could mean high payments for those individuals who would need expensive medicines. For example, those suffering from schistosomiasis would have to pay 1050 FG for treatment with praziquantel (plus the consultancy fee); whereas those suffering from skin infections [gale] would only have to pay 5 FG for benzoate of benzyl (plus the consultancy fee). [Source for medicine costs: PEV/SSP.]

The financial risk to the system would be minimal since every medicine would be paid for at its cost, assuring that sufficient funds would be available for resupply. (N. B. It would be prudent to price medicines

slightly higher than costs when inflation is expected, so that receipts will be sufficient to replace stocks at higher prices.) Administration of such a system at the health center level would be somewhat complicated, since a schedule of prices would have to be kept and applied for each medicine.

In any discussion of pricing for imported goods (i.e., medicines) it is important that local currency prices for traded commodities be determined using the shadow price of foreign exchange. At the time of this writing, the Guinean franc was overvalued by approximately 20 percent (and the trend was towards an increasing overvaluation). Thus, if imported medicines are priced at the official (rather than the shadow) exchange rate, they will be made artificially inexpensive to domestic consumers, introducing inefficiencies into health care pricing and contributing to an excess demand for foreign exchange.

4. Single Payment for Consultation and Medicine

A single charge to include both the cost of the consultation and medicine could be made. There are two ways that prices could be set under such a system. The first is to determine a fee based on total expected costs (for both medicine and consultation) divided by the expected number of curative consultations. The second method is to charge a mark-up margin proportional to the cost of medicines to cover non-medicine costs (this is the method suggested in PEV/SSP).

The first system could lead to overuse of some services and under-use of others, since all would be charged for at the same price. The second system could make treatments requiring expensive medicines relatively much more expensive than treatments requiring inexpensive medicines. This could tend to skew use of services toward the inexpensive treatments, if those were reasonably effective.

Costs would be more evenly shared among those using services by the first system and chances of having to make a large expenditure for health care would be low. The second system would make those needing expensive medicines bear a disproportionately high share of non-medicine costs and would increase the probability of a large expenditure. The PEV/SSP plan somewhat mitigates this risk by stipulating that some of the less expensive treatments be priced in such a way that they can subsidize the most expensive treatments.

The financial risks to the system would be high under both systems, since the calculation of the appropriate fee or margin to cover costs depends on a prior estimate of what medicines will be used. Under the first system (total costs divided by the expected number of curative cases) a prior estimate that a greater quantity of relatively costly medicines would be consumed than happens in reality would lead to a financial surplus. Under the second (where a margin is added to medicine costs) that same overestimate of the demand for expensive medicines would lead to a loss for the system.

Health center administration would be simplified by the first system, in which a single fixed charge would be charged to all patients regardless of treatment prescribed. The second system would be more complicated, since a schedule of different charges would have to be kept for each medicine.

5. Pre-Payment For Services

Pre-payment for services would create a system of health insurance. The expected medicine and non-medicine costs of covering a population would be divided by the number of people to be covered and each household would be assessed a pre-payment proportional to the number of people in it (different weighting could be given to children and adults if desired). All participants would then be entitled to all needed care at no additional charge. As figure 1 indicates, pre-payment systems could include full or partial payment. In the case of partial pre-payment, the same sequence of decisions regarding payment per visit or per episode, whether to charge for medicine and consultations separately or together, and so on, as in the other cases would pertain.

Overuse of services could be a real risk under this system, since there would be no financial cost to users of visits to the health center. This could be mitigated by modifying the system to require a modest charge per visit (e.g., a deductible or co-payment).

Costs of the availability of health services would be most equitably shared under this system, since they would be shared by all, including those lucky enough not to need to use the system. Similarly the risk of making a large payment for a complicated treatment could be eliminated. This payment system would create the financial risk to the system of having to estimate in advance the number and mix of illnesses to be treated in order to determine a pre-payment level sufficient to cover all costs.

One drawback of a pre-payment system would be the administrative necessity of keeping accurate records of who is covered, though issuing cards with pre-payment could substantially simplify that problem. Although fees might not have to be collected on a daily basis, accurate records of visits and medicines given would have to be kept to use in revision of the price of pre-payment in the next year (as is the case in any system).

C. Complex or Simple Price Schedules

If cost recovery is to take the form of fees for services, options for the structure of beneficiary payments range from "simple" to "complex." Simple pricing systems apply a single price to all, or groups, of services offered. A complex structure assigns different prices to treatment of each individual condition. Prices would vary as a function of the cost of the required medication and the intensity of care required for treatment.

Both of the systems proposed to date for pricing health services in Guinea (in the World Bank's Labe Project and in PEV/SSP) are of the complex type. Thus, for example, the schedule of prices for curative care in the Labe Project suggests a charge of 40 FG for treatment of mild malaria and 240 FG for severe malaria; 100 FG for treatment of moderate diarrhea and 820 FG to treat a severe case. These prices vary both across and within illnesses. A similar type of "complex" price schedule is suggested in the PEV/SSP document, in which treatments would be priced at roughly three times the cost of the medicine. The margin charged on medicine is intended to cover the fixed costs of operating the program -- recurrent costs and depreciation.

A third option is to consider some point along the continuum between charging either a single price for all treatments or different prices for each treatment. The GOG may find that the best solution lies in distinguishing groups of treatments that could be priced similarly, with different prices for different groups of treatments. A World Health Organization consultant team in Nigeria, for example, proposed the division of primary health care services into five groups with progressively increasing prices as a function of the average medicine cost for each treatment group.

For policy purposes, there are four points on which to compare simple and complex pricing: equity, efficiency, risk, and administration. The following section examines alternative price schedules from these four perspectives.

1. Complex Prices

Complex systems charge a different price for the treatment of different illnesses. One advantage of a price schedule that varies according to the actual cost of treating each illness is that each patient is required to pay for precisely the treatment they receive. There is no cross-subsidization between treatments, in which someone treated for an "inexpensive" illness pays more than the true cost of treating that illness in order to subsidize the treatment of someone else's more "expensive" illness (who might then pay less than the cost of that treatment).

Under a complex structure, there would be no incentive to "over use" services because they are under priced. Each patient would be required to pay the full marginal cost of the treatment they receive, thus ensuring efficient resource allocation on this level of the primary health care system.

2. Simple Pricing

An alternative approach would be a "simple" pricing structure -- a single flat price to be charged, regardless of the actual marginal cost of treatment. This single price could apply to all illnesses, groups of illnesses, or simply to different degrees of severity for a single illness.

A flat rate for treatment would imply a network of cross-subsidies between patients. A simple example of this would be one in which illness "X" actually costs 100 FG to treat and the actual cost for treatment of illness "Y" is 200 FG (assume there is one patient with each illness). Under a simple system, both patients would pay 15 FG. Thus, the victim of illness "X" subsidizes the treatment of illness "Y".

A simple pricing structure is more equitable by definition than a complex structure: each patient pays the same price, regardless of which treatment they receive. However, a simple structure does not convey to users the true economic cost of treating their particular condition. This could motivate people to consume a larger or smaller quantity of services than they would if they faced the true (higher or lower) cost of individual treatments. The result would be a less efficient allocation of resources in the primary health care system under a simple pricing structure.

"Equity" and "fairness" have different meanings in this context. Equity means simply that everyone pays the same amount, regardless of their illness. The notion of fairness is more subjective. Proponents of a complex pricing structure might argue that it is unfair for victims of an "inexpensive" illness to pay more than is necessary to cover their own care. Conversely, proponents of a simple structure might argue that it would be unfair for a mother who is unfortunate enough to have a complicated delivery to have to pay 2000 FG, while an ordinary delivery is charged only 400 FG.

One benefit of a flat price structure is that it eliminates some of the financial risk involved in becoming ill. No one knows in advance if they will contract an illness, what illness it will be (a costly "X" or an inexpensive "Y"), or how serious their case will be. Rather than facing the risk of a large medical expense, people might prefer to know in advance that their payment will be moderate (despite the possibility of this moderate charge exceeding the cost of treating an "inexpensive" illness under a complex structure).

Another benefit of a flat price schedule is that it simplifies financial management and accounting at the health center level. There would be no confusion regarding how much to charge for a given treatment, accounts would be easier for the staff to manage, and prices would be more comprehensible to the public.

A simple pricing structure does present the additional complication of having to determine in advance what the flat price should be. To ensure that a simple tariff will be self financing it is necessary to know in advance the mix of cases to be treated. Current epidemiological data can provide sufficient information for a first estimate for the determination of a price (which can be modified with later data).

The type of calculation necessary to determine a flat price can be illustrated by returning to the earlier example of illnesses X and Y. Recall that treatment of illness X costs 100 FG and treatment of illness Y costs 200 FG. Now assume that current data allows us to predict that 75 percent of patients will have illness X and 25 percent will have illness Y. By weighting the cost of treating each illness by the percentage of patients with each illness, one can determine a flat price that will cover the cost of treating both illnesses. In this example, a flat price of 125 FG would cover costs. However, if the actual case mix were 50 percent X and 50 percent Y, the price of 125 FG would fall short of costs and a loss averaging 25 FG per patient treated would be incurred.

A pricing system of intermediate complexity, where groups of illnesses were priced at a single rate would result in intermediate positions with respect to the four criteria in question. Several groups of uniformly priced treatments would be more efficient and less "equitable" than a system in which all treatments were performed for the same price. Similarly, groups of treatments would be less risky to individuals than completely differentiated prices, and somewhat easier to administer as well. (There may, however, be increased financial risk to the system as a whole in moving away from individually priced treatments.)

In short, a more complex pricing structure has the advantage of motivating a more efficient use of resources in the health sector than would a simple system and would be more certain of covering all costs. On the other hand, a simpler pricing structure is more equitable, spreads individual risks among beneficiaries, and would be easier to manage at the service-delivery level. There are fairness arguments that favor both sides.

III. Model for Analysis of Cost-Recovery Options

In this section a model is used to help analyze the financial implications of various options under consideration for the structuring of a pricing system for cost recovery. The model is set up on the Wang PC micro-computer at UNICEF/Conakry, where it is available for use by MOH, CCCD, UNICEF, and other donor staff. Here the model is first described, then used to make some illustrative calculations.

A. Description of the Model

The model disaggregates all of the fixed and variable recurrent costs envisioned for the primary health care system, and integrates them with a wide range of assumptions regarding the operating environment of the system and policy decisions on cost recovery. The model thus makes it possible to calculate the average price to charge for curative care in order to make the system self-financing, given any set of environmental and policy assumptions. Alternatively, it allows the calculation of the necessary subsidy to be allocated to assure financial viability of a system given any choice of prices for curative care. This section explains the model's structure.

Fixed costs are those expenses that do not change as a function of the number of patients served by the health system: a refrigerator costs the same amount to purchase and run whether it is nearly empty or full of vaccines. Variable costs, on the other hand, are only those expenses that change with the number of patients served: one hundred doses of vaccine cost twice as much as fifty doses. Fixed and variable costs, together, comprise total costs. The present model is built upon this distinction between fixed and variable costs for the total set of services provided at the health center.

1. Fixed Recurrent Costs

Two previous analyses of recurrent costs in Guinea's primary health care system have produced estimates of fixed costs: the Labe Project report by the World Bank, and the PEV/SSP report that emerged from an inter-ministerial committee organized by UNICEF. The present model includes the estimates of fixed recurrent costs (and depreciation) from both of these reports (see Table 1).

The Labe Project disaggregates these costs into the health center, prefectural, and national levels; PEV/SSP combines costs on the prefectural and national levels, separating out only the health center costs. The fixed costs calculated for the national and prefectural levels alone differ only slightly between the two studies; however, the Labe Project's estimates of health center recurrent costs are significantly higher than those shown in the PEV/SSP document (i.e., 431,000 FG versus 246,400 FG in PEV/SSP).

Table 1: RECURRENT EXPENDITURES: FIXED COSTS (FG)

Assumptions: Labo Project-IERD		PREV/ESP Plan		
FIXED COSTS	Recurrent Expenses	Amortisation	Recurrent Expenses	Amortisation
Health Center:		Health Center:		
Refrigerator (1)				Refrigerator (1)
purchase		31,500	1,400	31,500 purchase
fuel	90,000		91,000	fuel
Motorbike (1)				Motorbike (1)
purchase		87,500		87,500 purchase
mainten	84,000		84,000	maintenance
fuel	54,000		52,500	fuel
Freezers (2)		1,850		Freezers (2)
Sterilization kit		1,100		7,000 Sterilization kit
			17,500	
Daily expenses	60,000			Daily expenses
Cards	15,000			Cards
Needles & sery	28,000			Needles & seryrpes
Maint. Center	100,000			Maint. Center
Thermometer				350 Thermometer
Baby scale				2,800 Baby scale
Total at HC	431,000	121,950	246,400	129,150 Total at HC
Prefecture:		Prefecture:		
Automobiles (5)			2,002,112	693,064 Fridge & kerosene
purchase		5,250,000		419,840 Freezers (3)
mainten	5,250,000			Motorbikes (7)
fuel	4,050,000			612,376 purchase
Motorbikes (5)			588,104	maintenance
purchase		437,500	377,856	fuel
mainten	420,000			Toyotas:
fuel	270,000			23,399,952 dbie cabs (35)
Refrigerators (8)			28,350,024	diesel
purchase		252,000	29,399,952	maintenance
fuel	720,000			Corolla (1)
Matl. & furnit	200,000		450,016	gas
Typewriters		70,000	525,128	maintenance
Pref Tot/HC	194,821	107,313	188,089	94,834 Pref Tot/HC
National:		National:		
Delivery Trucks				Trucks:
purchase		2,100,000	3,150,112	3,500,068 Isuzu (2)
mainten	2,100,000		3,179,560	maintenance
fuel	3,168,000			diesel
Freezers		725,500	1,293,304	2,333,392 Reservoir (1)
				maint. & fuel
				419,840 Cold room
				349,976 Freezer room
Nat Tot/HC	16,061	8,614	23,242	20,132 Nat Tot/HC
Gr Total/HC	641,862	237,577	457,731	244,178 Gr Total/HC
Rent + Ament	875,739		701,507	Rent + Ament

Among fixed costs at the health center level, both reports include: purchase and fuel for one refrigerator; purchase, fuel, and maintenance of one motorcycle, two freezers, and a sterilization kit. With the exception of the last item, which is more expensive in the PEV/SSP report, these costs are nearly the same in both reports. However, the two reports differ as to the remaining items included among fixed costs at a health center. The Labe Project report includes staff per diems, paper cards (fiches), needles and syringes (though these could well be considered variable costs), and maintenance of the building. PEV/SSP excludes those items, but includes two items excluded by Project Labe -- a thermometer and a baby scale.

The result of these differences in equipment is that the Labe Project's recurrent costs are 431,000 FG, while PEV/SSP's amount to 246,400 FG. (Depreciation is roughly the same in the two reports.) This 185,000 FG difference in health center recurrent costs accounts for most of the difference in total health system fixed recurrent costs and depreciation calculated by the two reports.

The present model includes the option of using either set of fixed costs as the basis for calculating results. A conservative third option would be to combine the fixed costs of both reports so as to include all the items excluded by one report or the other.

2. Variable Recurrent Costs

Variable costs comprise the second major component of the model (see Table 2) The costs employed are those of the PEV/SSP report, disaggregated by vaccinations, growth monitoring, and pre-natal care. (The Labe Project report does not disaggregate variable costs.) The PEV/SSP report provides these prices in US dollars, since all of the variable inputs are for imported commodities. This is an important distinction, for it implies significant foreign exchange requirements in order to re-stock health centers with the necessary medicines. The inconvertibility of the Guinean Franc (FG) is a serious problem in this regard (though section III.C.1 outlines a partial solution to the inconvertibility problem).

As noted in the discussion of payment systems, it is essential both for planning and for accounting purposes that imported commodities be priced at the shadow foreign exchange rate, rather than at the official rate of exchange. To accommodate fluctuations in the foreign exchange rate, the variable cost portion of the model permits the selection of the appropriate exchange rate as an input to the model's calculations.

The calculation of variable costs requires several assumptions, each of which the model allows to vary. The primary assumption underlying the calculation of variable costs is the percentage of the population covered by preventive services. (The variable costs associated with curative care are included later in the model.) Any desired assumption regarding coverage of preventive services could be inserted into the model. Thirty percent is the first year CCCD goal; 50 percent the secondary year goal; and 80 percent is the goal for 1991 adopted in the PEV/SSP report. The ability to plug in different coverage levels for preventive care makes it possible to use the model for planning over time. This is particularly important in the present case, for which the first term of operation will be a "catch-up" phase, in which a greater rate of infant vaccination would be anticipated

to make up for the low levels of vaccination in the past. Following the catch-up phase, the system would revert to a lower level of continuous operations to maintain coverage levels.

Other assumptions explicitly incorporated in the model of variable costs include: birth rate per thousand, population per health center (these two determine the number of pregnant women and newborns per health zone) wastage of BCG vaccine, waste of DTP, Polio, tetanus, and measles vaccines through spoilage, number of doses of tetanus, DTP, and polio (which require three), and number of weeks of malaria prophylaxis of pregnant women. Data for each of these variables can be entered into the variable cost portion of the model, which can accommodate any assumptions regarding these numbers. The report's illustrative calculation of prices and quantities for primary health care are based on the assumptions displayed in Table 2 (which represent our best approximation of actual circumstances).

The model of variable costs for preventive care presents sub-totals for the three categories of preventive service. For vaccination of children, the model displays the total vaccination costs, revenues from the sale of vaccination cards (at the price of 50 FG each, which is currently being tested in Conakry and is another variable assumption), and the net cost of child vaccinations. These costs are shown per child, as well as in total for a given level of coverage. Costs of health booklets for growth monitoring are displayed in the same manner. Finally, pre-natal care costs (chloroquine and tetanus vaccinations) are also calculated in this manner. Each of these calculations accounts for spoilage of vaccines and number of doses. (It would be incorrect to assume that recommended dosages for preventive treatments equal actual dosages. For example, the records at several health centers indicated that pregnant women typically make their first pre-natal visit in their second trimester, and thus receive twenty weeks of malaria prophylaxis.) The last line of this part of the model presents the total net cost of preventive services.

It is also important to note that the proposed charges for preventive services do not cover the full cost of those services. Thus, as the percentage of the population covered by preventive care increases, the total net cost of providing those service increases, as well. The average price for curative care ultimately determined by the model is calculated to subsidize and thereby to cover the net deficits incurred by providing preventive care.

3. Calculating Equilibria Prices and Quantities for Primary Health Care

The model's underlying function is to incorporate data on fixed and variable costs into a model of demand for health care, and to calculate equilibria prices and quantities for services. Equilibrium is defined here as the price for curative care and the quantity of preventive and curative care demanded that generates just enough revenue to cover the health system's recurrent costs. To perform this calculation, the model requires two set of inputs in addition to those described above: demand characteristics and policy choice variables.

Table 2

VARIABLE COSTS OF PREVENTIVE SERVICES (FEV/SSP Hypothesis)				
=====				
Coverage =	50%			

Composition	Unit Price \$US	Unit Cost (a) \$US	Unit FG	Cost per Health Center FG

Vaccinations:				
Vaccins				
BCG	\$0.030	\$0.120	42	14,805
DTCoq	\$0.025	\$0.101	35	12,510
Polio	\$0.026	\$0.101	35	12,510
Measles	\$0.091	\$0.118	41	14,555
Vaccination Cards		\$0.036	13	4,442

Tot Infant Vac		\$0.477	167	53,862
Sale of Cards		\$0.143	50	17,625
Tot Net Vac		\$0.334	117	41,237
=====				
Growth Monitoring:				
Health Book		\$0.250	88	30,844
=====				
Pre-Natal Care:				
Chlor	\$0.005	\$0.257	90	31,683
VAT	\$0.017	\$0.065	23	8,160

Tot Pre-Nat		\$0.323	113	39,862
=====				
Total net preventive services				81,100
=====				

(a) includes wastage and sequence of vaccination (polio and DTCoq).

Assumptions:

- 47 — Birth Rate (per thousand)
- 15,000 — Pop. per Health Center
- 50% — Rate of wastage of BCG vaccine
- 30% — Rate of wastage of DTCoq, Polio, VAT, and Measles vaccines
- 3 — Doses of VAT, DTCoq, et Polio vaccines
- 20 — Weeks of chloroquine therapy for pregnant women (2 cp/week)
- 350 — Foreign Exchange Rate

Demand Characteristic

The model calculates the quantity of services demanded as a function of the average price of services and the per capita income of the beneficiary population (N.B. these are features not included in the model set up at UNICEF in Guinea, but will be incorporated in any follow-on consultancy). The required inputs thus include: (a) an initial quantity of services demanded; (b) an initial price of services demanded; (c) the price elasticity of demand for primary health care; and, (d) the income elasticity of demand for primary health care. This information defines the demand of the beneficiary population for primary health care, thus permitting the calculation of quantity demanded as a function of price and income. The total revenue generated by this demand equals the quantity of treatments demanded multiplied by the average price charged for those treatments.

Applying this model in Guinea requires educated guesses as to the specific values of many of these parameters. Prior to the system's operation, we have no real information about the quantity of services demanded at any price. The coming test phase for CCCD health centers will provide that information on a continuous basis, permitting both initial estimates and constant updating of those estimates as more data is compiled. The price and income elasticities are more problematic, since neither has been estimated for Guinea. One approach is to borrow information from other countries' health systems for which those parameters have been estimated. Based on such information, we would expect the price elasticity of demand to fall within the range of -0.10 to -0.35 [P. Feldstein reporting on studies in the United States and D. Dunlop on Ethiopia], and the income elasticity of demand to fall within the range of 0.9 to 1.3 [B. Massel and J. Heyer study in Kenya]. This is an appropriate approach, particularly since the model permits the testing of a range of values for these parameters. The extent to which the model's outputs (i.e., equilibria prices and quantities) are sensitive to changes in these parameters will help to prioritize future data gathering activities.

Target values for the quantity of service utilization follow from several demographic characteristics that the model incorporates: population per sub-prefecture, and the average number of illnesses per person per year seen by health centers in similar countries. Thus, in a sub-prefecture of 15,000 one might expect 0.6 curative cases per person per year -- or 9,000 cases -- as a potential case load. The actual case load, however, will be determined by the demand function described above. (See the appendices for figures on curative cases per person per year observed in Zaire.)

One final "environmental" characteristic incorporated into the model is the mix of illnesses in the population, which determines the average cost of medicine. The average medicine cost (which will be a weighted average of the cost of medicines for various ailments, weighted by the distribution of cases among those ailments) must figure into the system's costs, as well. Analysis of the PEV/SSP case data yields an average medicine cost of 47 FG per curative case; Projet Labe data indicate 85 FG; and data from Zaire indicate 119 FG in medicine cost per curative case.

Policy Choice Variable

The remaining inputs are policy choice variables, where the GOG must decide what kind of provisions it wants to include in its cost-recovery system. The model shows the effects of these choices on the financial status of the system and the equilibrium price and quantity for services. The sale price of vaccination cards determines the net cost of vaccination services (part of the variable cost of preventive service). The model also allows for the possibility of providing free care to indigents otherwise unable to attain care. That parameter is entered as a percentage of the population (which can be set to zero if no free care is to be provided). Another option under discussion is to allow health center staff to keep a percentage of receipts as a form of motivation payment. Current national decentralization discussions with respect to the prefectural head tax (CDP), envision the possibility of using a portion of it to subsidize health center operations. The model allows for various assumptions regarding the amount of the CDP allocated to sub-prefectures, the percentage allocated to supporting health centers, and the rate of collection of the tax (i.e., what percentage of the population actually pays the tax).

Each of these policy choices affects the flow of revenues into the system. From a policy perspective, it is important to understand that any decision that reduces the level of costs to be covered by health center receipts increases the level of public subsidy necessary to operate the system. The decision by the GOG to pay salaries for health system staff, for instance, represents a substantial subsidy. Providing free care to indigent persons would lower revenues without lowering costs, and thus require compensation elsewhere in the system. If the GOG is in some instance unwilling to subsidize where its policy choice requires a subsidy, the result will be to increase the price necessary to charge for curative care and to reduce the utilization of the system. Policy options that add to the system's revenue, such as devoting some portion of a local head tax to covering health center expenditures, will have the opposite effect.

4. Financial Flows Through the Health System

This final section of the model is structured to integrate the fixed and variable cost models and to apply the assumptions described above in calculating the surplus or loss at each administrative level of the health system. Receipts and expenses at each level of system are calculated, and the balance is passed along up the system to the next level. Table 3 illustrates this flow of funds through the health system.

At the health center level, receipts are the sum of payments for care, sale of medicine, and tax receipts from the local government. Total payments for care are calculated as the price for curative care multiplied by the number of cases per year, adjusted for the portion of those cases who pay for services. Receipts for medicines uses a similar formula, substituting the average sale price of medicine for the price of curative care. Tax receipts are calculated as the product of the population of the sub-prefecture the amount of the tax, the portion of the tax allocated to the health center, and the rate of tax collection.

Among expenses at the health center level, operating expenses and depreciation are drawn from the model's earlier calculation of fixed costs, and the expenditure on preventive services is drawn from the variable costs

Table 3

FLOW OF FUNDS THROUGH VARIOUS ADMINISTRATIVE LEVEL

Rural Health Center

Categories	Receipts	Expenses
Receipts		
pymts for cu	605,831	
medications	82,722	
vacc cards	17,625	
local tax co	150,000	
Operating costs		326,250
Personnel motivation		121,166
Purchase of prev. prod		63,475
Purchase of medicines		91,913
Purchase of vacc cards		4,442
Amortization		129,150
Total	856,179	736,396
Pmt to Pref. level	119,783	

Urban Health Center

Categories	Revenue	Expenditure
Receipts		
pmts cur care	3,634,989	
medications	330,888	
vacc cards	17,625	
local tax cont.	150,000	
Operating costs		326,250
Personnel motivation		726,998
Purchase of prev. prod		63,475
Purchase of medicines		330,888
Purchase of vacc cards		4,442
Amortization		129,150
Total	4,133,502	1,581,202
Pmt to Pref. level	2,552,300	

Perfectural Level

Categories	Receipts	Expenses
Receipts		
pmts at HC	3,254,521	
sale of med	913,564	
prev care HC	630,900	
vacc card HC	44,146	
Operating expenses		1,936,407
Purchase of med		913,564
Purchase of prev supplies		630,900
Purchase of vacc cards		44,146
Amortization		1,066,621
Total	4,843,130	4,591,638
Pmt to National Level	251,493	

National Level

Categories	Receipts	Expenses
Receipts		
pmts at Pr	8,299,262	
sale of med	30,147,610	
prev care Pr	20,819,693	
vacc card Pr	1,456,812	
Operating expenses		5,268,000
Purchase of med		30,147,610
Purchase of prev supplies		20,819,693
Purchase of vacc cards		1,456,812
Amortization		2,825,500
Total	60,723,378	50,517,616
Balance	205,762	

section of the model. Expenditure on motivation of personnel is the receipts from curative care multiplied by the percentage designated for that purpose. Expenditure on medicine is the number of curative cases multiplied by the average cost of medicine.

The financial balance for a health center is the difference between receipts and expenses. Surpluses may be passed up from each health center to support costs at the prefectural and national levels. There are an average of ten health centers in each prefecture. Thus, prefectural receipts average ten times the surplus at the health center level. Since it is assumed that full costs will be recovered for medicines, receipts from medicine sales balance with costs at both the health center and prefectural levels. At the prefecture receipts for preventive inputs balance with costs as the inputs are sold to health centers and purchased from the national level. Operating expenses and depreciation at the prefectural level are drawn from the earlier calculations of fixed costs. A surplus at the prefectural level may then be passed up as receipts to the national level.

Receipts at the national level consist of the surpluses at the prefectural level multiplied by thirty-three -- the number of prefectures. As at the prefectural level, the remaining receipts (sale of medicines and costs of preventive care) are exactly balanced off by their costs. Both medicine and preventive service costs and receipts at the national level are thirty-three times those costs at the prefectural level. Once again, operating expenses and depreciation are drawn directly from the fixed-cost portion of the model.

The difference between receipts and expenses at the national level represents the financial balance for the system as a whole. A perfectly self-financing system, in which services were neither under-priced nor over-priced, would show surpluses at the health-center and prefecture levels just great enough to leave a national balance of zero.

B. Illustrative Results of the Model

This section of the report presents illustrative results of the model. These results demonstrate the effects of variations in key parameters and decision variables on the pricing, subsidies, and level of coverage. Choices between higher prices (and lower coverage) and higher subsidies (and higher coverage) must be made to assure the financial soundness of the system. These results are illustrative, rather than definitive, because of the need to substitute ranges of values rather than specific numbers for several demand characteristics. The analysis shows the effect of variation in key demand characteristics, as well.

1. Assumptions

Our best guesses about the demand characteristics are the following: the corresponding quantity of curative services demanded to a price of 220 FG per episode is 2,250 curative episodes per year per health center and the price elasticity of demand is -0.2. The price chosen corresponds to the mean price charged per curative episode in seven health zones in Zaire. Those zones found that the population within the service area of the health zone averaged 0.6 curative episodes per person per year. In Guinea approximately one fourth of the 15,000 people within the average

sous-prefecture are estimated to be served by the health center. At 0.6 episodes per person, the health center would see 2,250 patients per year. The price elasticity used is about midway between the findings in other countries (see III.A.3.). In the simulations discussed below we allow the population served by the health center to vary to show the importance of our assumption. We also allow the number of curative episodes per person served to vary.

During our consultancy we were informed that the MOH was considering setting the price of a curative consultancy in its health centers at 250 FG per episode (medicines to be paid for at full cost separately). In the following simulations we show what the effect of setting such a price would have on the number of episodes of illness a health center would see each year and on the level of subsidy the GOG would have to provide to keep the system financially viable, under a variety of circumstances. We also simulate what price it would be necessary to charge to make the system financially viable without additional subsidy (break-even pricing), under the same variety of circumstances. The effects of the break-even prices on service use are also shown.

The choice of a price for curative consultations is the key decision variable. In the simulations presented here a series of other parameters and decision variables are held constant. These parameters and variables, the values assigned to them in the simulations, and the effect of an increase in each of them on the break-even price are shown below:

	simulation value	effect on break-even price
- proportion of pop receiving free care	5 %	increase
- proportion of receipts used as staff motivation	10 %	increase
- CDP allocated to sous-prefecture	100 FG	decrease
- sous-prefecture allocation of CDP to health centers	20 %	decrease
- collection rate of CDP	50 %	decrease
- average cost of medicine per curative case	85 FG	increase
- Labe Project estimate of fixed costs per health center	879,759 FG	increase

2. Simulations

The first simulation is shown in Table 4. There the population with access to curative care is allowed to vary from our best guess of 25 percent up to 50 percent, while preventive coverage is held constant at 50 percent. At 25 percent a price per curative episode of 250 FG would mean that the GOG would have to subsidize the system an additional 65.5 FG million. To avoid the need for a subsidy (to break even), a price of 360 FG would have to be charged per curative consultation. The higher break-even price would reduce use of services from 2,193 per year at a price of 250 FG to 2,039. At higher levels of access the price of 250 FG is adequate to cover all costs, thus the break-even price can be lower than 250 FG and service use higher. However, we believe it unlikely that effective access to curative services will be much higher than 25 percent.

Table 4: Prices and Subsidies with Variations in Access

Pop with Access to Curative Care (%)	Price = 250 FG		Break-even Pricing	
	Subsidy* (FG mil)	Curative Cases	Price (FG)	Curative Cases
25	-65.5	2,193	360	2,039
35	10.6	3,070	238	3,101
50	124.8	4,386	154	4,833

* minus sign indicates a subsidy is needed, no sign indicates that a surplus would be earned.

Assumptions:

- (1) preventive coverage = 50 %
- (2) population of sous-prefecture = 15,000
- (3) curative cases per person per year = 0.6
- (4) price elasticity of demand = -0.2
- (5) proportion of population receiving care at no charge = 5 %
- (6) proportion of receipts used as staff motivation = 10 %
- (7) CDP allocated to sous-prefecture = 100 FG
- (8) sous-prefecture allocation of CDP to health centers = 20 %
- (9) collection rate of CDP = 50 %
- (10) Labe Project estimate of fixed costs
- (11) average cost of medicine per curative case = 85 FG

Table 5: Prices and Subsidies with Variations in Preventive Coverage

Population Covered by Preventive Care (%)	Price = 250 FG		Break-even Pricing	
	Subsidy* (FG mil)	Curative Cases	Price (FG)	Curative Cases
30	-58.9	2,193	349	2,052
50	-65.5	2,193	360	2,039
80	-75.4	2,193	378	2,019

* minus sign indicates a subsidy is needed, no sign indicates that a surplus would be earned.

Assumptions:

- (1) curative coverage = 25 %
- (2) population of sous-prefecture = 15,000
- (3) curative cases per person per year = 0.6
- (4) price elasticity of demand = -0.2
- (5) proportion of population receiving care at no charge = 5 %
- (6) proportion of receipts used as staff motivation = 10 %
- (7) CDP allocated to sous-prefecture = 100 FG
- (8) sous-prefecture allocation of CDP to health centers = 20 %
- (9) collection rate of CDP = 50 %
- (10) Labe Project estimate of fixed costs
- (11) average cost of medicine per curative case = 85 FG

The simulation shown in Table 5 allows the population covered by preventive care to vary between 30 and 80 percent (the CCCD first year target and the UNICEF 1990 target), while curative coverage is held constant at 25 percent. The results show that at a price of 250 FG for curative care a growing subsidy would be needed as preventive coverage increases. The break-even price would only have to increase from 349 FG to 378 FG to accommodate the rise in preventive coverage from 30 to 80 percent. Similarly, this price increase would lower curative service use only slightly (from 2,052 to 2,019 cases per year).

In Table 6 the simulation allows the number of curative cases per person per year to vary while holding preventive coverage constant at 50 percent and curative coverage constant at 25 percent. The results show the great sensitivity of the system to this parameter. At 0.4 episodes per year a price of 250 FG per episode would require a large subsidy, but at 0.8 episodes a small surplus would be earned. Similarly, at 0.4 episodes the break-even price would have to be high (576 FG) and, consequently, service use low (1,237 cases); whereas at 0.8 episodes the price could be much lower (245 FG) and use of services much higher (2,936 cases). Although we consider episodes to be a parameter and not a decision variable, it is not absolutely given. The number of curative episodes coming to a health center is affected by the perceived quality of care offered there.

3. Policy Implications

The results of the simulations presented above have two sets of policy implications. The first has to do with the proposed price of 250 FG for an episode of curative care. The second set has to do with priorities for data collection.

Only under an optimistic set of assumptions does the price of 250 FG per curative episode result in self-financing of health care at the health center level. Thus it is likely that the GOG will have to choose between setting a higher price and allocating a greater subsidy if the system is to be financially sound.

The sensitivity of the simulation results to parameters like the population served by health centers, the number of curative cases per person per year, the level of preventive coverage, and the price elasticity of demand indicates the need for data collection on these items during a test of a cost-recovery system.

IV. Other Questions

A. Cross Subsidization

Cross subsidization within the health system will be necessary to maintain individual health center and prefecture solvency if the same prices are to be charged for services everywhere. Whatever system is chosen for recovery of costs, if a uniform system of prices is set so that the system as a whole just breaks even, then some individual health centers and, possibly, some prefectures will require additional subsidies, while others generate surpluses.

Table 6: Prices and Subsidies with Variations in Curative Cases per Person

Curative Cases per Person per Year	Price = 250 FG		Break-even Pricing	
	Subsidy* (FG mil)	Curative Cases	Price (FG)	Curative Cases
0.4	-122.3	1,462	576	1,237
0.5	-90.6	1,823	437	1,635
0.6	-65.5	2,193	349	2,052
0.7	-27.1	2,559	289	2,486
0.8	4.5	2,924	245	2,936

* minus sign indicates a subsidy is needed, no sign indicates that a surplus would be earned.

Assumptions:

- (1) curative coverage = 25 %
- (2) population of sous-prefecture = 15,000
- (3) curative cases per person per year = 0.6
- (4) price elasticity of demand = -0.2
- (5) proportion of population receiving care at no charge = 5 %
- (6) proportion of receipts used as staff motivation = 10 %
- (7) CDP allocated to sous-prefecture = 100 FG
- (8) sous-prefecture allocation of CDP to health centers = 20 %
- (9) collection rate of CDP = 50 %
- (10) Labe Project estimate of fixed costs
- (11) average cost of medicine per curative case = 85 FG
- (12) preventive coverage = 50 %

This will be so because individual health centers will vary in the key parameters that determine whether costs can be covered at a given level of price for services (i.e., the density of population surrounding the health center and that population's propensity to use health center services determine the financial standing of the health center, given any chosen pricing system). Thus, lower than average population density (and hence fewer people with access to services), lower than average utilization of curative services, or higher than average use of preventive services would tend to create deficits for that health center. (If the pricing system chosen does not provide for individual payment of full costs of drugs, then a health center which has a case mix requiring more expensive than average drugs will also make losses).

Health centers with relatively high population densities or curative utilization rates, or low preventive coverage would tend to make surpluses. Urban health centers as a group will tend to have a different cost structure and higher coverage rates than would rural centers. The urban centers also serve a relatively wealthy population. Table 3 illustrates the differences between urban and rural health centers in terms of their projected receipts and expenses. One additional feature of the finance model applied in this report is that it allows prices in urban health centers to be calculated as a multiple of the price in rural health centers. This implies some degree of cross-subsidization between urban and rural health centers.

A prefecture with several loss-making health centers could fall into deficit (and thus require additional subsidies), as a prefecture with several surplus health centers could show a surplus. In addition, prefectures with fewer than the average of ten health centers might not receive enough funds from them to pay all of its fixed costs.

In the absence of some system to address this situation, the deficit health centers and prefectures would eventually be unable to resupply themselves and would cease to offer the services desired. Two general possibilities exist to resolve this situation: (1) charge (different) prices at each HC reflecting local and prefectural conditions (higher prices where losses would otherwise be made and vice versa) or (2) provide for cross subsidization of loss-makers by those making surpluses. The existence of competition by alternative health care providers may limit the potential of the former.

The first option would be easier to administer at the national and prefectural levels, but would mean that people in some areas would pay more than others for the same services. The second option would require careful management and accounting at the national and prefectural levels. Accounting would have to be carefully monitored to be sure that all true health center surpluses were passed on to prefectures for redistribution and to be sure that deficit health centers were correctly stating their losses. Management skill would be required to motivate personnel to continue to improve services when surpluses are taken away and losses are covered by subsidies. A motivation payment to health center staff based on receipts would be one way of addressing this problem.

B. Bank Accounts

Establishment of bank accounts for health center (HC) funds would help provide security between the time they are collected and spent and would put unspent funds to good use. Each health center will receive receipts from payments for curative services on a more or less regular basis. Some health center expenditures will arise regularly (e.g. re-ordering of drugs and supplies, purchase of fuel), but others will be made only periodically (e.g. replacement of equipment), some only after several years have passed. It would be desirable for health center to have bank accounts where receipts could be deposited until they are needed. Security would be assured and interest could be earned, especially on long-term deposits, such as funds designated for replacement of capital equipment (depreciation). Bank deposits would also allow unspent funds to be recycled into the economy through bank lending. Such a system could work at the prefectoral level, as well.

C. Coordination of Implementation for Tests of Cost-Recovery Systems

A fair test for the proposed cost-recovery system will require that many inputs be put in place in a coordinated fashion. Inputs will have to come from the GOG, CCCD, UNICEF, and WHO, and, possibly, other organizations. The inputs must include commodities, training, organization, information, and decisions.

As described above (section I. A) the cost-recovery system will use receipts from payments for curative services to pay the costs of preventive services. Thus, for the test to be fair, all of the elements of fully-functioning curative and preventive services should be in place in the test area.

1. Curative Services

For curative services, elements in place principally means that the essential drugs program should be fully operational. UNICEF has the role of supplier of the initial stock of essential drugs; CCCD will supply initial stocks of chloroquine and ORS and training in their use; WHO is to provide technical advice; both UNICEF and WHO could provide foreign exchange for re-supply; and the GOG has the role of decision maker. Steps that remain to be taken before the system can be implemented in a test area include:

- (i) finalization of the essential drugs list;
- (ii) design and acceptance of a treatment protocol using essential drugs;
- (iii) development of supply, warehousing, transport, ordering, and accounting systems;
- (iv) provision for conversion of receipts in Guinean Francs (FG) into foreign exchange to pay for continuing imports [Both UNICEF and WHO have indicated that they could provide such an exchange facility. They and the GOG should move forward with formally establishing a system.]; and,

- (v) training of service-delivery personnel in diagnosis, prescription, handling, re-ordering, and accounting and supply-system personnel in ordering and accounting procedures.

In addition, WHO and UNICEF should estimate when an essential drugs system could be put into operation in the test area (see section IV.C.5 for a discussion of the test area). This will aid in planning the test and put UNICEF and CCCD on notice about when to order the initial stocks of drugs and supplies.

2. Preventive Services

It is primarily CCCD's responsibility to see that preventive services are in place in the test area. CCCD must see to it that:

- (i) cold-chain equipment is in place;
- (ii) supply systems for vaccines, needles, syringes, vaccination cards, fuel, and spare parts are set up (it would be wasteful to set up separate supply systems for essential drugs and vaccinations); and
- (iii) service-delivery personnel are trained in vaccination technique (including handling and storage of vaccines and cold-chain operation and maintenance), ordering procedures for re-supply, and accounting (again, separate accounting for essential drugs and vaccinations would be wasteful).
- (iv) CCCD should arrange for timely arrival of imported measles vaccine and vaccination supplies; UNICEF should arrange for the import of the other vaccines.

3 Cost Recovery

Several activities specific to cost-recovery should also take place prior to the test. These special steps include decisions that must be made by the GOG about what systems will be tested; an information/publicity activity to inform the populations of the test area about what will be happening there; provision for above-normal intensity of supervision of test health centers; and set up of a monitoring system to be able to carefully follow the tests.

Clearly, the most important activity is the choice by the GOG of cost-recovery systems to be tested. This report describes a range of options and provides a model with which to analyze the consequences of various policy choices (see section II). Further, a list of decisions to be made is shown in appendix A.

Once cost-recovery systems are chosen for testing, accounting procedures and methods need to be developed. Health-care delivery, supply, and supervisory personnel must be trained in the procedures and methods. GOG decisions will have to be made about who will handle and be responsible for funds, what sanctions will be levied for mishandling of funds, and what kind of security will be provided for accumulating receipts (e.g. bank accounts, strong boxes).

The role of community representatives in cost recovery must also be decided by the GOG. Then information, training, and organization of the bodies to represent the communities must be undertaken.

PEV/SSP suggests an active role for management committees at each health center in cost recovery. Similar concepts have had limited success in practice in Zaire (Basic Rural Health Project) nor Niger (Rural Health Improvement Project). Committee members in those countries are unwilling to devote enough time to carry out daily or weekly checks of accounts. We recommend that a low time-intensity system be developed, where the community representatives have oversight responsibility, but day-to-day cost-recovery activities are carried out by one of the health center staff. Health center staff should have plenty of time to be able to take on these extra duties, according to what we believe will be the number of people utilizing an average health center.

Target estimates of utilization are approximately 2250 curative cases, 5625 follow-ups, 1058 pre-natal visits, and 1763 child vaccination visits, for a total of 10,696. With a health center staff of three nurses, each would receive 13.5 visits per day. If half of the time of one nurse were necessary to oversee cost recovery, then each nurse would have to handle an average of 16.2 cases per day. These numbers are rough approximations of target utilization rates, and should be taken only to indicate rough orders of magnitude. Moreover, there are epidemiological reasons to expect seasonal fluctuations around this average daily case load. (See appendix C for the underlying calculations.)

4. Special Steps to Prepare for the Test

To prepare the populations of the test areas, some form of information campaign should be mounted. This campaign should would try to impart a message to local leaders along the following lines. Their communities have been selected as the first areas of Guinea where a new health system is to be tested. The system will provide adequate supplies of drugs and carry out preventive activities like vaccinations. The new system will be better than the old, but, in order to assure that the system can be sustained financially, a participation in the form of payment for services will be required from the beneficiary population. The message would go on to describe the particular payment system chosen and the level of fees.

Greater intensity of supervision of health centers should be planned for during the test period. This extra supervision would help to resolve problems and misunderstandings about how the cost-recovery system is to work. For example, medicine stock outs could be averted, so that use of services is not affected by a non-cost recovery variable. The supervisory visits could also gather regular financial data from the health centers to aid in monitoring the test. In addition, special funds should be set aside to subsidize health center operations in the event that service utilization is much lower than expected, or costs are much higher than expected. The subsidies would allow the health centers to continue to re-supply themselves through the end of the test.

The monitoring of the test should include data collection on all of the key variables determining financial viability (these may differ in importance depending on what systems are chosen for testing): (a) use of services (curative and preventive); (b) numbers of initial and follow-up

visits; (c) mix of medicines used; flows of receipts and expenditures; and, (d) proportion of people given care without charge (indigents). These data should be analyzed to find out whether the system tested is financially viable and, if not, how it can be modified to make it so. Observations by supervisors and surveys of service-delivery personnel could be used to identify logistical and administrative problems. Limited household surveys could be carried out to examine what effects the cost-recovery system has on use of health services by different groups in the area (effects of ethnicity, income or wealth, and distance to the health center, plus the degree to which the burden of payments falls disproportionately on some households might be analyzed). The radius from which users are drawn could be found by surveying users about their willingness to travel to health centers and the alternatives available to them through other types of providers of health care.

5. Test Area

The CCCD project area provides the opportunity to test cost-recovery for PHC in both urban (Conakry) and rural (Kindia and Telimele) settings. Because of the logistical difficulties of assuring essential drug and preventive-activity supplies and carrying out supervision, consideration should be given to carrying out the tests in only a part of the CCCD rural area. (Kindia would be the a priori choice, since access is easier there than in Telimele.)

In the rural area we believe it would be desirable to test two to three different systems in two to four health centers each. This would mean a maximum of twelve health centers would be involved. All of Conakry could be included in a test of two or three systems (one in each Prefecture). To reduce the complication of the tests, it probably would be better to carry out the tests first in Conakry, then later in the rural areas.

Since the populations of Kindia and Telimele have high incomes relative to other rural areas of Guinea, results of the tests will have to be interpreted accordingly. Use of services in other rural areas will likely be lower than in the test area for any given level of prices charged.

6. Interim Pricing of CCCD Services

It is likely that CCCD services will be offered in the test areas before a full cost-recovery system is put in place. Thus, a policy needs to be defined as to how to charge for these services in the interim.

Vaccinations: the 50 FG charge for a vaccination card should be instituted wherever vaccinations are offered. This amount does not cover even the variable costs of vaccination (see section II), but does help cover some costs and may increase the likelihood that mothers will bring their children for the full series of vaccinations, since paying for the service may reinforce its value in mothers' minds, as well. A danger of not charging the 50 FG fee during mass campaign days would be that mothers would then want to wait for the next free opportunity and would not bring their children to dispensaries on a day-to-day basis.

Oral Rehydration Salts (ORS): should be priced at least at the c.i.f. price Conakry (about 35 FG per packet). Consideration should be given to adding a charge to account for the handling and transport costs that eventually will be incurred in delivering ORS to the interior, so that ORS will be offered at the same price by health centers everywhere. A price of 50 FG per packet would cover these costs.

Chloroquine: should be priced at its c.i.f. price Conakry (2.25 FG per 100 mg tablet) plus a handling and transport charge. Since chloroquine is an inexpensive drug that is already widely recognized as effective in treating a common acute illness, it could be sold at 5-10 FG per 100 mg tablet.

D. Possible Private Sector Involvement

The possibility of private sector involvement in the marketing and delivery of pharmaceuticals warrants serious consideration. Present plans envision a large-scale GOG operated network distributing imported medicines from port to the health centers. Present plans thus require a large fleet of vehicles, the purchase and maintenance of which would become a GOG operation and public expense. Rather than undertaking all segments of pharmaceutical delivery the GOG could try to involve the private sector in the following ways.

For non-dangerous, long shelf-life pharmaceuticals, like ORS and chloroquine, the GOG should consider supplementing distribution through health centers by wholesaling supplies to the private sector. Private sellers would be free to purchase as much as they wished to be sold directly at market prices. Providing ample supplies of ORS and chloroquine through health centers at moderate prices would provide a brake on market prices. The private distribution network would be able to reach areas unserved by the health centers.

For dangerous drugs, products with short shelf lives, and items requiring delivery directly to health centers under specialized conditions (i.e., cold chain), the GOG could accept competitive bids from private transporters wanting to provide that service. Another option that might be pursued would be to contract with private pharmacies to deliver and store pharmaceuticals for the GOG system. Such contracts could be re-competed at regular intervals in order to maintain firms' incentive to provide delivery services as efficiently as possible.

Private sector involvement in this manner need not be an all or nothing proposition. A full range of public-private partnership arrangements could be explored. For example, the GOG could contract with private transporters to deliver ORS and chloroquine to regional depots, from which the GOG could then wholesale them. This would imply that the GOG absorbs the transport costs which otherwise would have contributed to higher prices for these products in remote areas.

The present state of Guinea's private sector marketing channels suggests that a fully private distribution system for pharmaceuticals could take some time to develop. However, such an operation could be phased in gradually; and, the need to establish some such delivery networks provides a unique opportunity for the GOG to contribute to the development of private marketing channels.

E. Recommendations

1. Additional Health Financing Consultancies

The MOH should consider requesting two additional health financing consultancies. The first would come after the MOH has had time to consider this report. At that time the MOH should be ready to begin to make the decisions listed in Appendix A. The consultant could help clarify, evaluate, and assure the internal consistency of the proposed decisions. This consultancy should only occur during a period when key decision makers are present and ready to make decisions. The second consultancy would correspond to the preparation for and implementation of the test of cost-recovery systems in the project area.

2. Evaluation of CCCD Project Progress in Cost Recovery

The requirements of the project agreement are too ambitious with respect to the GOG having in place a cost recovery system by the end of the first 18 months of the project. The delivery of project services has been slow to start. As discussed in the body of this report, even the test of a cost-recovery system requires that full services be delivered. Thus, compliance with the project agreement provisions for cost-recovery have necessarily been delayed. We recommend that the GOG not be held strictly to the project agreement, but that some intermediate benchmarks towards the achievement of a functioning cost-recovery system be established and agreed upon. A possible starting point would be the setting of a timetable for the decisions we list in Appendix A.

Appendix A

Decisions to Make in Setting Prices for Curative Care

The setting of prices for curative care lies at the heart of establishing a self-financing primary health care system. It is a complicated task, both analytically and politically. This appendix lists the individual decisions that are components of setting curative care prices.

- 1) Review the list of equipment and prices for fixed costs to ensure that estimates of fixed costs neither over- nor under-estimate program requirements.
- 2) Choose a sale price for vaccination cards and growth chart booklets.
- 3) Set realistic goals for preventive care coverage, taking into account the likelihood that ultimate goals for preventive coverage will take time to achieve. The assumption made about preventive coverage determines the expected deficit in preventive services to be subsidized by curative care.
- 4) Make realistic assessments of the wastage of each vaccine.
- 5) Decide whether to provide free care to indigents. If so, determine the percentage of the population to qualify.
- 6) Decide whether to pay motivational fees to health center staff. If so, determine the percentage of curative care receipts to devote to that purpose.
- 7) Determine the rate of the CDP tax, the portion going to health centers, and assess realistically the rate of collection of the tax.
- 8) Make realistic assessments of the environmental parameters describing curative coverage: population per sub-prefecture, percentage of the population with access to the center, and annual number of curative cases per person.
- 9) Decide whether the central government is to absorb costs at the prefectural and/or the national levels.
- 10) Choose a payment structure from among the options discussed in section IV of the report.

These decisions provide the foundation for determining the average price necessary to charge for curative care so that receipts will meet costs. The precise distribution of the charges across beneficiaries and visits will be a function of the payment structure selected.

Appendix B

FICHE RECAPITULATIVE
RESULTATS DE L'ETUDE DE FINANCEMENT CES ZONES DE SANTE AU ZAIRE*

Zone de Sante	consultants/ pop (a)	consultations consultant	couverture consult pre-nat	couver- ture PEV	recettes de fonct/ depenses de fonct (b)
Bokoro	0.50	3.30	57%	42%	75%
Bwamanda	0.58	2.25	96%	67%	87%
Dungu	0.65		53%	35%	
kaniama	0.35				
Kindu	0.49				
Sona Bata	1.37				
Kikimi (b)	0.49				

N.B.

1. Le nombre de consultants par population a Sona Bata est le plus eleve du pays.
2. En toute zone le consultant est payer les consultations sont gratuites. Les medicaments sont payes a part.

Prix de consultant:	FG
(1) Minimum	127
(2) Maximum	318
(3) Moyen	223
(4) Prix moyen des medicaments:	119
(5)=(3+4) Prix moyen par episode:	342

Taux de change: 6.4 FG = 1.0 Zaire

-
- (a) population dans l'aire de sante, environ un rayon de 5 km.
 (b) zone semi-urbaine.
 (c) jusqu'au niveau de la zone, equivalent de la Prefecture en Guinea.

* Bitran, Munkatu, et. al., "Financement des Zones de Sante au Zaire," Departement de la Sante Publique, Departement du Plan, FONAMES, Projet Sante pour Tous, Projet SANRU, Projet Ressources pour la Sante Infantile (REACH), octobre 1986.

Appendix C

Total Annual Visits to a HC in Continuous Operation

Assumptions:

- 15,000 = population of an average sous-prefecture
- 25% = population with access to the HC
- 0.6 = curative cases/accessible person/year
- 2.5 = follow-ups to initial curative visits
- 47 = pregnancies and births per thousand population
- 50% = coverage of total pop. for pre-natal care and vaccinations
- 3 = visits per pregnant woman for pre-natal care
- 5 = visits per child for vaccinations
- 3 = nurses per HC
- 48 = weeks of work/nurse/year
- 5.5 = days of work/nurse/week

Curative Care:

- 2,250 = initial visits
- 5,625 = follow-up visits

Pre-natal Care:

- 1,058 = total pre-natal visits

Vaccinations:

- 1,763 = total vaccination visits

Total Visits: 10,696

Visits/Nurse/Day: 13.5

Appendix D

List of Documents Consulted

1. "Enquete centree sur la consommation des menages de la ville de Conakry," Ministere du Plan et de la Cooperation Internationale, Novembre 1984.
2. "Community Based Survey of Practices Concerning Vaccination and Treatment of Diarrhea and Fever in Children in Conakry, Guinea," Ministry of Health and Social Affairs, Centers for Disease Control, et OCCGE/Burkina Faso, June 1986.
3. "Avant-Projet Integre de Developpement Rural, Prefecture, Labe," Gruppo Volontariato Civile, Organismo di Cooperazione e Documentazione Internazionale, 1986.
4. "Reprogrammation du PEV et des SSP," Ministry of Health and Social Affairs, May 1986.
5. "Guinea Population, Health, and Nutrition Sector Review," World Bank, February 1985.
6. "Pre-etude Projet Sante Labe," World Bank, 1985.
7. "Deuxieme Etude Projet Sante Labe, World Bank, 1986.
8. "Project Agreement CCCD Guinea," 1985.
9. "Issues Regarding the Proposed CCCD Project in Guinea," R. Waldman and M. Mäkinen, June 1984.
10. "Le Financement Communautaire des Soins de Sante Primaires en Afrique de l'Ouest: des Lecons Tires d'une Experience du Projet de Developpement Sanitaire de Pahou, Republique Populaire du Benin," E. Alihonou, et al., mai 1986.
11. "Politique Generale de la Sante et Plan de Developpement Sanitaire (1987-1991)," Ministere de la Sante et des Affaires Sociales, juillet 1986.

Appendix E

List of People Contacted

Ministry of Health and Social Affairs

Dr. Yaya Diallo, Director General, Preventive Services
Dr. Mamady Conde, National Director, Mother and Child Care
Dr. Alpha Telly Diallo, Director, Health Statistics and Planning Unit
Dr. Boubacar Dieng, Director, Expanded Program of Immunization
Dr. Moussa Keita, Director, Malaria Service
Dr. Kandjoura Drame, Director, Diarrheal Disease Service

Ministry of Plan

Mr. Bano, Planning for the Social Sector
Mr. Keita, Planning for the Social Sector
Mr. Oumar Diallo, Prices and Cost of Living Unit

Ministry of Decentralization

Mr. Ismael Camara

PMI Coronthie

Mr. Aboubacar Sidiqi Conte, Statistician

SMI Madina

Dr. Deinabou Diallo, Director
Mr. Diallo Hassimian, ATS

WHO

Dr. Celestin Gantin, Representative, Conakry
Ms. Susan D. Foster, Geneva

World Bank

Ms. Irene Hopwood, Representative Responsible for Health and Agriculture
Mr. Bachrach, Project Consultant
Mr. Mamadou Dioulde Diallo, Manager, Rural Health Project

UNICEF

Mr. Ian Hopwood, Director
Ms. Maria Calivas, Program Administrator
Mr. Rudolph Knippenberg, Microplanner, Active Channeler

Reach

Mr. Harry Godfrey, Immunization Consultant

Appendix F

Scope of Work for First Health Financing Consultancy in Guinea

- 1) Calculate the recurrent costs (in local currency and foreign exchange) of the CCCD interventions (ORT, malaria, and immunizations) and other PHC services. These costs will be used to determine the level of resources to be raised to make the CCCD and other PHC activities sustainable.
- 2) Determine the level of medium and long-term support for recurrent costs that can be counted on from: (1) donors for foreign exchange costs (e.g., UNICEF supply of vaccines) and (2) MOH for local currency and foreign exchange costs (e.g., salary and fuel costs.)
- 3) Review, with MOH and (Ministry of Finance if appropriate), the advantages and limitations of feasible options for community participation in financing of CCCD and PHC services in Guinea. These options may include fees (of various levels) for services, capitation payments (e.g., pre-school consultation cards), and community contributions (e.g., collections of voluntary contributions from households). This review will include discussion of how to assure access to services by groups in the population unable to pay for services. Experiences in Guinea with community financing (if any) will be reviewed.
- 4) Review the advantages and limitations of alternative systems for the delivery of CCCD and PHC services. This review will include public and private sector options.
- 5) The reviews of options for community financing and alternative delivery systems will be used to plan pilot testing of initiatives in these areas. A scope of work for a follow-up consultancy to launch the pilot tests will be drafted, including a timetable.
- 6) A report will be drafted in-country showing the results of the cost analyses, the sources of financial support, and reviews of options for financing and delivery systems.