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# PROCEEDINGS

FROM THE REACH WORKSHOP  
IN HEALTH CARE FINANCING

in collaboration with the  
ACSI-CCCD Project

Yamoussoukro, Cote d'Ivoire

## **Resources for Child Health Project**

March 24-26, 1988

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**REACH**



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WORKSHOP IN HEALTH CARE FINANCING**

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## **GLOSSARY OF TERMS**

- ACSI - Africa Child Survival Initiative**
- CCCD - Combatting Childhood Communicable Diseases (Project)**
- ORS - Oral Rehydration Salts**
- PHC - Primary Health Care**
- PVO - Private Voluntary Organization**
- 
- TROIS RIVIERES = Three Rivers**

## **EXECUTIVE SUMMARY**

Between March 24-26, 1988, approximately 150 participants from 31 African countries, France, Switzerland, the United Kingdom, and the United States assembled at the Hotel President in Yamoussoukro, Côte d'Ivoire, for a highly participatory look at a wide range of health care financing issues. This REACH workshop constituted the first three days of the ACSI-CCCD Project Consultative Meeting.

The goals of the REACH Workshop were a) to explore the many conflicting and complex issues that enter into health care financing; b) to recognize problems of health care financing and approach them responsibly; c) to collaborate with colleagues in identifying creative approaches to health care financing; and, d) to assess the feasibility of these approaches.

To accomplish these goals, the participants were divided into six working groups (three conducted in French and three in English). Through a series of four modules, each group dealt with 1) assessing and diagnosing a health care financing problem; 2) determining the costs of a primary health care program; 3) identifying strengths and weaknesses of alternative financing strategies; and 4) outlining steps for implementing an alternative strategy.

Each of the four REACH modules was designed to lead the participants through a decision-making exercise. The modules segregated the types of information that would be needed in order to start implementing a financing

strategy. Therefore, the exercise represented a problem-solving tool for analyzing alternatives and deciding upon a strategy according to country-specific situations.

The ACSI-Combating Childhood Communicable Diseases (CCCD) Project is an A.I.D.-funded project in Africa designed to strengthen the delivery of basic child survival preventive services (immunizations, ORS, and malaria prophylaxis and treatment). One objective of the CCCD Project is financial self-sufficiency of governments to provide these services once donor funding is withdrawn. Therefore, it is incumbent upon the project to devise and implement alternative financing strategies to sustain project activities in the future.

The Resources for Child Health (REACH) Project has provided technical assistance to the CCCD Project in the area of health care financing in order to strengthen the African capability in financing health services. For this reason, CCCD and REACH joined together to host the conference in Côte d'Ivoire, focusing on the range of technical, administrative, and financial issues surrounding the CCCD Project.

Preventive primary health care strategies, such as immunization and diarrheal disease control programs, represent cost-effective technologies as compared to inpatient hospital care. The belief that primary health care (PHC) is a less costly approach to improving the survival of children has led to the creation of many health programs and governmental commitment to "Health for All" in Africa and elsewhere.

The concerns of planners of PHC programs have focused primarily on organizational, administrative, and technological issues, such as whether ORS or a home-based solution should be used to treat dehydration resulting from diarrhea. For the most part, the costs of delivering PHC technologies to the population in need, including adequate outreach and quality services, have received little attention. In recent years, there has been an accumulation of evidence that the provision of PHC technologies, not necessarily the technologies themselves, is more costly to national governments than had been anticipated originally.

Financing activities are expected to enhance the ability to sustain health improvements by making more financial resources available to support priority health activities, such as child survival programs. This reflects the expectation that with the introduction of a new financing strategy or changes from one strategy to another, the pool of resources now devoted to health in a country will increase. These additional resources can then be used by governments to support and sustain health services.

In Africa, governmental commitments to PHC programs have continued despite worsening economic conditions and growing population size. However, the ability of public health facilities to provide services during the last decade has been affected seriously: there have been shortages of basic pharmaceuticals, fuel, vehicles, equipment, and trained health personnel.

Given the decreasing supply of resources for PHC programs and increasing need due to population growth in Africa, additional health financing options must be developed and evaluated. Several African countries have decentralized financial and administrative responsibilities

to local areas, privatized national hospitals, and established revolving drug funds and fee-for-service systems for basic health care in order to augment the pool of resources available for PHC.

Significant discussion focused on the ability of user fee systems to generate sufficient resources to cover the operating costs of CCCD Project activities, such as vaccinations, control of diarrheal disease, and malaria treatment and prophylaxis. In addition, much concern was focused on how to influence policy makers within countries to adopt alternative financing strategies as a means of improving the sustainability and quality of preventive health programs. Other discussion topics included how to improve the management capacity of the public health sector, the role of revolving drug funds in revenue generation, and the role of international donors in program sustainability and financing.

Most of the participants accepted user fees in principle. Discussion arose about the type of payment scheme to be selected and how these systems should be implemented. However, many participants felt that the inability of the population to pay for services and the importance of community solidarity were sufficient counter-arguments to the widespread promulgation of fee schemes based on individual payment.

## I. INTRODUCTION

### A. HEALTH CARE FINANCING

Primary health care strategies, such as immunization and diarrheal disease control programs, represent cost-effective technologies as compared to hospital care. The belief that primary health care (PHC) is a less costly approach to improving the survival of children has led to the creation of many health programs and governmental commitment to "Health for All" in Africa and elsewhere.

The concerns of planners of PHC programs have focused primarily on organizational, administrative, and technological issues, such as whether ORS or a home-based solution should be used for the treatment of dehydration due to diarrhea. For the most part, the costs of delivering PHC technologies to the population in need, including adequate outreach and quality services, have received little attention. In recent years, there has been an accumulation of evidence that the delivery of PHC services, not necessarily the technologies themselves, is more costly to national governments than had been originally anticipated.

Financing activities are expected to enhance the ability to sustain health improvements by making more financial resources available to support priority health activities, such as child survival programs. This reflects the expectation that with the introduction of a new financing strategy or changes from one strategy to another, the pool of resources now devoted to health in a country will increase. These additional resources can then be used by governments to support and sustain health services.

The term "financing strategy" is broad and refers to four major types of mechanisms through which more resources can be made available to health care programs. A financing strategy can:

1. move more resources from national government budgets into the health sector and away from other sectors, such as defense or commercial affairs. This strategy emphasizes the reallocation of public funds between sectors.
2. move more resources from curative, hospital-based care into primary health care. This strategy is directed at the reallocation of health funds within the health sector.
3. focus on finding ways to increase the total amount of resources available to health other than through reallocation from the public budget or from within the health budget. This type of strategy is revenue-generating.
4. focus on finding ways to use resources in the health sector more efficiently and effectively in order to be able to treat more children with the same amount of resources.

The second and fourth types of strategies are internal to the health sector, while the first and third strategies involve other sectors as well. In addition, the first and second strategies involve only reallocation of resources, while the last two strategies require sophisticated approaches to changing the way in which health services are delivered and managed to augment the total pool of resources available to health care.

Each of these four strategies has the dual goals of improving a country's ability to pay for better health care and sustaining health services. However, each strategy aims at a distinct type of change within the society and the health sector. The REACH Workshop was designed to elaborate upon these relationships. This document presents a summary of the findings of the REACH workshop which was held as part of the ACSI-CCCD Consultative meeting in Yamoussoukro, Côte d'Ivoire.

## B. Health Care Financing in Africa

In Africa, governmental commitments to PHC programs have continued despite worsening economic conditions and growing population size. However, the ability of public health facilities to provide services during the last decade has been affected seriously: there have been shortages of basic pharmaceuticals, fuel, vehicles, equipment, and trained health personnel.

In 1985, according to the World Bank, the per capita income of several African countries was less than \$400 (World Bank, 1986, World Development Report). Macroeconomic performance had not improved the low income levels since the late 1970s for several reasons: 1) poor world economic performance which has reduced worldwide demand for exports from African countries; 2) inadequate domestic economic policies; and 3) deteriorating trade balances (D. Dunlop and K. Evlo, 1988). These economic conditions have affected the health sector as well, with some African countries only able to allocate 2-3% of the government budget to health. As a result, the private sector has played a role in financing health care activities in these countries (see Table 1).

Table 1

Private Health Expenditures As a Percent of Total Health Expenditures in Selected Countries in Africa 1/

COUNTRY	DATE	PERCENTAGE	COMMENTS
Botswana	1978	48	Individual payments account for 21 percent.
Burkina Faso	1982	19	
Ethiopia 2/	1986	63	
Ghana	1970	73	
Lesotho	FY 1980	12	Does not include expenditures on traditional practitioners and private non-PVO services.
Malawi	FY 1981	29	
Mali	1981	29	
Rwanda 3/	1984	12	Figure only includes individual and insurance payments for non-traditional services.
Senegal	1981	39	Does not include payments on traditional practitioners.
Sudan 4/	1986	min 75	
Swaziland	nd	50	
Tanzania 5/	1976	min 37	
Togo	1979	31	Does not include expenditures on traditional practitioners or non-hospital modern care. Individual payments account for 28 percent.
Zaire 6/	1985	min 25	Rural consumer spending estimated at US \$60 million.
Zambia	1981	50	Payments by individuals account for 27 percent; missions 3 percent; and mining enterprises 19 percent.
Zimbabwe	FY 1980	21	Payments by individuals account for 17 percent.

- Sources:
1. Table A-3, de Ferranti, 1985
  2. Donaldson and Dunlop, 1987.
  3. Page 7, Shepard, Carrin, and Nyandagazi, 1987.
  4. Table 3, Dunlop, 1987
  5. Table 10, Dunlop, 1984
  6. Table 4-12, World Bank, 1987

Given the decreasing supply of resources for PHC programs and increasing need due to population growth, additional health financing options must be developed and evaluated. Several African countries have decentralized financial and administrative responsibilities to local areas, privatized national hospitals, and established revolving drug funds and fee-for-service systems for basic health care in order to augment the pool of resources available for PHC.

Alternative strategies for financing health care include insurance, prepayment and the adoption of user fees at government health facilities. Paying for services is not a new phenomenon in Africa, as most individuals seeking care from traditional healers would be required to pay in cash or in kind. In addition, private health expenditures as a percent of total health expenditures range from 12 to 75%, according to one estimate, as shown in Table 1. However, it is not clear how willing individuals are able to pay for preventive services or health care for their children. Some studies (2, 3, and 4) have shown willingness to pay for public services if the quality services will be provided.

### C. The CCCD Project

The ACSI-Combating Childhood Communicable Diseases (CCCD) Project is an A.I.D.-funded project in Africa designed to strengthen the delivery of basic child survival preventive services (immunizations, ORS, and malaria prophylaxis and treatment). One objective of the CCCD Project is financial self-sufficiency of the government to provide these services once donor funding is withdrawn. Therefore, it is incumbent upon the project to devise and implement alternative financing options strategies to sustain project

activities in the future. The Resources for Child Health (REACH) Project has provided technical assistance to the CCCD Project in the area of health care financing, in order to strengthen the ability of that project to become self-sustaining. For this reason, these two projects joined together to host the conference in Côte d'Ivoire, focusing on the range of technical, administrative, and financial issues surrounding the CCCD Project.

## II. PROFILE OF THE REACH WORKSHOP ON HEALTH CARE FINANCING

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### III. SUMMARIES OF THE SIX WORKING GROUPS

Participants were divided into six working groups (three Francophone and three Anglophone) on a country basis. Each group had approximately 25 participants and two facilitators. The facilitators presented materials and concepts for the modules and led the participants in discussion.

Each of the four REACH modules was designed to lead the participants through a decision-making exercise. The modules segregated the types of information that would be needed in order to start implementing a financing strategy. Therefore, the exercise represented a problem-solving tool for analyzing alternatives and deciding upon a strategy according to country-specific situations.

This section summarizes briefly the major points raised and discussed within each of the six discussion groups for each module. Samples of the flipcharts which were developed during the REACH workshop are also included here.

## A. Module 1

Although there is continued experience and accumulated evidence about the success of alternative financing schemes in Africa, there is no "recipe" for resolving resource allocation and management problems in health. Therefore, each country will undertake its own solutions, based on political, economic, social, and cultural priorities. The first module was designed to have the participants enumerate the effects that these aspects have on the likelihood of success of a financing scheme, as well as the possible effects of the financing scheme on political, economic, cultural, and social factors. The module was designed to show that resource allocation problems and solutions are dynamic and must be constantly tuned to the country context. This process is what the REACH Project refers to as a country diagnosis. This diagnosis is intended to match goals and objectives of health programs with resource requirements and needs for financing strategies.

The objectives of Module 1 were to assist individuals in developing a tool for diagnosing and analyzing health care financing options. Participants had to 1) think about how financing options relate to health goals; 2) identify resources available and necessary to accomplish these goals; and 3) examine relationships between financing choices and broader social, political, economic, and cultural factors.

Most of the working groups began by enumerating health objectives as described in a study case entitled, "The Case of the Republic of Trois Rivières" (see case study in Appendix A). These objectives included:

- o reducing childhood morbidity and mortality;
- o increasing immunization coverage;
- o improving access to health services;
- o sustaining child survival health programs before the end of the CCCD project contract;
- o finding other sources of financing for health programs;
- o increasing community participation in health care;
- o maintaining stocks and distributing supplies and vaccines; and
- o following the goals and objectives of the President of Trois Rivières.

The next part of the module focused each group on the type of resources available to achieve these goals and the types of resources for which Trois Rivières might have a greater need in the short-term. All groups enumerated the following types of current resources:

- a) human resources, such as the number of physicians working in the public and private sectors, and the national EPI manager;
- b) physical resources, such as the number of primary health care clinics; vaccines and equipment; and
- c) financial resources, from the government budget, CCCD project resources, and individual household earnings;

Some groups thought that the country had significant resources from agriculture or that the population, with its level of education, also represented a resource base for the future. All groups identified the "problem" in the case, which was that the CCCD Project had two years remaining on its contract, and the government had to start to think about ways to generate needed resources to bridge the gap after the withdrawal of donor assistance.

The means by which resources could be generated (health care financing strategies) were also discussed and some of the responses were: individual payment for services, other donor assistance including small, international, non-governmental organizations, increased taxation including a cigarette and alcohol tax, community funds, lotteries, insurance schemes, and improving the efficiency of the current system of delivery of services.

Most of the discussion in Module 1 centered around the relationship between the goals and objectives of the health sector, health care financing strategies, and the context which encompasses social norms, culture and tradition, economic conditions, and political priorities. Most groups organized these relationships into some permutation of the following table:

**Effect of a Selected Financing Strategy on a Country's Social,  
Political, Economic, and Cultural Situation.  
Example: User Fee Systems**

Social	Political	Economic	Cultural
+ increased quality of care	+ encourages political commitment	+ augments resources available	- tradition
+ better coverage	- unpopular strategy	- diminishes household budget	
- inequality based on ability to pay	+ empowerment of people	+ GNP/Capita	

\* Positive sign denotes positive effects; negative sign denotes negative effects.

It is interesting to note that this relationship operates in two directions. First, that the context in a particular country should influence the type of health care financing strategy that is adopted; and secondly, the type of financing strategy implemented will have an effect on these various factors. For example, in a country with a large GNP per capita, a system of charging prices for drugs or services may be adopted. In this case, an economic factor has influenced the decision to a certain degree. However, once this type of system is in place, it could be the case that some individuals might not be able to afford an adequate amount of health care and utilization of services may decrease, posing a threat to health status (a social consequence of a financing strategy).

Module 1 helped raise several fundamental issues with respect to diagnosing a health care financing problem:

1. there is no financing strategy which can be applied in the same way in all countries, or even in parts of a single country;
2. there is no strategy which is perfect: each one has both positive and negative effects and influences on society, individuals, and the economy; and
3. the approach to "diagnosing" a health care financing problem is to first understand what the goals and objectives of the health system are; second, to identify resources; third, to enumerate possible options; and finally, to narrow the range of options by examining their impact on and appropriateness to the specific country or situation in question.

#### B. Module 2

The second module was designed to link the general objectives of a health program (e.g., the CCCD Project) with methods to help determine specific priorities. One method is to determine the cost of delivering program health services at current levels of outcomes, such as numbers of children immunized, and then to project what it would cost to achieve greater coverage levels. By first determining program costs, gaps between current levels of resources and needs can be identified. Some type of financing strategy will be required to secure adequate resources for program activities.

Module 2 was designed to probe deeper into the issue of the kinds of resources that have and are being used to provide CCCD services. Embodied in Module 2 was a method of organizing and classifying resource information. The specific objectives of Module 2 were:

- 1) To identify and measure resources used for delivery of malaria control and/or immunization programs;
- 2) To identify who contributes which resources; and
- 3) To outline methods for interpreting cost data.

For the workshop, cost was defined as the **value of the resources used in the delivery of services, including donated resources**. Recurrent costs were defined as those which have a high frequency in the life of a projects, while investment costs were specified as those which occur infrequently and are for the initial development stage of a program.

Participants were asked to identify sources of financing for either malaria control or immunization activities. Because of their differences in technology, focus, target groups, and methods of services delivery, these two activities were chosen so that comparisons could be made. Each working group could compare the costs and financing of different health strategies. Most groups responded with four major categories: 1) government health budgets; 2) donors, namely USAID, UNICEF, and PVOs; 3) population; and 4) other sources. Malaria control and immunization initiatives often receive assistance from other ministries and private sector enterprises as well.

At this point most of the groups divided into smaller working groups which were asked to develop a framework for analyzing the costs of a program. To do so, a cost classification system was required. There was no consistent pattern across working groups about how this framework was to be designed. Some groups divided costs into recurrent and investment costs, some into fixed and variable costs, and others by type of resource: human, financial, institutional, and material.

Different types of frameworks could be correct, because information about different costs are needed to make different decisions. For example, if one wants to know how much it will cost to reach an additional level of coverage, dividing total costs into variable and fixed costs will facilitate that analysis. On the other hand, if one is interested in knowing what the annual costs of operating the project are going to be, then costs should be divided into recurrent and investment costs. These distinctions are not always clear. The point however, is that there is no standard form of analysis, although greater standardization would facilitate comparisons between one point in time and another or across countries.

The following are examples of certain frameworks developed during the conference:

Table Four  
Example A: Cost Matrix for a Vaccination Program

Categories/ Source	Government		Donors				Volunteers	Community
	MOH	Others	USAID	UNICEF	WHO	OTHER		
<u>Personnel</u>								
Technical	X	X					X	
Support	X	X	X	X	X	X	X	
Consultants			X	X	X			
<u>Commodities</u>								
Vaccines			X	X				
Syringes			X	X				
Sterilizers			X	X				
Supplies			X	X				
Cold Chain Equip	X	X		X		X		
Record/Info Systems	X			X				
<u>Travel/Transport</u>								
Vehicles			X	X	X			X
Airplanes			X	X	X	X		
Fuel	X					X		
Maintenance	X		X	X	X			X
Per Diems	X							
<u>Media</u>	X	X	X			X		
<u>Overhead</u>	X							
<u>Facilities</u>								
Maintenance	X							
Health Centers	X							X
Community Centers	X							X

"X" means that this cost is borne by the source in the corresponding column.

Table Five  
Example B: Cost Matrix for a Malaria Control Program

Category	Population	Government	Others	Donors
Electricity				
Telephone		X		
Office Supplies				
Training		X		X
Supervision		X		X
Maintenance	X	X		
Technical Assistance			X	X
Surveillance		X		X
Research				
Health Education		X	X	X
Capital Costs				
Equipment		X		X
Vehicles		X		X
Buildings	X	X		X
Machines		X		X
Computers			X	X
Recurrent Costs				
Salaries	X	X		
Transportation		X		X
Pharmaceuticals		X		X
Insecticides		X		X
Larvicides				

These frameworks show that donor resources are more likely to become available for investment costs, such as vehicles and equipment, rather than recurrent costs, such as personnel. However, once a piece of equipment has been purchased, it is generally assumed that the maintenance and operation costs are the responsibility of government. Therefore, each additional type of capital investment made has a cost to the government in the future. In addition, this module showed that the types of resources needed were different for the immunization and malaria control programs.

The purpose of this exercise was also to find out from each group why they thought it was important to collect and analyze costs and how cost information could help managers or policy makers make decisions. The following list summarizes the responses from the groups:

RELATIONSHIP BETWEEN PURPOSE AND TYPE OF COST ANALYSIS

TYPE OF ANALYSIS	PURPOSE	CLIENT
1) Determine the total cost of operating either the immunization or malaria control program;	To lobby more effectively for needed resources in the health sector; to describe the program	Minister of Health Department of Directors
2) Determine the recurrent and the investment costs of the programs and the proportions of total cost;	To estimate annual demand for resources and predict future demands for capital equipment	Minister of Health Donors
3) Compare data from one year to the next or between one program and another;	To outline trends and differences in the same program within or between countries	Minister of Health Donors
4) Compare program costs with benefits and outcomes (cost-effectiveness analysis);	To choose the most cost-effective program among a set of alternatives; i.e. the one that costs less to society per unit of output	Donors Ministry of Health Ministry of Finance
5) Determine the principle sources of funds for the programs and the type of resources which they contribute;	To plan future financing of the program	Minister of Health
6) Determine areas of greatest consumption, such as fuel or per diem;	To improve financial control and management and improve efficiency	Program Managers Government Auditors
7) Determine whether the programs are affordable to the government; and,	To estimate long-run sustainability	Minister of Health Donors
8) Determine what future costs would be if the programs expanded to satisfy health objectives	To predict future resource needs and the burden	Program Managers Ministry of Planning

### C. Module 3

The third module was designed to help participants outline the advantages and disadvantages of alternative financing strategies, given a specific resource problem with the CCCD Project. Criteria for evaluating these strategies were developed. The point of this module was that no one strategy satisfies all criteria, and that there are trade-offs between both positive and negative aspects of financing choices.

The third module focused on alternative financing strategies for CCCD Project activities. This module builds on Module 2 which examined detailed costs of these activities. Once the costs and burden of financing these two prevention programs have been determined, then plans for their future financing could be discussed. As explained earlier, the health financing problem, as presented in the case study, was that significant donor funding for the CCCD Project would diminish within two years and the government would be responsible for continuing the program using its own resources. The objectives of Module 3 were:

- 1) to identify current financing schemes for malaria control and immunization programs;
- 2) to identify alternative financing schemes that might be implemented in light of social, political, and economic factors; and
- 3) to rank these alternative financing schemes, based on their overall feasibility.

Participants were asked to enumerate all of the possible financing strategies that could be used to increase the available resources to help alleviate this situation. They generated the following list of strategies:

1. Additional government resources
  - o allocate more resources to health from other sectors
  - o allocate more to PHC from curative care within the health budget
2. Community strategies
  - o lotteries and other fund raising activities
  - o donated community labor
  - o prepayment
3. Individual payment
  - o for service (consultation)
  - o for drugs
  - o for episode of illness
4. Insurance schemes
  - o employer-based
  - o social security
  - o civil servant
5. Taxation
  - o head taxes
  - o alcohol/cigarette tax
6. Private sector
  - o philanthropy
  - o pharmacies
  - o organized/managed care

The most frequently discussed financing strategy was that of user fees, as a result of the focus of the CCCD Project and other country experiences. Most participants seemed to accept user fees in principle. Disagreement arose only about the type of payment scheme to be selected and how these systems should be implemented. However, many participants felt that the inability of the population to pay for services and the importance of community solidarity were sufficient counter-arguments to the widespread promulgation of fee schemes based on individual payment.

Several additional issues with respect to charging fees for services are summarized below:

Type of service: The discussion underscored the distinction between charging fees for preventive and curative services. Curative care usually results in a direct benefit to the recipient, such as treatment for an injury; however, preventive care not only results in individual benefits (protection from disease through immunization), but also in greater social benefits (eventual eradication of disease from a community). Thus, it behooves society to see that everyone receives a certain level of preventive care (e.g., all immunizations). If individuals were required to pay for these services, there would be disincentives for them to seek this type of service, and the socially optimum level of consumption would not be achieved. This is especially true when individuals lack knowledge about the benefits of preventive services. Charging fees for preventive services may have detrimental effects on utilization, though this may not be the case if services are supply-constrained due to inadequate resources. However, preventive services could be financed by charging individuals higher prices for curative services.

Type of costs: Because user fee systems are designed to generate additional resources to cover the costs of delivering services, questions often arise about the type and amount of costs that are covered. It was generally felt that it would not be feasible to recover capital costs from user fees, and most participants believed that fees should be tied to recurrent costs. Whether full recovery of recurrent costs can be attained in this way depends upon the population's ability and willingness to pay

for services. However, even if only a fraction of recurrent costs can be recovered, a user fee policy would contribute to the overall pool of available resources.

Type of fee: User fees can be established in a variety of ways; for example, they can be charged per consultation (fee-for-service), for drugs (fee-for-drugs), per illness (fee-for-episode), or some combination of these three. The revenue generating potential is different for each and each type of system has different consequences for the individual. For example, fees for drugs (equal to the cost of those drugs) may help ration the overuse of some non-essential and/or harmful medications, but may also penalize individuals who require expensive pharmaceuticals. A fixed fee per episode of illness, regardless of the illness type, is a more equitable strategy for some individuals, especially for those with chronic illnesses; however, this strategy may not be able to cover enough operating costs associated with delivering these services. Fee-for-service may help ration the use of health services, but may also place a greater burden on larger households, or on individuals who tend to require more health care than average.

Setting a price for services: Price setting for services depends upon several factors, including the cost of delivering services, and estimates of the ability and willingness of the population to pay for services. Utilization of services may increase or decrease depending upon how these services are valued. Some countries explore the relationship between prices, utilization, and revenues by arbitrarily setting a price and

adjusting the price according to results. For example, different health zones in Zaire charge different prices for the same services, depending upon willingness to pay.

Type of fee scale: An issue related to setting a price for services is whether this price will apply uniformly to all individuals who seek care (a flat fee), or whether the ability of individuals to pay will be taken into account (sliding scale). A sliding scale will charge patients different amounts depending on their ability to pay. Flat fee systems may be easier to administer and manage than sliding fee scales, which depend upon knowledge of patients' ability to pay. This ensures greater collection and lower administrative costs. The greatest objection to flat fees is based on equity grounds. A flat fee represents a greater proportion of household income at lower levels of income. Thus, flat fees tend to penalize the disadvantaged in a society. However, in some societies, the social safety net based on an extended family and other community affiliations may offset this discrepancy.

Locus of control: Fees that are collected at health facilities can be either 1) retained at that health facility, 2) sent to a district level facility, 3) sent to the ministry of health, or 4) sent directly to the national treasury (or Ministry of Finance) for reallocation to the health sector or other sectors. The first option allows health facilities to manage their own resources which increases the chance that these resources are used appropriately, based on the health needs of the population. It also provides an incentive for the health facility personnel, who can use the revenue to improve working conditions and/or salary levels. The most centralized option (number 4) benefits the public sector in general, but

may not return to the health sector in the form of investments to pay for recurrent costs. Individuals may not want to continue paying for health services if they cannot see an overall improvement in their delivery.

Management of revenues: Management of resources requires a minimum level of training and competency on the part of those individuals responsible for collecting and maintaining the cash box. However, all participants expressed their concern regarding levels of personnel training, the way funds are used, and the lack of an overall reporting and management systems within the health sector. Several strategies to improve this situation were discussed, including in-service and participant training, development of management information systems, and development of tighter controls on use of funds.

Therefore, user fee strategies require a 1) commitment from the government to implement and monitor them; 2) the equitable allocation of services; 3) supervision, management, and accountability; and 4) ability and willingness of the population to pay for services.

Throughout the discussion of Module 3, each of the alternative financing schemes was evaluated on the basis of their effect on the following selected criteria:

- a) Equity: equal access to services for all socio-economic levels of society;
- b) Efficiency: the relationship between the cost of providing services and the quality and quantity of the services delivered;

- c) Risk-sharing: to spread the financial burden of illness across society rather than placing the burden on the most ill (who are often the poorest);
- d) Sufficiency of funds: whether the revenues generated by the financing strategy are sufficient to cover their costs;
- e) Reliability of funds: whether the funds generated by the strategy will be steady over time; and
- f) Administrative feasibility: the capacity of the public and/or private sector to manage the financing strategy.

The following table illustrates how one working group undertook this exercise. Other criteria such as social and cultural acceptability, and utilization effects could be added.

Advantages and Disadvantages of Alternative Financing Strategies

Options/ Criteria	Sliding Scale	Community Participation	Fee-for-service (in-kind)
Equity	++++	+++++	+++
Efficiency	+	+++	+
Risk Sharing	++	+++	+++
Sufficiency of Funds	+++	++	+
Reliability of Funds	++	+	+
Administrative Feasibility	+	+++	+
Utilization	+++	++++	+++++
Political Feasibility	++++	++++	+++

Number of positive marks illustrated strength of association.

#### EXAMPLE: REVOLVING DRUG FUNDS

During the development of Module 3, several working groups discussed revolving drug funds as a strategy for recovering the costs of purchasing drugs. These discussions are presented below as an example of the type of analysis that was made regarding a specific cost-recovery strategy.

These funds are usually established from a large capital investment and purchase of drugs which are then sold to the community at cost. The revenues which are collected are used to replenish medication stocks in the community. This type of system requires a stable population and access to foreign exchange to pay for improved drugs and drug procurement systems, as well as management information systems and accounting systems.

The advantages of this financing strategy are the following:

1. they improve local availability of drugs;
2. they create incentives for providing higher quality of care;
3. they improve access to services;
4. they increase patient compliance to medication regimens; and,
5. they benefit other health services by making them stronger and better perceived by the population.

The disadvantages of revolving drug funds include:

1. the high requirement of foreign exchange;
2. they may decrease access to individuals who cannot afford to pay for drugs;
3. management and accountability problems threaten the sustainability of the system;
4. they require stable populations and therefore may be limited in their applicability to wider target populations; and
5. there is an increased emphasis on curative care.

The major point of this exercise was to demonstrate that there is no perfect alternative strategy and that tradeoffs exist among criteria, e.g., between equity concerns or administrative feasibility. Each country will be able to make its own value judgments as to which criteria are the most important, and therefore, which strategy is the most appropriate.

#### D. Module 4

In addition to choosing a financing strategy to secure additional resources, the fourth module addressed the possibility of changing the way services are delivered to achieve greater results for the same level of input. The notion of efficiency of service delivery was described and analyzed. Once efficiency and financing strategies were evaluated, the participants were able to outline first steps in implementing their choice. The order of these steps relate back to the first module, where the country-specific political, social, and economic, aspects were articulated.

Module 4 examines how costs of delivering services could be reduced, thus improving the efficiency of the system. Up until this point, most of the alternative financing strategies discussed focused on generating additional resources for the health sector. This module introduces the idea of efficiency.

Participants were asked to identify areas in an immunization or malaria control program where inefficiencies exist. Some of the responses included:

- o health workers do not work very hard -- there is a lot of slack time;
- o health centers are not open at the most appropriate hours, or provide services on an irregular basis;
- o there is a lot of duplication in the system such as different supervisors visiting the same health facility;
- o vaccines and supplies are wasted;
- o health facilities are overstaffed;

- o technology is inappropriate - equipment cannot be operated or maintained;
- o strategy of delivery is too resource demanding or not appropriate;
- o distribution of supplies is irregular;
- o different donors exist and there is duplication of efforts.

Sources of inefficiency were therefore found in staffing patterns, use and choice of technologies, and logistics systems. Some of these sources cannot be improved without a great deal of difficulty, however, there are cases where a little change in technology or organization of services can result in a great change in outcomes. For instance, changing the distribution pattern from one which visits a health center once a month to one where a tour of all health centers is made at once could improve the system without significantly adding to costs.

Because financing strategies imply change in how services are delivered and in society as well, participants were asked to choose a strategy and outline steps for implementation. The following is an example:

Example:  
Implementation Strategies for Increasing Health Resources

Strategy	Steps
Improve Financial Management (improve efficiency)	Determine how funds are managed now Develop new systems Field test new systems Revise system Develop training plan Implement system Evaluate
Social Security Funds for Health (create alternative financing strategy)	Determine social security revenues Determine proportion of revenues for health Lobby with social security administration Develop system for collection and earmarking funds Develop strategy for allocating to health ministry
Revolving Drug Fund (create alternative financing strategy)	Decide which drugs are included Determine costs to provide medications Determine ability of population to pay Decide on price Train in funds management Implement the system Evaluate management

NB: These steps are only illustrative and are not exhaustive of the entire process to design, implement, and evaluate a system of financing. Often much more lobbying and consensus building needs to take place before any change can be made. The difficulty comes in having a strategy which is flexible and responsive to the health and social system as a whole.

## V. CONCLUSIONS AND RECOMMENDATIONS FOR THE FUTURE

Significant discussion focused on the ability of user fee systems to generate sufficient resources to cover the operating costs of CCCD Project activities, such as vaccinations, control of diarrheal disease, and malaria treatment and prophylaxis. In addition, much concern was focused on how to influence policy makers within countries to adopt alternative financing strategies as a means of improving the sustainability and quality of preventive health programs. Other discussion topics included how to improve the management capacity in the public health sector, the role of revolving drug funds in revenue generation, and the role of international donors in program sustainability and financing.

The workshop accomplished its objective of bringing all participants to a common level of understanding about health care financing. This should facilitate future discussions within countries about next steps and approaches. However, many of the participants were interested, as well, in learning more about how to implement some of the analytic steps. The experience in the workshop reinforces the need to incorporate direct skills training into future workshops designed to provide a general overview of health care financing issues. In addition, future workshops on health care financing in Africa should build upon this experience by focusing on specific topics and concentrating more directly on improving analytic skills in areas such as costing of programs, setting prices, and financial management information systems, etc.

The interest evidenced by the participants in learning "how" to do in addition to "what" to do is also being reflected in other aspects of the REACH Project activities. To date, most of our attention has been directed at sharing the findings from our field activities. The experience of the workshop has made clear the need to share, as well, the methods used to produce the findings. While there is general interest in the experience in other countries, most of the participants were interested in how the same analytic tasks could be used in their own setting.

As a result, REACH is reviewing all of its earlier studies to determine how the methods used can be more effectively shared. We are exploring the possibility of developing more useful training materials and "field manuals" from these documents in areas where sufficient experience exists to do so. These materials will serve as resources for more intensive HCF workshops directed at specific skill acquisition targeted to individuals with specific operational needs for analytic skills.

## **VI. APPENDIXES**

- A. Summaries of REACH TA in CCCD countries
- B. Matrix of REACH work
- C. Summaries of other REACH TA in HCF
- D. Examples of Responses from Evaluation Questionnaire
- E. REACH Publications List

**APPENDIX A**

**Summaries of REACH TA in CCD Countries**

## SUMMARY OF TECHNICAL REPORTS FOR THE REACH PROJECT IN CCCD PROJECT COUNTRIES

Summarized below are the results and recommendations of REACH technical assistance reports in health care financing in CCCD countries. Additional details can be found in the reports themselves.

### Burundi: Study on the Financing of the Health Sector

The purpose of this study was to analyze national health expenditures for 1986 and project these expenditures into 1987. In addition, the financing of preventive health services was evaluated to determine relative proportions between donor assistance and government financing.

Total health expenditures in Burundi were approximately \$28 million in 1986. Capital costs accounted for 24% of the total, with recurrent costs being approximately \$22 million. Eighty-eight percent of primary health care expenditures are being covered by local resources, out of which the government finances 35%, the population 29%, and the balance (24%) financed by other sources. Only 12% of PHC is financed by outside sources.

The Ministry of Health contributed 36% of the total expenditures in 1986. To maintain this level of contribution, the Ministry of Health would require a minimum budget of \$10 million in 1987. However, in 1987 the MOH is budgeted for less than this amount which means that it will not be able to finance health services to the same extent. Who will finance this difference and what will happen if donors are not willing to defray some of the additional costs?

The report concludes that there is a definite need for a PHC financing strategy, and recommends a framework for monitoring PHC expenditures as a basis for determining a financing strategy.

### Cost Recovery in Central African Republic: Results from Two Preliminary Surveys and Selected Interviews

The Government of the Central African Republic has agreed to consider recovering the costs of some health services as a means of financing recurrent costs. This report contains results from interviews with policy makers and health facility managers regarding cost recovery strategies, as well as results from a preliminary survey of patients about their expenditures on health care.

Two hospitals in the CAR are undertaking cost recovery measures and may serve as models for future discussion and development of cost recovery strategies. Each of these health facilities use revenues generated through fees to pay for a range of service delivery costs, such as salaries, pharmaceuticals, maintenance, and supplies. The survey showed that

managers in these facilities are dealing with issues of determining prices for services, providing care for the indigent population, and procuring necessary supplies.

The results of the preliminary survey show that individuals are paying a considerable amount for their health care. The average expenditures ranged from 10,848 FCFA (\$36) for consultations plus pharmaceuticals, surgery and hospitalization in one facility, to 493 FCFA (\$1.60) for consultations and pharmaceuticals in another. Over 75% of respondents replied they would be prepared to pay for health services at government facilities. The results suggested that quality of care was a factor in choosing a health provider.

The study recommended that a roundtable discussion take place with policy makers to outline a strategy for establishing a pilot cost recovery project in public health facilities in the near future.

#### Analysis of Health Services Expenditures in the Gambia: 1981-1991

The Government of The Gambia is working towards the restructuring and strengthening of its health system. To this end, the government is negotiating with the International Development Association, the World Bank, and other donors for funds to carry out the National Health Project. The study identified past and current expenditures, estimated past and current shortfalls in recurrent spending, estimated future donor contributions to program costs, estimated the recurrent costs of the National Health Project and its components, and projected NHP operating expenses until 1991.

In the past seven years, the GOTG's total budget for recurrent spending increased 180%. A large proportion of that increase was due to a growth in debt service obligations, which increased from 5% to 40% in 1987. There have been several shortfalls in the financing of 1) drugs and dressings; 2) other expendable supplies; 3) maintenance and operation of transport; 4) maintenance of facilities; and 5) replacement of equipment. These shortfalls have resulted in a serious disruption in the delivery of services.

The National Health Project is an ambitious effort to restructure and strengthen the entire health system of The Gambia with implementation to take place over five years. However, in order for this project to support and strengthen the health system, several recommendations were made: 1) attention should be paid to meeting current shortfalls in government financing of health services; 2) support for the creation of a cost recovery system for drugs should be developed; 3) the Ministry's capacity to coordinate donor assistance should be strengthened; 4) the Ministry's capacity to budget and plan for health financing needs to be strengthened; and, 5) staff should be consolidated rather than expanded.

## Pricing for Cost Recovery in Primary Health Care in Guinea

This report provides an analytical framework for policy-makers to help facilitate the decision-making process regarding the choice of cost recovery strategy for the CCCD Project. The report addresses the advantages and disadvantages of alternative payment structures (fee-for-service, fee-for-episode, fee-for-drugs, prepayment for services, and simple versus complex price schedules for services) for CCCD activities.

In addition, an analytic model allows policy makers to see the financial implications of assumptions, such as coverage targets, demand for care, and costs of providing services based on impressions and existing country data. Using a Lotus 1-2-3 spreadsheet, the model calculates the "break-even price" for services, depending upon the assumptions used. In this manner, the features of a sustainable pricing system for primary care can be developed.

The report discusses the advantages and disadvantages of alternative pricing schemes and payment structures in terms of 1) efficient resource allocation, 2) equitable distribution of the financial burden, 3) financial risk to the population, and 4) the administrative burden of implementing these strategies.

For the CCCD Project, the report suggests that if uniform prices are charged in health centers, some will have losses while others will generate surpluses. The health system will "break-even" as a whole, but the surplus-generating health centers will need to subsidize those centers which are operating at a loss because of differences in utilization/demand for services.

Two recommended steps for follow-up were made: 1) a choice about financing strategy needs to be made with key decision-makers; and 2) a pilot cost-recovery site should be selected and preparations made for implementation.

## Comparative Analysis of CCCD Project Health Care Financing Activities

The purpose of this study was to compare the financing experience of the 13 countries which have implemented CCCD Project activities in Africa (Burundi, CAR, Côte d'Ivoire, Congo, Guinea, Lesotho, Liberia, Malawi, Nigeria, Rwanda, Swaziland, Togo, and Zaire). The comparative analysis reviewed existing REACH study documents and CCCD Project economic evaluations to assess the range of program costs and performance in cost recovery. In addition, the study examined the similarities and differences among these countries with respect to their macro-economic performance. The study also described possible alternative financing strategies which could be explored in these countries in lieu of Fee-For-Service (FFS) systems or in addition to FFS.

The study makes several conclusions and recommendations about CCCD Project financing:

- 1) Country-specific financing strategies should be adopted rather than relying solely on user fees as the means of sustaining project activities.
- 2) The objective of the health financing component of the CCCD Project should be directed at the sustainability of the health service delivery system upon which CCCD services rest, not specifically CCCD activities in isolation.
- 3) Fee-For-Service financing strategies are in widespread use in these countries; however, further analysis should be conducted on the impact of this strategy on utilization of services and access to health care for the indigent population.
- 4) Fee-for-Service and user fee strategies raise revenue to cover primarily local currency costs, and 60% to 75% of the total cost of CCCD Project activities (based on results from cost analyses) requires foreign exchange. Future financing strategies will need to address this requirement in order to sustain project activities.
- 5) It is important to implement mechanisms to monitor continuously CCCD Project costs and financing performance in order to improve the management and operation of the project, but also to increase the potential for sustainability.

#### Report on Self-Financing of Health Care at Government Health Centers in Rwanda

This report focuses primarily on user fees as an approach to financing. The analysis compared Catholic mission and public health centers in two provinces (Kigali and Gikongoro) as to the costs to patients. The mission facilities tended to two of five times as much, but were perceived to have a higher quality of service.

A questionnaire was developed to determine population and utilization characteristics, as well as willingness to pay. On average, approximately 26% of households reported difficulties paying for medical care. The survey showed that virtually all households were willing to accept higher fees to assure medications were available. Prepayment schemes were also of interest.

**APPENDIX B**

**Matrix of REACH Work in CCD Countries**

MATRIX OF REACH WORK IN CCCD COUNTRIES

COUNTRY/ STUDY PERFORMED	DIAGNOSIS	COST ANALYSIS	ALTERNATIVE FINANCING	OTHER
Burundi	X	X		
Central African Republic	X		X	
Côte d'Ivoire				
P.R. of the Congo				
Guinea				X
Lesotho				
Liberia				
Malawi				
Nigeria				
Rwanda			X	
Swaziland				
Togo				
Zaire				

Diagnosis = Initial visit to determine health care financing priorities  
 Cost Analysis = Technical assistance in analysis of costs of CCCD activities.

Alternative Financing = Includes studies of willingness to pay for services and evaluation of alternative financing schemes.

Other = Development of a pricing model.

**APPENDIX C**  
**Summary of Additional REACH Technical Assistance**  
**in Health Care Financing**

## ANNOTATED BIBLIOGRAPHY

### Resources for Child Health (REACH) Project

April 1988

Outlined below are additional health care financing reports produced by the Resources for Child Health (REACH) Project.

#### Issues Papers

##### The AID Experience in Health Care Financing: 1978-1986

This document provides a summary of A.I.D. experience in health care financing prior to the REACH Project and served as background material for A.I.D.'s participation in a Donor Coordinating Meeting on Health Care. The report documents A.I.D. activities that 1) focus on improving resource allocation patterns between health and other sectors; 2) mobilize additional resources for health; 3) document project costs and attempt to contain these costs; and 4) focus on the organization and delivery of health services. These activities are summarized and lessons for future activities discussed.

The report also identifies gaps where future financing initiatives should focus. These areas include health insurance and its role in financing and studies concerning the structure and financing of health services.

##### The Private Sector in Health Care Delivery in Developing Countries: Definition, Experience, and Potential

This policy discussion paper addresses the role of the private sector in health care financing. The growing recognition of the scale and importance of the private sector in financing and delivering health services in developing countries is discussed. This discussion paper represents one overview of the growing private sector health care financing experience and is meant to nourish the policy dialogue rather than resolve it.

##### ANE Bureau Guidance for Costing of Health Services Delivery Projects (draft)

This document contains useful guidelines for costing of health services delivery projects, including detailed descriptions of how to collect cost information and methods used to calculate costs. In addition, The Guidance represents one of the first attempts to make the classification and categorization of costs more uniform across and among health projects. This cost format will hopefully improve the quality of economic and financial analyses performed for A.I.D. project paper development.

The Guidance has been field-tested in one African and three Asian countries and will be revised in the near future. In addition, each of the six costing tables will be placed on a computer spreadsheet to facilitate cost calculations.

#### Background for the ANE Bureau Guidance on Costing of Health Service Delivery Projects

This document provides the rationale behind the development of The Guidance by reviewing the methods and results of nearly 30 costing studies, summarizing interviews with economists who have worked on A.I.D. Project Paper teams, and analyzing the role of economic and financial analysis in health project design.

The major conclusions of the Background are that a uniform system for classifying and categorizing costs needs to be developed, and that results from economic and financial analyses should be used more systematically during the design phase to encourage the development of financially sustainable projects.

#### Health Care Demand Studies in Developing Countries (draft)

This review document was commissioned by REACH for the 1987 Technical Advisory Group Meetings and represents one of the first attempts to synthesize the results and methods of demands studies which have been undertaken in developing countries. This document reviews nearly 50 articles and reports which describe methodologies, experience from several countries, and results from seminal demand studies.

The report states that most demand studies implicitly assume that people demand care from a singly provider; yet there are a few studies which show that most people seek several providers during the course of a single illness episode. In addition, the way that prices, income and other variables influence decisions about where and how often people seek health care have been reviewed. Many studies have found that prices charged by providers have little impact on the choice of where to seek care and the amount of health care consumed. However, one recent study shows that fees do have an important effect on demand.

#### Planning the Financing of Primary Health Care: Assessing the Alternative Methods

This paper was written as a background document for a presentation at the World Federation of Public Health Associations Conference in Mexico City in March 1987. The relationship between the scope of primary health care and scarcity of resources is described, as well as the need for better planning of financing for health. Alternative financing strategies are outlined in detail and are evaluated on the basis of their advantages and disadvantages. Some of the criteria used to assess these alternatives include the impact on equity, administrative feasibility, impact on

efficiency, cultural appropriateness, and reliability of the strategy as an important source of revenue over time. The document is available in English, Spanish, and French.

#### A.I.D. Health Projects: Comments on the "Sustainability" Issue

This paper was written as part of a series of REACH Technical Notes which are meant to support and stimulate policy dialogue about health care financing issues. The paper provides a framework of five project components which should be used in determining whether a project will be sustainable or not. These components include 1) the level of demand for primary health care services; 2) how the health services delivery system is implemented; 3) the degree of training of health service personnel; 4) the degree of administrative and management training; and, 5) the use of management information systems. Questions and subjects for discussion on A.I.D.'s sustainability policy are also provided.

#### Comments on Guidelines on External Financial Resource Mobilization for Health in the Region of the Americas: PAHO, 1986

This paper reviews relevant portions of the PAHO Guidelines outlining access to international financial resources which was developed for use by PAHO personnel. The author provides comments on the guidelines as well as suggestions for A.I.D. regarding areas of the guidelines which could provide A.I.D. policy clarification.

#### Cost Recovery by Government Hospitals in LDCs: A Key Element in the Strategy to Increase the Commitment of Resources to Primary Health Care

This paper describes the relationship between the impact of financing systems on health sector performance and the possible role of efficiency gains in the hospital sector on raising additional resources for child survival and primary health care. For this strategy to work, the general quality of services and the efficiency of these facilities improved. These changes are generally made through improved organization and management of hospital services.

#### Cost-effectiveness of Immunization Strategies: Issues and Future Directions, (draft)

This paper summarizes and analyzes the results of several cost-effectiveness studies of the EPI which have been undertaken in recent years. In addition, the document critically analyzes the methods which have been used to calculate costs and classify cost information. Recommendations are made regarding how the methods could be improved and standardized; how the results could be utilized more and more effectively; what cost-effectiveness of the EPI has to do with sustainability; and how these studies may become more useful in the field.

## ANE Bureau Health Sector Financing Model

This model was developed to assist A.I.D. Health, Population, and Nutrition Officers to engage in policy dialogue on pertinent issues of health care financing. The purpose of model is to use microcomputer technology to provide a tool to illuminate the effects of government investment and revenue policy choices on the financial sustainability of the health sector. The financial implications of national policy decisions, such as the recurrent cost burden of additional construction and expansion of health facilities, can be visually displayed.

The model was developed on a Lotus 1-2-3 spreadsheet and is highly user-friendly. Assumptions about population growth rate and other demographic variables, the numbers of health facilities currently in operation, and coverage goals can be entered and changed in the model depending upon the country-specific situation. The results of these variables are graphically displayed.

## How Important is Sustainability in Evaluating Projects?

This document was prepared by the REACH Project Associate Director for Health Care Financing as a background for the discussion around sustainability. The paper underscores that the term "sustainability" has two meanings: 1) the sustainability of outcomes, such as coverage levels or standards of good health; or 2) the sustainability of project/program activities, such as an immunization program or a family planning program. The definition of sustainability that one chooses will determine how sustainability is approached. Sustaining program activities may be easier than sustaining outcomes.

The paper also points out that sometimes project goals are not directly related to sustaining activities or outcomes, such as relief efforts. In addition, the paper states that sustainability is hard to achieve because projects involve levels of resource commitment on the part of the country far in excess of what would have been forthcoming without the project.

## **AFR Bureau**

### Cost-Effectiveness of Immunization Strategies in the Republic of Cameroon

This report discusses the cost-effectiveness of the national vaccination campaign which was launched to improve the immunization coverage rate from an estimated 30% of children less than five years of age. The study concludes that the campaign contributed no more than 12% to total coverage of fully vaccinated children at a cost over 3 million dollars. The cost per fully vaccinated child was estimated to be \$18.93. The report maintains that, although campaigns are undertaken for other than economic reasons (i.e., for political, social, and organizational reasons), more emphasis should be placed on the economic aspects of mass immunization efforts. This consultancy was performed in collaboration with UNICEF.

## Cost-Effectiveness Analysis of Immunization Strategies in the Islamic Republic of Mauritania

This report is one of the first studies comparing the cost-effectiveness of the three principle vaccination strategies in use throughout the world: routine services provided by fixed centers; routine services provided by mobile teams; and a mass campaign held in selected urban cities. The report concludes that routine immunization services provided by fixed centers are more cost-effective at \$4.55 per fully vaccinated child, with the services provided by mobile units being the least cost-effective at \$17.37 per fully vaccinated child. Finally, although the mass campaigns contributed significantly to improving total population coverage, they required a significant amount of resources. The cost per fully immunized child for the campaign was mid-way between those of the fixed facilities and mobile teams (\$8.97). The report provides recommendations for improving the cost-effectiveness of each of these strategies.

## Rapid Assessment: Senegal National Immunization Campaign

This report summarizes the findings and conclusions of a UNICEF Rapid Assessment undertaken in July of 1987 of Senegal's immunization campaign. The report provides a general background to health problems and EPI status prior to the Senegalese campaign, a description of the acceleration phase, an assessment of the acceleration's achievements and costs, and discussions of the lessons learned from the campaign and sustainability of campaign results. A joint UNICEF/AID team was responsible for the assessment.

The total full cost of the campaign was estimated to be approximately 5 million U.S. dollars, and the coverage of fully immunized children only increased from 20% to 35% nation-wide. Therefore, the cost per fully immunized child was high (between \$19 and \$27, depending upon assumptions used). A possible contributing factor to the high cost of the campaign was the use of injectible polio vaccine, which costs \$0.69 per dose as compared with oral polio vaccine at \$0.02 per dose.

## Zaire Health Zones Financing Study

The Government of Zaire currently is undertaking a nation-wide effort to decentralize its health care system to provide more autonomy to local health authorities for raising revenue and determining how it is spent. This report documents the experience of 10 health zones chosen because they could provide the research team with adequate data on their financial characteristics. The results provide valuable empirical evidence on the potential benefits of decentralization and of various cost-recovery methods, and establish a basis for recommendations for the improvement of existing methods.

The health zones were able to finance a significant proportion of operating expenses (depreciation excluded) through user fees, recovering an average of 79% of total operating costs. In addition, the Government of Zaire and NGOs played an important role in financing and/or subsidizing the proportion of operating expenses which were not covered by the zones. Health zones made significant capital investments in 1985 using government and NGO resources (one zone's investments represented 42% of total funds).

However, in about half of the zones, health centers operated at a deficit in 1985, with reference hospital and other centers subsidizing these centers. If health centers were to finance their own investments or to make periodic depreciation allowances to replace their capital stock, they would need additional funds equivalent to over 65% of their 1985 average operating revenue. Reference hospitals had a better cost recovery performance, with one hospital covering nearly 99% of its operating costs. Yet, to replace their capital stock, reference hospitals would require a 14% increase in their 1985 operating revenue. The central administrative office in most zones had to depend on subsidies to finance its operations.

Major recommendations of this study for the Government of Zaire are to 1) promote coordination of activities among health care providers within the zones; 2) provide the zones with additional training programs, especially in the field of management and information systems; 3) grant administrative autonomy to the zones; and 4) maintain current levels of investment and operating subsidies to the zones. Recommendations for the health zones include 1) seek participating and coordination of all activities with all health providers in the zones; 2) improve accounting and information systems of the zones; 3) promote ideas of pre-payment; 4) seek external training for health zone personnel; and 5) hire trained personnel in management and information systems.

#### Zaire Financial Management Information Systems Study

This report presents the results of a study which examined financial management information systems in four health zones. The study was undertaken as part of a joint program of health financing activities developed by SANRU and the REACH Projects to improve the financial sustainability of Zaire's primary health care system.

The four zones studies illustrated different levels of complexity and sophistication in financial and general management practices. The information systems in the zones are bifurcated: one system serves the reference hospitals and the other system serves the central management office and peripheral health centers. Information systems were either centralized or decentralized in the zones studied, and the amount of bookkeeping undertaken in the zones varied. Staff training and performance in financial management varied as well. There was no consistent method of recording and classifying receipts and expenditures: a standard chart of accounts was lacking in nearly every case. Although all zones studied produced cash flow statements, not all of these were of adequate quality.

The major recommendations of this study include: 1) adopt a strong system of financial accounting, characterized by double-entry bookkeeping, accrual accounting, and production of standard financial statements; 2) devote significant resources to upgrading the training of both accounting staff and health zone managers; 3) design and test three stages of FMIS improvements; and 4) implement the FMIS in "teaching zones". The stages of FMIS improvements are outlined in detail in this report.

## **ANE Bureau**

### Indonesia HCF Abstracts

This monograph includes abstracts from five technical assistance activities performed on behalf of USAID/Jakarta. Each report contributes to the USAID Mission's efforts to design a private sector health care financing project in Indonesia. In his paper, Dr. Hunter describes the future roles of ASKES and PKTK in private sector health care financing. Dr. Stevens reports that many inefficiencies exist in the hospital sector and that it is possible to develop opportunities for reallocating funds from curative toward preventive care. Dr. Berman examines information needs for a private sector hospital-based scheme. Dr. Jeffers describes the health legislative process as it relates to the formulation of health policies and laws. Dr. Torrens' report concludes that the private sector project should focus on policy and health insurance development.

### Indonesia: PERTAMINA: The Transition of Employee Health Benefits from a State-owned Industry to the Private Sector

This report contains an analysis of the prospects for "privatizing" PERTAMINA's (the state-owned oil company) health benefits program by developing an HMO through Tugu Mandiri, a life and health insurance subsidiary of PERTAMINA.

### A Business Plan for Tugu Mandiri of Jakarta, Indonesia to establish a Health Insurance and Health Maintenance Organization

This report presents the findings and recommendations of a REACH team of consultants on the feasibility of a third-party payment scheme (HMO) by Indonesia's PERTAMINA. The report maintains that the establishment of an HMO would benefit employees and reduce costs, as well as set an example for the government health sector as a whole. The report outlines a Plan of Action for establishing an HMO using PERTAMINA-operated health facilities. This plan would maintain: 1) the strengths of the existing health care system; 2) a high standard of health care quality; and 3) adequate flexibility for PERTAMINA to adapt the HMO model to their unique situation.

## Indonesia: A Methodology for the Private Sector Resource Mobilization Study

This report provides a methodology for assessing resource mobilization for health services in the private sector. Based on conditions in Indonesia, it suggests the type of information that would be needed, where the necessary information could be found, as well as specific procedures for collecting that information.

## Increasing the Efficiency of Health Services in Indonesia: A Key Strategy for Child Survival

This report describes strategies developed for improving access to health services for the disadvantaged population, and for increasing the efficiency of health services delivery so that more resources could be devoted to PHC in general and, more specifically, to child survival projects. The report maintains that strategies aimed at increasing efficiency and cost recovery in the government in-patient hospital sector is a key means of increasing resources for PHC and Child Survival resources.

## Current Status on Health Financing Programs in Indonesia

This report describes legal and legislative requirements for the MOH's social financing program (DUKM). It also presents recommendations for future action in this arena on the part of the MOH and USAID/Jakarta.

## An Information Component for the Proposed USAID/Jakarta Private Sector Health and Family Planning Project

This report outlines the data and information needs of proposed private sector health and family planning project based on the stated applications for the information components. For each of the three applications -- policy and planning, project development (aimed at testing and disseminating interventions to improve health sector financing and management), and monitoring/evaluation activities-- data needs and sources, as well as key indicators, are presented. The report concludes with a strategy for the information component and possible areas for USAID/Jakarta support.

## Health Care Financing in Indonesia

This report describes and evaluates the status of health care financing in Indonesia. Information for this consultancy was gathered through extensive interviews and data review and synthesis. The report discusses aspects of ASKES, PKTK pilot project, and the private sector in general that may have a significant impact on the success of alternative financing schemes, such as third party payments in Indonesia.

The Impact of Economic Development, Fertility Trends and National Immunization and ORT Efforts on Infant/Child Survival: Thailand and the Dominican Republic

These two reports use a multivariate model to predict the unique contribution of national investments on immunization and ORT to changes in patterns of child survival. The model includes macro-economic variables; prior government expenditures on health education, welfare and sanitation; population birth and growth rates; structural changes based on importation of technology; and selective health interventions, most notably immunization and ORT in Thailand and the Dominican Republic.

Expanding the Medicare System in the Philippines

This report provides a conceptual framework for expanding population coverage in the social security/health insurance system to include not only employees and their dependents, but also the self-employed, the unemployed and other low-income groups. In addition, the report addresses the government's concern over the growing trend in the proliferation of private health care organizations, similar to HMOs in the United States, and their inability to regulate the type and quality of services provided.

The financing of health services in the Philippines is based on an aggregation of different policies pursued by several public and private sector organizations. Given the prevailing inequities in the distribution of income, this results in a financial barrier to a large proportion of the population's access to quality services. The Medicare Program I provides only limited financial coverage to its beneficiaries. In order to improve this system, it was recommended that 1) a price structure be established which will ensure the growing effectiveness of Medicare payments; 2) increase members' contributions by lifting the salary ceiling; 3) standardize the administrative systems used for the populations served; and 4) standardize payments and investment mechanisms.

Cost Analysis of the National Immunization and Control of Diarrheal Disease Programs in the Republic of Turkey

This study was undertaken as part of a joint Government of Turkey/WHO/UNICEF/AID Comprehensive Program Review of the EPI and CDD Programs in Turkey. Three types of cost analyses were performed: 1) costing of the national EPI and CDD programs; 2) evaluation of the cost-effectiveness of each program; and 3) a field survey of 16 health centers to determine factors which influence the cost of the EPI.

The report concludes that the routine EPI is on its way to becoming financially sustainable, given the high level of government commitment (nearly 97% of total full cost). Donor assistance is used primarily to finance the cost of training and vaccine, and the government must find alternative mechanisms for paying for these essential elements of the EPI in the future. By contrast, the national CDD Program is still in the early stages of development, relying more heavily on donor contributions for ORS packets, training, and printing of promotional material.

The full immunization coverage of children between 12 and 23 months was 57% (results of surveys in nine provinces), and the cost per fully immunized child was \$17.08. This figure falls within the range of cost-effectiveness ratios found world-wide. The cost per child treated with ORS (an estimated 4% of total children with diarrheal episodes) was \$9.66, which is higher than the experience of other countries. This figure reflects the initial high development costs and lag in program acceptors.

The facility survey suggested that the wide variation in cost per dose is due to not only the scale of activity, but also variations in the use of transport and personnel for immunization.

#### LAC Bureau

#### A Health Plan for the Banana Control Board/Belize

This study assessed the nature and level of demand for health services within the banana-growing area, the costs of providing a range of services to this previously underserved population, and the financing and provision options available to the banana growers in meeting the defined need.

The report shows that the population in the banana-growing area will increase to over 15,000 by 1991 and that clinic operations will be confronted with a very high demand for services within a very short period of time. The demand data show that there should be a commitment to undertake major facility and staff expansion over the next two years. The cost analysis demonstrated that clinic operations will be highly sensitive to the ability to collect revenue from patients. It is suggested that capital costs be financed by an outside source, while the patient population would be responsible for financing the recurrent costs of operations.

#### Bolivia: Primary Health Care Financing Project Evaluation

This report reviews the implementation of the USAID-funded Primary Health Care Financing Project in Bolivia. The project was designed to improve the delivery and availability of basic health services to low-income rural and semi-urban persons in the department of Santa Cruz, through the participation of local community organizations. One of the principle objectives of the project was to determine the feasibility of establishing self-sustaining primary health care services through private providers.

#### Cost-Effectiveness of Immunization Strategies in Ecuador

This report presents an analysis of the cost-effectiveness of immunization services based in fixed facilities versus those provided through a mass campaign during 1986. Coverage data were derived from a national survey conducted in June 1986 under the auspices of the Ministry of Health, the PREMI project, and in collaboration with several Ecuadorian organizations. Cost results showed that the mass campaign was

significantly more expensive than providing immunization service in fixed facilities. Despite this factor, the mass campaign did make significant contributions to immunization coverage for children under 2 years of age.

#### El Salvador: Health Facilities Rehabilitation Assessment

This report assess the reconstruction needs of El Salvador's health system in the aftermath of the October 1986 earthquake and makes recommendations for the improvement of health services provision. The first highlights areas of concern in El Salvador's current public health system, increasing hours of operation, and rehabilitating health facilities so that care can be provided in the short run. The second presents a detailed background section reviewing the MOH's activities over the last decade, including the factors affecting its performance. In addition, PAHO's design for a health facilities network for the greater San Salvador region is described. Finally, the report discusses issues of construction and operating costs, efficiency enhancement, and revenue generation pertinent to the proposed network.

#### General Principles for Estimating Costs of the Advanced Centers for Primary Health Care, Mexico

This report summarizes the cost elements relevant to carrying out an evaluation of the cost-effectiveness of the CAAPS program in Mexico. This document contains a guide to the principle steps which must be followed in estimating costs of accomplishing program objectives, as well as a framework for estimating the costs of care, including a matrix for human and material resources. Methods for estimating effectiveness of the CAAPS which focuses on different types of care are also presented and discussed.

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**APPENDIX D**

**Examples of Responses from the Evaluation Questionnaire**

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**RESULTS FROM REACH HCF WORKSHOP  
EVALUATION QUESTIONNAIRE**

**QUESTIONS 3 - 6**

CATEGORY	EXPATRIATES %		NATIONALS %		UNABLE TO IDENTIFY %		TOTAL %	
NUMBER OF RESPONDENTS	37		30		24		91	
ORGANIZATION								
Poor	6	16%	0	0%	1	4%	7	8%
Satisfactory	8	22	8	27	5	23	21	24
Good	17	46	18	60	13	59	48	54
Excellent	6	16	4	13	3	14	13	14
Total	37	100	30	100	22	100	89	100
PRESENTATION								
Poor	0	0%	0	0%	0	0%	0	0%
Satisfactory	3	9	5	17	4	18	12	14
Good	16	50	18	60	9	41	43	51
Excellent	13	41	7	23	9	41	29	35
Total	32	100	30	100	22	100	84	100
CASE STUDY								
Poor	11	30%	0	0%	3	13%	14	15%
Satisfactory	12	33	12	40	3	13	27	30
Good	9	24	9	30	14	58	32	35
Excellent	5	13	5	16	2	8	12	13
Total	37	100	26	100	22	100	85	100
KNOWLEDGE GAIN								
Poor	12	32%	4	15%	3	14%	19	22%
Satisfactory	13	35	10	37	5	24	28	33
Good	11	30	11	41	9	43	31	36
Excellent	1	3	2	7	4	19	7	9
Total	37	100	27	100	21	100	85	100

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## Question 7: Sample Responses

What issues were particularly clarified for you during each module of the workshop?

Participants were most responsive to learning about the importance of financing strategies. They appreciated information on the available options, alternative financing schemes, and utilization of resources. Nationals found the exchange of ideas, discussion of issues, and problem solving with their counterparts informative.

Expatriates:

"Options and alternatives available to policy-makers and criteria for making decisions."

"The importance of a systematic approach to the subject and the importance of looking at alternatives in solving the problems."

"A way of thinking about issues. Process of analysis, posing of appropriate questions at each level of program and strategy development."

Nationals:

"The different methods of resolving the issues of financing and of strategies."

"The process of analysis of the question of financing, interventions, and cost-effectiveness."

"The issues to consider when analyzing the cost of health care."

"The different options of financing PHC with advantages to all."

## Question 8: Sample Responses

What issues do you feel were neglected during the workshop?

Individual responses varied but the need for more specific information was expressed often. Participants wanted to learn skills, such as cost effectiveness analysis, cost evaluation and financial analysis. Some participants wanted more information on methods that other countries utilize and "recipes" for meeting financing requirements. n

Unknown:

"A lot of information. I am sorry that all of the information on sustainability and institutionalization of programs was not discussed. For the next time, you should have a structure with examples of other countries."

Expatriates:

"decision-making in choosing a viable alternative"

"A rigorous analysis of what we already know -- both from the field and literature. Not enough emphasis on where we go from here having learned a good bit from both REACH's experience and others."

"The importance of developing country governments to realize the need for HCF notwithstanding underlying policy of free health services."

"Discussion of REACH-assisted programming (achievements lessons learned from Zaire, Mauritania, etc.)."

Nationals:

"In reality the question of efficiency (module 4) was not addressed. We didn't discuss the problems of management that ministers of health meet in providing health programs."

## Question 9: Sample Responses

What recommendations do you have for other workshops"?

Participants liked the exchange of ideas, but felt that more concrete examples would have made the application of the modules to their own situation easier.

Participants benefitted from the experiences of others but would have liked more interaction among the two language groups. Also, more distribution of background information, perhaps some given before the start of the conference would have facilitated the participants in reaching the goals of the workshop.

Expatriates:

"Stick to more case studies using the exposure of the CCCD countries and any other countries with pertinent exposure."

"Draw upon the experiences of countries already working in HCF to provide a frame of reference for those that do not have this experience."

"There are countries with good experiences which can be good ideal cases that can help."

"More emphasis on broader methodological and technical approaches since this is an area where most people have little training/experience. The case study should be more detailed."

Nationals:

"It would have been beneficial to select an option of financing and examine its management for maximizing cost-effectiveness for the benefit of other participants."

"Discuss the actual experiences, (pertinent to financing) ask participants to bring appropriate documentation."

"It would be better to be very clear about the objectives. My impression had been that we would get into some detailed analysis. However, this is not possible with so many people and with the wide-ranging backgrounds, experiences and needs. It should be made clear in the beginning that we will look at the process in general and exchange experiences."

"Given the difficult situation, it was well done -- I don't feel personally that I gained skills. What was useful was the exposure to what others are doing."

**APPENDIX E**

**REACH PUBLICATIONS LIST**

## REACH

### PUBLICATIONS LIST

#### HEALTH CARE FINANCING

September 1988

#### PAPERS:

- 1001 The AID Experience in Health Care Financing, 1978-1986  
(August 1987)
- 0108 ANE Bureau Guidance for Costing of Health Services Delivery  
Projects (September 1983)
- 0215 A Comparative Analysis of CCCD Project Health Care  
Financing Activities (August 1988)
- 1002 Health Care Demand Studies in Developing Countries  
(November 1987)
- 0022 Impact of Economic Development, Fertility Trends, and  
National Immunization and ORT Efforts on Infant/Child  
Survival: Dominican Republic and Thailand, 1950-1982  
(July 1986)
- 1006 Improving Health Through More Effective HCF: The Role of  
the REACH Project (November 1987)
- 1003 Planning the Financing of Primary Health Care: Assessing  
Alternative Methods -- preliminary version (March 1987)
- 1004 The Private Sector and Health Care Delivery in Developing  
Countries: Definition, Experience, and Potential (April  
1988)

#### MONOGRAPH:

- 1005 Indonesia: The Organization and Financing of Health Care  
Services (Summer 1987)

#### REPORTS:

- 0183 Belize: A Health Plan for the Banana Control Board/Belize  
(September 1987)

0067 Bolivia: Primary Health Care Self-Financing Project Evaluation (May 1986)

0180 Burundi: A Study on the Financing of the Health Sector (September 1987) (French and English)

0178 Central African Republic: Cost Recovery in the Central African Republic: Results from Two Preliminary Surveys and Selected Interviews (September-October 1987) (French and English)

0452-A Dominican Republic: A Study of Hospital Fees in the Dominican Republic (October 1987) (English and Spanish)

0010 Ecuador: Cost-effectiveness of Immunization Strategies in Ecuador (August 1987)

0083 Egypt: Drug Study: Child Survival Pharmaceuticals (October 1987)

0125 El Salvador: Health Facilities Rehabilitation Assessment (December 1986)

0046 Gambia: Analysis of Health Services Expenditures in the Gambia: 1981-1991 (June 1986)

0085 Guinea: Pricing for Cost Recovery of Primary Health Care (August-September 1986)

0452-B Honduras: User Fees in Honduran Hospitals and Health Centers: Policy and Experience (November 1987)

0119 Indonesia: A Business Plan for Tugu Mandiri of Jakarta, Indonesia to Establish a Health Insurance and Health Maintenance Organization (June 1986)

0084-C Indonesia: Increasing the Efficiency of Health Services in Indonesia: A Key Strategy for Child Survival (August-September 1986)

0084-B Indonesia: Health Care Financing in Indonesia (September 1986)

0084-A Indonesia: An Information Component for the Proposed USAID Private Sector Health and Family Planning Project: What is Needed, What is Available, How Might it be Organized? (October 1986)

0453-A Indonesia: A Methodology for the Private Sector Resource Mobilization Study (December 1986)

- 0453-B Indonesia: Current Status of Health Financing Programs in Indonesia (December 1986)
- 0213 Jamaica: Privatization in the Jamaican Health Sector (April 1988)
- 0227 Jamaica: Financing Health Care in Jamaica -- preliminary version (June 1988)
- 0467 Kenya: Kenyatta National Hospital Implementation Plan (Available October 1988)
- 0212 Philippines: Evaluation of the Philippine Medicare System (February 1988)
- 0179 Rwanda: Self-financing of Health Care at Government Health Centers in Rwanda (April-May 1986)
- 0152 Senegal: Rapid Assessment of Senegal's Acceleration Phase (Submitted to UNICEF November 1987)
- 0182 Turkey: Cost Analysis of the National Immunization and Control of Diarrheal Diseases Programs in the Republic of Turkey (March 1988)
- 0451-A Zaire: Health Zones Financing Study (June-October 1986) (English and French)
- 0451-B Case Studies on Management of Ten Health Zones in Zaire (June-October 1986) (in selected copies of French version)
- 0466-B Zaire: A 1986 Update of the Zaire Health Zones Financing Study (April 1988) (French and English)
- 0466-A Zaire: Financial Management Information Systems in Four Zairian Health Zones (December 1987) (English and French)

**TECHNICAL NOTES:**

- 0149-A AID Health Projects: Comments on the "Sustainability" Issue (February 1987)
- 0149-B Cost Recovery by Government Hospitals in LDCs: A Key Element in the Strategy to Increase the Commitment of Resources to Primary Health Care (June 1987)
- 2001 How Important is Sustainability in Evaluating Projects? (February 1988)