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The AID Experience in
Health Care Financing
1978-1986

by:

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**Resources for
Child Health
Project**

REACH



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FOREWORD

The United States Agency for International Development (AID) has been actively involved for more than eight years in the area of health care financing. The Resources for Child Health (REACH) Project is a major centrally-funded project designed to lend technical assistance to the Agency's activities in this area. This summary of AID experience in health care financing since 1978 was originally requested from REACH by the Office of Health, Bureau for Science and Technology, in order to serve as background for AID's participation in health care financing, prior to the REACH Project.

To perform this task, the REACH Project asked Dr. Maureen A. Lewis, Research Associate, The Urban Institute, to manage the effort and author the report. Drawing upon the extensive experience and knowledge she gained working for AID in the Bureau for Policy and Program Coordination, she has developed a useful compendium of abstracts of the major activities in which AID has dealt with health financing issues. The REACH Project commends her for her summary of the eight years of AID experience and for her valuable contribution of an "institutional memory" on the subject.

The REACH Project joins her in expressing appreciation to those who assisted in identifying and gathering the relevant documents summarized here: Anne Tinker, Chief, Division of Health Services, Office of Health/S&T; David Eckerson, AFR/TR/HPN; Katherine Jones-Patron, LAC/TR/HPN; Theresa Lukas, ANE/TR/HPN; and Dr. Joe H. Davis, AFR/TR/HPN.

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Over the last decade AID has supported a number of health financing activities. Recently that effort has accelerated and activities are proliferating rapidly. This paper is an attempt to: (1) document what AID has done in the health care financing area; (2) summarize the activities that have been undertaken and what has been learned; and, (3) outline where the gaps are to assist in designing future health care financing initiatives.

Included in this review are projects, project components, research studies, operations research, evaluations, feasibility studies, and important planned activities. Consultant reports have not been included because of the number, variable quality and relevance, and the fact that many do not translate into projects nor do they provide lessons for future activities.

In attempting to produce a complete summary of AID experience in this area, AID files have been searched, and the various projects and studies undertaken in the past few years obtained. As an appendix, each of these activities is abstracted and the objective, methodology, findings and implications are summarized separately. The review here is based on those abstracts.

The categorization of health care financing topics provided in the health care financing guidelines provides a working framework for this review. The four areas are (1) resource mobilization; (2) resource allocation; (3) costs and cost containment; and, (4) organization of the health delivery system.

Before turning to a discussion of these efforts, it should be noted that there are a few projects that attempt to address all of these categories. Most of these are projects with multiple objectives and components. The LAC Regional Health Care Project is broadly conceived to allow the contractor to respond to many kinds of requests and to pursue studies in a number of different areas. S&T/H's Reach project is similarly designed.

Resource Mobilization

Mobilizing resources is the most basic component of health care financing and the one that has received the greatest attention. Typically government health services in most developing countries are "free" or entail a nominal fee that may or may not be collected. A method for moving toward more market oriented health care and increasing resource levels is through the imposition of fees for all or part of medical services, but it is not the only means. Communities can contribute time and physical resources to construct, maintain, or expand health services—efforts which also mobilize resources; also possible is raising taxes or instituting special taxes earmarked for health. Other possible community financing initiatives and examples from country programs are summarized in Scinson (1982).

Demand. Before resources can be generated from users, it is imperative that something be known about a population's ability and willingness to pay for health services and pharmaceuticals. It is an essential step in setting user fees at optimal levels. Even when there is substantial ability and willingness to pay, this information does not necessarily give complete guidance on how much can be charged for services and commodities. The dilemma is that while the system needs the resources, it has equity objectives to meet, and some households are better able to pay than others. Ferreting out and matching charges with ability to pay is cumbersome and unrealistic in practice. Demand studies can help to rectify the problem to some extent by documenting what people are already paying to traditional and modern providers. Such efforts can also help to clarify people's preferences with regard to the type of care they want by observing their behavior, and assist practitioners to determine what services patients are willing to pay for and how to price services

appropriately. National level demand studies on how much people spend for health can be a valuable complement to the project or area-specific expenditure information, and can help planners gain some idea of utilization patterns.

A research study by Akin et al. (1983) summarizes the literature on the subject and both clarifies the definition and documents the multi-disciplinary evidence that exists on health demand in the developing countries. They also outline the economic approaches to analyzing the issue, and undertake an analysis of health demand in the Philippines. Their study suggests that quality rather than price determines where poor households seek health care, and that often multiple sources of care are sought in an effort to obtain results. An ongoing study in Peru applying a recent USAID supported national health and nutrition survey is also analyzing the demand for health services using an econometric model, but their results are somewhat different. Preliminary results for Lima and the Peruvian Sierra (Gertler et al., 1986) shows the importance of price in the decision to use private health facilities and the deterrence of travel time in the use of a public hospital or private clinic. Wealth and education also improve the likelihood of seeking care, particularly private health care.

A Prigor study of one area in Honduras pointed up the importance of quality as a key component of households' willingness to consider paying for health services. Indeed, although most patients in Honduras used multiple sources of health care, they favored private providers simply because drugs and medical supplies were more consistently available. Frequently patients were improperly charged for publicly provided services, ostensibly to cover costs of these essential inputs.

Myers and his Thai colleagues (1985a; 1985b) have examined demand on a more aggregate level and have found that total household health expenditures rose 7.5 percent between 1979 and 1983, a higher proportion than any developed country. Most of this expenditure went for private health care. In Ecuador, analysis of an existing household budget survey (Immink, 1983) documented expenditures on various forms of health care and pharmaceuticals. Expenditure levels rose with income, education and residence in Quito. Surprisingly marginal expenditures go for medical services rather than drugs.

An indepth anthropological study in the Dominican Republic (Ugalde, 1983) used field observation, surveys and interviews in two communities to document patterns of health care usage, constraints to health services access, how effective households were in meeting their health care needs (through medical checkups and lab examinations for a subset of 40 households), and the likely receptivity of residents to prepayment schemes. A good deal of effort was invested in determining willingness to pay. Quality of service appears to affect household's willingness to contribute, and charges for drugs are highly acceptable, particularly since fees ensure reliable supplies.

A Pricor study in Rio de Janeiro, Brazil, attempted to measure demand by asking the community where they currently sought care by the kind of medical problem, and inquiring about income and insurance coverage. The second phase of the project is to implement a package of contributions selected by each community, which will help to support the local health center. Contributions range from agreeing to clean the clinic to paying fees for certain services and activities the community has selected. The follow-up evaluation on how well these contributions have worked and whether they have supported the health program is not yet complete. Similar components of two Pricor efforts in Benin

and Liberia have asked communities about their willingness and ability to cover costs of health care as background to subsequent financing experiments. This method, however, is less desirable than the observation of utilization and expenditures in health care since intent and action often diverge.

Drugs. The highest proportion of total costs in "free" health care are accounted for by labor and drugs. People who do not consult a health provider tend to self-prescribe or consult a pharmacist. Moreover, health workers and clinics without drugs tend to be patronized by very few patients. The perception of the central importance of drugs has led to a number of experiments with revolving drug funds. Studies in Dominica, Liberia, the Philippines, and Thailand all documented the success of these efforts, and where the drugs of choice for the community (Philippines) and management were adequate (Dominica) the funds continued to operate by generating capital through fees. MSH has just begun a drug financing project in the Eastern Caribbean that builds on the Dominica experience and will include additional activities in establishing drug revolving funds. A similar effort in Haiti as part of the Rural Health Delivery Systems project has not yet been evaluated. Revolving drug funds improve pharmaceutical supplies and are relatively simple to operate. The issue of community preferences, management, and in some cases access to foreign exchange are the most common problems facing their establishment.

The pharmaceutical industry on the delivery side has been studied quite thoroughly in Peru (Bates et al., 1983), Egypt (Cole et al., 1985) and Jordan (Cole et al., 1983), and scholarly work on the subject reviewed for the Middle East region (Washuck, n.d.). Pharmacists play a central role in advising clients on how to cope with health complaints. In Peru and throughout the

Middle East, however, pharmacists are in short supply especially in rural areas. All four studies point to the potential value of pharmacists as health promoters and as possible key sources of health care in rural areas, but also note the need and a lack of training opportunities for practicing pharmacists.

Fees. A number of projects have experimented with fees, two of the most successful are in Zaire, where about 25 to 30 percent of recurrent costs are met through fees; Sudan where a program in Central Region is covering 30 percent of regional operating costs; and, Benin where half of operating costs are paid for through fee-for-service revenues. The surprising success of the Basic Rural Health Project (SANRU) in Zaire is attributable to the design of the government's zone system where each zone is managed semi-autonomously by a hospital, typically operated by a FVO, that is responsible for satellite health centers. More importantly, charges are imposed for drugs, and some health provider salaries are tied to utilization since fees cover (some) salaries. The imposition of fees in Sudan has improved quality of care mainly because health workers or hospitals can retain the collected fees, thereby providing an incentive to keep clients and collect revenues.

Niger has always had fees attached to government services, including drugs dispensed by community health workers; however, the system has not functioned well and the anticipated drug revolving fund has not materialized due to decapitalization. Reforms are under investigation for consideration under the new health program grant, which will have a strong health care financing focus.

In both Sudan and Niger an alternative pharmaceutical source has been established that functions as an ongoing business concern but is subsidized either through provision of drugs (essentially a social marketing model) or ticket-books that supplement the patient's payment. In both countries this

market-oriented subsidy is becoming increasingly popular and is spreading rapidly. In Sudan, AID's Rural Health Support Project has aided and abetted this expansion.

Pricor has supported a study to assess the various payment schemes introduced in Zaire, and concluded that charging fees increased utilization of preventive care with no effect on curative care demand. The evaluation of the payment schemes is not yet complete, although preliminary results suggest conflict in preferred approaches between health workers and patients. The impact on utilization, cost recovery, efficiency, or service quality were not evaluated, however.

As part of its costing exercise in Togo and Zaire, the CCCD project has encouraged cost recovery to augment MOH resources. Drug revolving funds, sale of vaccination cards (Togo), and community financial responsibility have been experimented with generated funds to cover recurrent costs. None has yet been evaluated.

Despite the experience, these efforts have not yet provided consistent guidance on when to charge, how to structure charges, or what to charge for, other than drugs. These issues bear further attention. Moreover, given evidence elsewhere, as well as the conclusions here that fees generally do not cover all costs even all recurrent costs, fees should be seen as one component of a health financing initiative.

Resource Allocation

How resources are allocated shapes a country's health system. Allocation decisions have strong effects on who receives care and of what kind. Typically LDC Governments allocate most of their health resources to hospitals. PHC has often been supported by donors or by modest increases in ministry of health budgets.

Knowledge regarding how the ministry of health is spending its resources may engender change, since actual expenditures are often not considered by health decisionmakers and their revelation may encourage more systematic allocations. At least it provides the means for effective decisionmaking. Even WHO attempts to cost out national health programs by examining budget figures rather than actual expenditures. However, efforts to determine where funds come from, what they are ultimately spent on, and what impact these allocations (and programs) have is crucial to planning and to the efficient use of resources.

A number of separate efforts are ongoing on this subject within AID projects. The Prigor project in Dominica, the Niger preparation for the program grant, a recent LAC supported workshop in Jamaica, and a pre-project feasibility study in the Eastern Caribbean have all examined government resource allocations to some extent. In most cases the emphasis has been on recording actual expenditures and reforming the budgeting process to more nearly approximate expenditures. Typically budgets and resource allocations are independent of one another. In all cases this process is ongoing and no conclusions have emerged other than the obvious need for attention in this area.

A recent joint Pritech/Reach Project activity in Morocco points up the value of even having "indicative" information on how resources are allocated and what they produce. The team, in its "indicative survey of health financing" was able to provide the government with information regarding resource allocation within their current system and the existing implicit incentives, and was thus able to help highlight its weaknesses and problems.

In Honduras, budgetary tightening led to a successful policy dialogue that postponed and eventually modified a hospital construction plan. The ongoing MSH project in Honduras developed a cost projections model for use by USAID and the ministry of health that set out the recurrent cost implications of the planned hospital construction loan agreement with the Inter-American Development Bank and the likely resource levels from all sources. The loan would have built ten new hospitals, however, only one ever reached completion. The timely and persuasive cost analysis along with associated intensive discussions among the donors and the government produced a significant shift in government investment and prevented expansion of an additional long term financial burden for the government, although the evidence and dialogue were unable to eclipse the pending agreement completely.

The study of social security systems is also relevant to resource allocation since such a large amount of money is poured into these systems, especially in Latin America. The newly launched LAC Regional Health Financing Project will be addressing some of these issues, but the specifics are yet to be determined. The topic is addressed further in the section on the organization of health systems below. The Bureau has also reviewed the entire social security system in Latin America.

The sensitivity of allocation decisions to health status has been examined by two AID supported studies, one for Colombia (Barnum et al., 1980), the other for Indonesia (Grosse et al., 1978). Although data were of uneven quality, both efforts demonstrated the value of understanding the effectiveness of different interventions and their costs in designing programs. Some interventions are more effective than others in reducing morbidity and mortality, and some of the least effective are costly.

Where resources are scarce, some planning, an understanding of where resources are currently going, how different programs will affect health, and the cost of different interventions will facilitate efficient resource allocation and reduce waste. Interventions range from indepth studies and data collection to the simple "indicative review" or the assessment of a particularly important area such as that in Honduras over hospital costs.

Costs and Cost Containment

The largest gap in the health financing are is the overwhelming lack of data on costs. This gap, however, is not unique to AID activities. Little good data exist that can meaningfully help the planning and financing process, although it is a central component of actions in this area. Costs represent the actual amounts of resources (time, commodities and money) allocated to any particular activity. Thus the cost of an immunization program is the sum total of the donor money, the value of existing infrastructure and services used (e.g., the time of medical teams, clinic space, etc.), the vaccines and supplies, and any transportation or administrative time. By contrast, the budget will often have line items such as "immunizations" which reflect the amount that that category of activity should receive; however, as in any government, that amount may not be spent on immunizations at all. Indeed, in a number of countries budgets bear no relationship to actual resource allocations much less to actual expenditure levels. Actual expenditures only represents the operating fund for immunizations, it does not include the costs associated with multi-purpose staff and facilities, slush funds or the value of any donations. Thus budgets, expenditures and costs are not substitutes and reflect very different financial categories.

Gaspari (1980) has set out the theoretical issues related to costing out programs. Barnum et. al (1978) pieced together available information to estimate likely costs of services in one area of Indonesia. Grosse et. al (1978) conclude that better cost and effectiveness data are essential if resource allocation simulations are to be incorporated into the government's planning process.

The CCD project has systematically costed out the recurrent costs of its ORT and immunization efforts using a standard approach developed by Davis (1983) that records the time, transport, vaccines and other supply costs, and differentiates costs across locations. The exercise, already underway or completed for Malawi, Togo, Swaziland, and Zaire, should provide valuable cost data on these interventions and could be useful in measuring costs change over the life of the project and differ across settings. A Pricor study in Senegal has attempted to collect cost information but inappropriate collection methods have thwarted initial efforts. A revised process is, however, in the planning stages. Additional costing efforts have been attempted or are ongoing under Pricor supported studies in Zaire and Haiti. The revolving drug funds already discussed have in some cases collected cost data on this one component of health care.

Cost containment is an issue of greatest relevance to hospitals where the bulk of government health resources are spent. How to establish incentives to hold costs down and to raise worker productivity have not been major concerns of AID's PHC-focused health program. However, this topic is critical to mobilizing resources. In the U.S., costs have been brought down and increases arrested through incentives to control costs. Portugal is expanding an earlier pilot effort to revamp the costs and quality incentives facing hospital managers so as to reduce costs and enhance productivity. Bekele and Lewis

(1985) show the savings in rural Sudan in response to cost containment initiatives in the regional hospital. No other efforts have yet been launched in this important area.

Another aspect of costs is productivity. If worker productivity increases, costs per unit of output fall thereby stretching resources. A Jamaica study constructed cost and productivity indices to measure government health center efficiency and observed wide variation in both. Such information can be invaluable to streamlining operations and cutting costs. If nothing else, such a study can identify where there are weaknesses or examples of excellence.

Because of its importance to the other portions of health financing, better cost information is essential. Resource allocation, raising funds for the sector, and knowing where to cut costs or establish incentives to lower costs all hinge on having reliable cost information at hand. Those data do not yet exist.

Organization of Health Services Delivery System

This category of activities in health financing has received by far the most activity in AID, largely because private sector activity has been grouped under this heading. How health services are delivered and organized by the government affects the cost, efficiency and effectiveness of the health system. Most governments in the developing world, particularly those assisted by AID, have embraced a government provision, free service model. A few countries, have experimented with voucher systems (Thailand, see Meyer et. al, 1985), and Brazil has implemented a system similar to that of the U.S. where private providers are reimbursed for services delivered; Malaysia is considering such a system; and AID is assisting Portugal in establishing and implementing a diagnostic related groups (DRG) system patterned on the U.S. experience.

The private sector, however, is generally considered peripheral and little is known about its role, size, or clientele. Collaboration between public and private sectors is infrequent beyond the pharmaceutical areas already discussed.

Raymond and Glauber (1983) set out options for greater private sector involvement in health care delivery, and for expanded public-private collaboration. This broad study discusses the nature of possible public-private relationships and how such arrangements might be established in the Middle East. Bekele (1984) surveys the private health sector in Sudan where private sector suggests otherwise, however. An Ecuadorian study by Habis (1982) enumerates the size of the private health sector, and recommends general ways of harnessing that resource for public objectives. The African Private Sector Research Retrieval and Analysis project assesses the size and potential of the private health sector.

A number of countries are also searching for alternative structures to finance health privately. A workshop in the Philippines explored the feasibility and promise of developing HMOs. An indepth study in the Eastern Caribbean assessed the feasibility of prepayment there. A contingent from the Indonesian MOH and health managers from the Indonesian oil parastatal Pertamina visited key HMO centers in the U.S. under the REACH project to assess relevance of HMOs and review the experience of U.S. companies. A similar visit by a team of Moroccan officials concluded that a more pressing need for the government was improved resource allocation and management rather than private HMO-type health care.

USAID/Quito supported an inventory of private sector activities to determine the need for additional and alternative health services. This feasibility study was meant to feed into the mission's overall interest in promoting private sector investments in the sector. A broader and very good study by MSH examined the roles of pharmacies, PVO's and cooperatives in Peru

as background to mission consideration of support for helping coops include health care delivery in coop benefit packages. The study explored health coverage, service components, expenditures, and the operating climate for similar efforts. The Philippine Health Care Financing Project also aims at experimenting with alternative schemes for raising funds and supporting health care, but on a community rather than a national level. To date, grants have been given to private groups to assess what initiatives might make sense in this area.

Two studies, one in the Dominican Republic (Ugalde, 1983), the other in Honduras under a Pricor grant (MSH, n.d.) were meant to evaluate the possibilities of prepayment and other financial alternatives in supporting health care. Both reviewed the demand for health at some length and concluded based on minimal information that prepayment would be an alternative worth pursuing; the Honduran study also suggested cost recovery initiatives at the hospital level. Liberia and Benin on the other hand have had communities reject the prepayment concept from the onset. A Pricor study in India on the structure and operation of cooperatives is ongoing but could provide valuable information on the role of prepayment in rural settings. A newly established project in Bolivia is attempting to assist cooperatives develop health care components as part of their package of services.

A recent study of HMOs and HMO-type arrangements in Latin America by GHAA indicates that such arrangements are not uncommon in the region although their structure, size, and degree of government involvement vary widely. It is interesting to note the reason given for the proliferation of these private systems: oversupply of physicians. The study further noted the impediments to the expansion or supply of these private arrangements: insufficient experience

and management expertise, and lack of capital. Zukin (1985), under contract to LAC Bureau, has developed guidelines on assessing the feasibility of HMOs in a given context. Ramey (1985) complemented that report for the LAC Bureau by assessing the relevance of market forces and circumstances needed for successfully implementing prepaid health plans in developing countries.

Zschock (1983) has reviewed the nature and status of social security systems in Latin America and detailed the sources of revenue, expenditures and major costs. The study also points out the glaring gaps in knowledge and the need to provide better information about social security systems and their operation on a country level.

Insurance and its role in financing health has not been given much attention. A recent review for the Jordanian government by the Health Management Group (1982) and a subsequent report by Ferster (1985) on health insurance evaluates not only the potential for national health insurance, but sets out some of the options on how much an initiative might be structured and areas where additional work is needed to provide the government with the necessary information to make decisions on this issue. The Portuguese experiment and the expansion (detailed below in the abstract "Health Care Financing in Portugal) into a nationwide system is a model effort to come to grips with a whole delivery system and how it is financed.

There are only AID supported studies that are concerned with the structure and organization of health financing and health care. The topic deserves further attention, especially since private and public insurance can be important means of promoting private sector involvement in health care delivery. Moreover, government regulation and cost containment incentives to the private sector are key to containing costs.

Summary and Conclusions

AID has undertaken a broad range of activities in health care economics and financing. This compendium provides a guide to what has been done, ideas that have been generated, and to some extent the value of the experiments. The detailed abstracts provide additional information on the items discussed here.

The gaps in knowledge have been suggested in the text, and although most of these are generic, most are important enough to warrant consideration in most country contexts. For instance:

- cost data are relevant in every situation if countries and donors are to understand what they are spending for what kinds of services;
- information on current and ideal resource allocations are needed to achieve policy objectives; this also bears on the issue of health care organization and delivery systems;
- private sector activity: current role and scope for broader or additional roles, and information on how to best integrate and harness the private sector;
- increasing efficiency at the hospital and clinic level; there are more resources and probably more waste in hospitals;
- assessment of the ability and willingness to pay for health care and drugs, to determine what items to price and how much to charge, as well as the equity effects of government expenditures in health;

How relevant any of these are in any given context will obviously vary and needs to be considered on a country-by-country basis. It is clear, however, that country level experience is invaluable in guiding future work both with

regard to actual implementation and additional studies. The A.I.D. experience will be valuable beyond just the Agency itself.

REFERENCES

- Akin J., C. Griffen, D. Guilkey and B. Popkin (1984). "Demand for Primary Health Services in the Third World." Mimeo.
- Barnum, H., R. Barlow, L. Fajardo and A. Pradilla (1980). A Resource Allocation Model for Child Survival. Cambridge, Mass.: OG&H.
- Bates, J., J. Burns, P. Cross, G. Gereffi, C. Keaty, and P. Prentiss, (1983). "Investigation of Health Service Delivery in Three Elements of the Peruvian Private Sector" (November).
- Bekele, A. and M. Lewis (1985). "Financial and Resource Management in PHC: Sudan Case Study." Mimeo
- Bekele, Abraham (1985). "Health Care Financing in the Central Region." Report to PPC, (October).
- Bekele, Abraham, and Maureen A. Lewis (1986). "Financing Health Care in the Sudan: Some Recent Experiments in the Central Region." International Journal for Health Planning and Management (January-March) Vol. 1, No. 2. Oxford University Press.
- Blumenfeld, S.N., T. Osteria and I. Siason (1986). "Community Financed Drug Boticas in the Philippines." PRICOR Study.
- Chirinos, Octavio et al (1986). "Financiamiento y Costo del Sector Salud." Documento Tecnico Preliminar Componente No. 6, (July).
- Cisse, Mahamondon (n.d.). "Evaluation of Rural Health Project".
- Cleland, Catherine (1984). "Possibilities for HMO-type Organization in Less Developed Countries" by HHS, (October).
- Cole, H., R. King and S. Sukkary (1982). "Pharmacists, Pharmacies, and the Pharmaceutical Sector in Jordan: Implications for Basic Health Care." The Futures Group, (January).
- Cole, Henry E., Robert H. Smith and Sohair Sukkary (1983). "An Overview of Pharmacies, Pharmacists and the Pharmaceutical Distribution System in Egypt." The Futures Group.
- Cross, Peter and H. McIntyre (1986). "Research Protocol on Community Financing" (March).
- Cross, Peter and H. McIntyre (n.d.). "Implementing a Revolving Drug Scheme for Dominica, Project Summary." PRICOR mimeo.
- Davis, Joseph (1983). "Guidelines for Cost Analysis of CCCD Projects." Mimeo.
- Elkins, Henry. Interim reports.

- Fexster J. with S. Goohope (n.d.). "An Economic Financial and Organization Prefeasibility Framework for Developing a Comprehensive National Insurance System for the Hashernite Kingdom of Jordan."
- Gaspari, Celeste (1980). "The Cost of Primary Health Care." Mimeo (December).
- Gertler, P., L. Locay and W. Sanderson (1986). "The Demand for Health Care in Peru: Lima and the Urban Sierra, 1984" (Draft).
- Gray, Clive (1983). "Community Financing of PHC in Rural Areas of Senegal's Sine Saloum Region," HIID (October). A report by PRICOR.
- Gray, Clive. "A Report to PRICOR." September 1983.
- Grosse, R. N., J. L. deVries, R. L. Tilden, A. Dievler and S. R. Day (1979). "A Health Development Model Application to Rural Java." Draft (October).
- Habis, Antoine M. (1984). "Private Sector Health Assessment" (January). Mimeo.
- Harrison, Polly (1984). "Proceedings: Health Officers' Conference, Bureau for Latin America and the Caribbean." Workbook with all the papers from the conference.
- Health Management Group. "Alternative strategies for a National Health Insurance Plan for Jordan: Findings and Recommendations" (November). Mimeo.
- Immink, Maarten D.C. (1983). "Food and Health Expenditure Patterns in Urban and Rural Ecuador: Analysis of Household Budget and Survey Data." APHA report (November).
- Jeffers, J., T. Wineberg, C. Cleland, and A. Bekele (1984). "Health Sector Resources Management, Improved Health Resource Management Component." Project 338-0069.
- John Snow, Inc. (1985). "Mid-term evaluation for Philippine Primary Health Care Project" (December).
- MSH and MOH/Honduras. "Final Report on the Study of Financial Alternatives to Support Extension of Basic Health Services in Honduras."
- Meyer, Jonathan (1985). "Household Survey of Health Expenditures: Mali" (August). JDM Consultants.
- Makinen, Marty (1984). "Financial and Economic Consultant CCCD Project Zaire" (July).
- Musgrove, Philip (1985). "Informe Preliminar" ANSSA-Peru Documento de Trabajo, (July). Mimeo.
- Musgrove, Philip (1986). "Measurement of Equity in Health" (March). Mimeo.

- Myers CN, Causino N, and Mongkolsmai D. (1985). "Finance of Health Services and Medical Care in Thailand." PRICOR report.
- Myers CN, Khumthong C, Siripirom C. (1985). "Community Finance of Primary Health Care in Thailand." Paper presented at the APHA Annual Meeting, (November) Mimeo.
- Norris, J., A. Fairbank, S. Raymond, H. Hunter, and M. O'Byrne, (1986). "An Indicative Survey of Health Services Development in the Kingdom of Morocco: A Report to the Minister of Public Health" (January).
- PRICOR (1984). "Project Evaluation Summary, May 1985 and SANRU Activity Report" (April).
- Project Hope (1985). Summary of Proceedings of Workshop, Jamaica.
- Ramey, Thomas C. (1985). "Prepaid Health Insurance Plans in the International Setting: Market Forces and Steps to Implementation." Health Central International.
- Stinson, Wayne (1982). "Community Financing of Primary Health Care." Primary Health Care Issues, Series 1, No. 4. APHA. Washington, D.C.
- TRITON (1985). "A Feasibility Study and Development Plan for a Private Alternative Health Service Delivery Model in Ecuador." Final Report (July).
- The Group Health Association of America, Inc. (1985). "Managed Prepaid Health Care in Latin America and the Caribbean: A Critical Assessment" (September).
- Uber-Raymond, Susan and Anne Glauber (1983). "Beyond the Public Prescription: Private and Public Roles in Near East Health" (July). Center for Public Resources.
- Ugalde, Antonio (1982-3). "Report for the Feasibility Study of a Prepayment System for Primary Health Care in the Dominican Republic," First, Third, and Fourth (Final) Reports.
- Washchuck, Gail A. (n.d.). "The Role of Pharmacists and Pharmacies in the Provision of Health Care in Six Near East Countries." The Futures Group.
- Zachariah, Bobby and Patricia Desai (1986). "Improving Health Worker Productivity through Operations Research." PRICOR Paper.
- Zschock, D. (1985). "Medical Care Under Social Insurance in Latin America: Review and Analysis." Paper prepared for LAC/DR/HN.
- Zschock, Dieter (1986). "Medical Care Under Social Insurance in Latin America." Latin American Research Review, V. 21, No. 1.
- Zukin, Paul M.D. (1984). "Guide to the Assessment of Health Maintenance Organization (HMO) Feasibility," (October). Health Management Group, LTD.

Worldwide

The Cost of Primary Health Care

Demand for Primary Health Services in the Third World

Guide to the Assessment of HMO Feasibility

Possibilities for HMO-Type Organizations in Less
Developed Countries

Prepaid Health Insurance Plans in the International
Setting: Market Forces and Steps to Implementation

Africa

Private Sector Research Retrieval and Analysis Project

Costs of CCCD Projects in Malawi and Swaziland

Community Financing Schemes in Benin

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The Role of Pharmacists and Pharmacies in the Provision of
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Alternative Strategies for a National Health Insurance Plan
for Jordan: Findings and Recommendations

Pharmacists, Pharmacies, and the Pharmaceutical Sector in
Jordan: Implications for Basic Health Care

Indicative Survey of Health Care Financing: Morocco

Latin America and Caribbean

Managed Prepaid Health Care in Latin America and the Caribbean:
A Critical Assessment

LAC Health Officers' Conference, Gettysburg, PA

Medical Care Under Social Insurance in Latin America:
Review and Analysis

Community Financing and Health Service Coverage in
Rural Communities, Bolivia

Self-Financing Primary Health Care: Bolivia

Community Health Workers, Community Water Supply Financing,
Brazil

A Resource Allocation Model for Child Survival, Colombia

Prefeasibility Study of a Prepayment System for Primary
Health Care in the Dominican Republic

Health Sector Resources Management, Eastern Caribbean

A Feasibility Study and Development Plan for a Private
Alternative Health Service Delivery Model in Ecuador

Bringing Health to Ecuador's Poor Through Private Sector
Initiatives

Implementing a Revolving Drug Scheme for Dominica

Food and Health Expenditure Patterns in Urban and Rural Ecuador:
Analysis of Household Budget Survey Data

Study of Financial Alternatives to Support Extension of Basic
Health Services in Honduras

Health Sector I, Honduras

Workshop on Alternative Health Financing and Delivery Systems
For Jamaica

Improving Health Worker Productivity Through Operations Research,
Jamaica

Demand and Utilization of Health Services in Peru

Investigation of Health Service Delivery in Three Elements
of the Peruvian Private Sector

ABSTRACTS: WORLDWIDE

Project Title: The Cost of Primary Health Care

**Umbrella Contract/
AID Funding Office:** PPC/PDPR

Nature of Activity: Evaluation Methodology

Country: N/A

Contractor: Celeste Gaspari

Status: Reporte Completed 12-1980 (27pp.)

Description of Project:

This project seeks to provide the health planner and project evaluator with a conceptual framework that would lead to a logical ordering of priorities and considerations, as well as other aspects of cost estimates that should be considered, included, or questioned. The analysis avoids numerical benchmarks and instead presents a conceptual and schematic discussion of the complexities and interdependencies involved in costing health projects. The paper argues that there are no short cuts or "cut-off" numbers which can be given or which should be applied. Numerous differences, ranging from project infrastructure to cost accounting methods, ensure that project evaluation must be specific to each project while located within the logical framework presented.

Methodology/Project Approach:

The study presents a theoretical argument against any simple costing method while developing an overall framework for conceptualizing costing approaches. The study presents the Sine-Saloum Rural Health Care Project in Senegal as a case study and presents an extensive bibliography on cost evaluation and effectiveness.

Findings/Output:

The study finds no simple method of costing and comparing projects because, it argues, none can be found. At the simplest level, even basic definitions such as "primary health care" are not unambiguous. Primary health care projects take place within an overall development context in varying national contexts. As an overall guide, the study proposes considering a matrix of project costs on the basis of function including direct and indirect, one-time and recurrent costs.

Implications/Next Steps:

Evaluating costs according to "cost per individual served" is neither a realistic nor reliable guide to program evaluation. Rather, projects should be grouped by range and scope of coverage and costs should be compared within those groups. The study suggests developing a catalogue of comparative

studies grouped according to: providing similar care, duration, similar population, and comparable stages of national economic development. The evaluator can then compare costs within groups according to a standard list of questions derived from the framework presented in the paper. In this way, some systematic form of evaluation can be applied to all projects.

Source: "The Cost of Primary Health Care," by Dr. Celeste Gaspari, December 1980.

Project Title: Demand for Primary Health Services in the Third World

**Umbrella Contract/
AID Funding Office:** AID/PPC

Nature of Activity: Research Project

Country: General -- Filipino case study

Contractor: Carolina Population Center

Status: Report Completed 1984 (395 pages)

Description of Project:

This study provides a comprehensive description and analysis of the use of primary health care (PHC) services in Third World countries. By focusing on the demand side of PHC consumption, the study unravels several myths built into international donor community project design philosophy. For example, the village health worker-community involvement model, intended to fill a vacuum in basic services, frequently encounters a competitive private health network including a spectrum of traditional providers. Understanding this broader medical network and exploring all the variables involved in selection and utilizing PHC facilities, this project develops and estimates a thorough and sophisticated economic model to explain medical care consumption patterns.

Methodology/Project Approach:

The work proceeds along three levels of analysis. First, the report reviews evidence on patterns of use of PHC services and outlines a framework of factors hypothesized to determine the demand for health care. Second, the report reviews the literature or economic models of the demand for health and develops a sophisticated multivariate model incorporating hypotheses about factors ranging from demographics to income level to cultural beliefs. The third model is then applied in a detailed case study of costs in the Bicol region of the Philippines. An extensive bibliography of relevant literature is included.

Findings/Output:

The study challenges many of the assumptions implicit in the PHC program supported by the international donor community by presenting a detailed picture of demand for health including variables such as pricing, financing issues, clients' income, and other non-economic determinants. For example, the study notes that sick individuals mix the services of traditional, public modern, and private modern practitioners with very little prejudice. The evidence also suggests that pharmacies are a popular source of informal care and that perceived quality of care may be an important element in determining use patterns. Numerous factors coincide in determining demand apart from the simple provision of "free" services in a rural clinic. Examining the package of real and perceived costs of seeking medical care suggests the importance of

quality of services over quantity and that perceptions of quality are more often attached to facilities or types of facilities than to individuals. The study also found that there was continued use of traditional healers even when inexpensive modern medical resources were readily available. Finally, in the Philippine case, unexpected consumption behavior resulted from the government's strategy of building free clinics for the poor: wealthier households which could have afforded to pay used the clinic rather than the very poor who were deterred by various non-economic factors.

Implications/Next Steps:

PHC programs should be designed to conform, at least in part, to existing patterns of demand behavior. The study rates that medical service use is sensitive to perceived quality and to the delivery of effective curative care. Project implementation thus should build on the felt need for curative care rather than the much weaker demand for preventive services while aggressively delivering care to the poor who tend not to use government facilities in the intended proportions. Taken together, the evidence presented in the study suggests that PHC financing may be easier than conventional wisdom has allowed. User fees, coinsurance mechanisms, cooperative financing arrangements, and HMOs may all have value in the Third World context. This study demonstrated a demand structure for PHC. Partial or full self-financing of local PHC projects would reduce dependence on donor funds for survival and generate revenue to increase quality.

Source: "Demand for Primary Health Services in the Third World" by J. Akin, C. Griffen, D. Guilkey and B. Papkin, 1984.

Project Title: Guide to the Assessment of HMO Feasibility

**Umbrella Contract/
AID Funding Office:** LAC/DR

Nature of Activity: HMO Implementation Guide

Country: n/a

Contractor: Health Management Group

Status: Completed 1985 (122 pages)

Description of Project:

Guide to the necessary steps needed in establishing an HMO.

Methodology/Project Approach:

Steps and action required in establishing an HMO.

Findings/Output:

This guide to HMO feasibility is conducted in five phases. Phase I is a preliminary assessment carried out by a physician and a health care financial specialists to determine a client's interest and needs with respect to establishing an HMO. Phase II consists of five parts. First, the legal feasibility study establishes the legal authority that allows the development and operation of an HMO. The next step is the design of health services and delivery systems through a comprehensive planning process. The marketing feasibility study requires the selection of a service area, development of objectives, and marketing plan. The financial feasibility study specifies the anticipated costs of the proposed program, i.e., costs of start up and operations over a five year period. The organizational and management feasibility study points out areas where competency must be demonstrated, such as building a strong board of directors, assessing staffing needs, and initiating long range planning process to accommodate change and growth. In phase III, there is a coordination of enrollment, medical, financial and management groups to assure commencement of operations on target date. Phase IV is actual implementation, while phase V is for evaluation and revision of the program.

Implications/Next Steps:

The development of a satisfactory scope of services is easier when the proposed HMO is based on an already existing hospital with some salaried staff. An adequate economic base of the service area and a sufficient number of members are the most critical elements in establishing the feasibility of an HMO. HMOs may exert competitive pressure on fee-for-service providers and insurers. The guide does not include the factors which must be asserted in deciding whether an HMO makes good economic sense.

Source: Guide to the Assessment of Health Maintenance Organization (HMO) Feasibility by Paul Zukin, M.D., Health Management Group, LTD.

Project Title: Possibilities for HMO-Type Organizations in Less Developed Countries

**Umbrella Contract/
AID Funding Office:** LAC/DR

Nature of Activity: Design for HMO Feasibility Assessment

Country: All LDC in particular Dominica, St. Kitts, St. Lucia, Montserrat

Contractor: RSSA

Status: Completed (31 pages)

Description of Project:

This paper provide a description of health maintenance organization (HMO)-type entities to assist in evaluating the feasibility of starting an HMO in a new setting. The difference between an HMO-type organization and a typical Ministry of Health (MOH) managed health services delivery system are discussed, terms are defined, and guidelines for analyzing the existing financing and delivery system in a Less Developed Country (LDC), specifically Dominica, St. Kitts, St. Lucia, and Montserrat, are provided. Different development strategies are discussed.

Methodology/Project Approach:

The feasibility evaluation presents five different options for HMO development. These are (1) Segregated system, privately managed (2) Segregated system, publicly managed (3) Restructured system, privately managed (4) Restructured system, government managed (5) restructured system, quasi-government managed.

The four parts, or subsystems of the HMO-type system are: a financing scheme, an organized delivery system, a supportive political environment, and a sponsoring entity. Replicating an entire HMO system may be impractical in a particular country, but parts of the system can be implemented to achieve specific objectives.

Findings/Output:

Implications/Next Steps:

Source: "Possibilities for HMO-type Organization in Less Developed Countries" by Catherine Cleland, HHS, October 1984.

Project Title: Prepaid Health Insurance Plans in the International Setting: Market Forces and Steps to Implementation

**Umbrella Contract/
AID Funding Office:** LAC/DR

Nature of Activity: Assessment for HMO Development

Country: n.a.

Contractor: Health Central Medical Trading Company

Status: Completed (50 pages including cartoons)

Description of Project:

This is a presentation to explore the considerations which guide the decision making process of a U.S. company as it considers the international business environment. It then presents the criteria for pursuing the establishment of an HMO in third world markets.

Methodology/Project Approach:

The presentation discusses the following issues in relation to the business-based approach to HMO development: (1) incentives, risks and rewards for U.S. companies investing overseas; (2) determining the appropriate environment; (3) the role of the host country as a partner; (4) addressing the financial challenge of third world market conditions; and (5) the business approach summary. The presentation then discusses the development of an HMO including: (1) basic features of a typical plan (2) starting an HMO (3) risk management (4) conflicting tensions in HMO development in developing countries. And finally the presentation discusses opportunities for the public/private approach to HMO development in developing countries.

Findings/Output:

Implications/Next Steps:

There is considerable risk in investing and operating in the international environment. Moreover, HMOs are complex entities and must operate in a different but equally complex environment. Nonetheless, HMOs offer exciting possibilities and there is considerable scope for adaptation of the model in the CDC contest

Source: "Prepaid Health Insurance Plans in the International Setting: Market Forces and Steps to Implementation" by Thomas C. Ramey, HCI

ABSTRACTS: AFRICA

Project Title: Private Sector Research Retrieval and Analysis Project

**Umbrella Contract/
AID Funding Office:** AFR/TR/HN

Nature of Activity: Overview of Available Information in Eight African Countries

Countries: Rwanda, Somalia, Upper Volta (Burkina Faso), Niger, Senegal, Liberia, Sierra Leone, and Swaziland

Contractor: JDM Consulting Group

Status: Completed June, 1984

Description of Project:

The project developed eight case studies and an overview paper that reviews what is known about the private sector in health, what kinds of care most people use, and speculates on ability and willingness to pay. The paper also provides a sample questionnaire for suggested use in obtaining better information on willingness to pay for services.

Methodology/Project Approach:

Information was collected in-country, relying largely on papers prepared for other purposes (eg., private enterprise overviews, population feasibility and evaluation efforts, anthropological studies) because of the lack of health-specific information in most countries. The information was then used to point out the gaps in knowledge that impedes better host country policies on utilization of fees and the design of appropriate private sector projects in health. Indeed, only Senegal had any relevant data on willingness to pay and health consumption patterns.

Findings/Output:

The project highlights the lack of information, recommends a household level survey that will shed light on the demand for modern health services in any given country, and provides a model questionnaire for possible application in the region. The objective of the next step would be to undertake low cost, modest surveys that could quickly and inexpensively address the health care demand issue.

Implications/Next Steps:

The studies are only somewhat helpful, partly because of the lack of hard information and the need to borrow from tangential evidence from each country. The author argues for demand surveys in these countries, using as evidence the useful information collected in the Philippines by Akin et al. (see study in this volume) and Malaysia by Heller. Both these studies involved major investments to produce their results. While useful they are not the best starting point for the scaled down efforts envisioned in this study.

The summaries are somewhat confused between looking at the private sector and assessing demand for health. The questionnaire is inappropriate from a technical standpoint, and incomplete for its suggested purpose.

Sources: "Private Sector Research Retrieval and Analysis Project: Somalia," October 18, 1983, NTIS Accession Number JDMCG/TR-83/1.

"Private Sector Research Retrieval and Analysis Project: Liberia," November 29, 1983, NTIS Accession Number JDMCG/TR-83/2.

"Private Sector Research Retrieval and Analysis Project: Upper volta," December 20, 1983, NTIS Accession Number JDMCG/TR-83/3.

"Private Sector Research Retrieval and Analysis Project: Niger," January 22, 1984, NTIS Accession Number JDMCG/TR-84/1.

"Private Sector Research Retrieval and Analysis Project: Zimbabwe and Lesotho: Bibliographies," February 16, 1984, NTIS Accession Number JDMCG/TR-84/2.

"Private Sector Research Retrieval and Analysis Project: Rwanda," February 22, 1984, NTIS Accession Number JDMCG/TR-84/3.

"Private Sector Research Retrieval and Analysis Project: Swaziland," March 8, 1984, NTIS Accession Number JDMCG/TR-84/4.

"Private Sector Research Retrieval and Analysis Project: Senegal," June 1, 1984, NTIS Accession Number JDMCG/TR-84/5.

"Private Sector Research Retrieval and Analysis Project: Sierra Leone," June 2, 1984, NTIS Accession Number JDMCG/TR-84/6.

"Private Sector Research Retrieval and Analysis Project: Overview and Recommendation - Household Expenditure Survey," June 2, 1984, NTIS Accession Number JDMCG/TR-84/7.

1. Heller, Peter. "A Model of the Demand for Medical and Health Services in West Malaysia." Discussion paper No. 62, Center for Research on Economic Development, University of Michigan, Ann Arbor, Michigan, October, 1976.

Project Title: Costs of CCCD Projects in Malawi and Swaziland

Umbrella Contract

AID Funding Office: CCCD

Nature of Activity: Cost Analysis

Country: Malawi and Swaziland

Status: Ongoing

Description of Project:

These two country subeffort of the CCCD project aimed at costing out the oral rehydration and immunization components of the Ministry of Health PHC program in Malawi and Swaziland. The approaches are discussed in the paper, and data charts are provided at the back to illustrate the sources for the cost estimates.

Methodology/Project Approach

The methodology is somewhat novel. Although not entirely clear in the Malawi study, "costs" are based on government expenditures at the national and local levels. These are then linked to immunization and ORT activities to produce unit cost estimates. The study does attempt to impute the value of fixed assets such as buildings, and assess the proportion of time vehicles and other equipment allocated to immunizations and ORT, two aspects frequently overlooked in costing exercises. At the local level, there were difficulties in allocating personnel time, however.

Findings/Output

The cost estimates for national and local levels are presented in a series of tables in both studies, which summarize the calculations. Average costs are also calculated as is the cost per fully immunized child at the national and local level.

Implications/Next Steps

Costs are very infrequently measured in AID projects. If rational resource allocations and sensible budgeting are to occur, cost information is essential. Attaching a costing component to the CCCD country projects is a valuable means of considering both the financial as well as the public health dimensions of the investment, and can assist governments more effectively plan for continuing projects once donor assistance terminates.

Although these two efforts are important, by the author's own admission, costs and impact data were weak in many instances, forcing him to ignore certain costs, impute allocations of time and supplies based on necessarily arbitrary estimates, and assume population coverage in some instances. With additional time and funds, a more thorough cost study could determine what

compromises in measures of actual costs were insignificant and which ones would normally warrant expenditure of the marginal additional amount to obtain greater accuracy. A future study would also greatly benefit from estimates of actual costs rather than a matching of expenditures and services rendered.

Sources: "Cost of the Combatting Childhood Communicable Disease (CCCD) Project in Malawi, 1984-85," Final Report, by Robert L. Robertson, September 1985.

"Cost of the Combatting Childhood Communicable Disease (CCCD) Project in Swaziland, 1984-85," Final Report, by Robert L. Robertson, September 1985.

Project Title: Community Financing Schemes in Benin

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Benin

Contractor: Unitarian Universalist Service Committee

Status: Ongoing

Description of Project:

This project was designed to test various community financing mechanisms for the provision of PHC services in the Pahov District Demonstration Project. However, the community leaders from all three study options selected to use the fee-per-episode financing method. Prepayment schemes were rejected because the community did not trust that promised services would necessarily be provided and because the project began during a period of drought when the community had very limited amounts of cash. The project has involved a high level of training of village health workers and close supervision by heads of zones (nurses). Rather than serving as a comparison of methods of financing, this study has examined ongoing patterns of fee-per-episode implementation.

Methodology/Project Approach:

The project has involved intensive initial training of CHWs and supervisors with substantial attention paid to setting up procedures for collecting and accounting for receipts. Essentially this study is a documented experience. The project is affected by the overlapping studies and demonstrations taking place within the communities involved. The overall purpose of the experiment is to test cost recovery mechanisms so that curative care expenditures might subsidize preventive services.

Findings/Output:

People have generally proven willing to pay for services although the project has run up against numerous cultural roadblocks. For example, high-status people often would not pay when services were delivered. Also, women were unaccustomed to paying cash for deliveries. While there has been debate about exactly which aspects the community should be expected to pay for, the principle of payment for services seems well accepted. A relatively good system of checks and balances in the accounting and management areas has evolved through intense supervision of CHWs. The project has been characterized by mid-course changes and experiments designed to overcome roadblocks as they arise. Finally, the project has found that it is possible to charge non-residents a higher fee. This has proved an important subsidy for health services.

Implications/Next Steps:

The major implication of this study fees can recover a substantial portion of costs. At present, Pahov communities have been able to support about half the cost of health services through fees. Next steps involve continuing efforts to streamline accounting procedures. Finally, community involvement has played a crucial role in project acceptance.

Source: Notes on ongoing studies.

Project Title: Planning and Evaluating Community Financing in Kolahun District, Liberia

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Liberia

Contractor: MOH and Christian Health Association of Liberia

Status: Completed April 1986

Description of Project:

In order to sustain primary health care (PHC) services under the resource constraints, an operations research project was conducted by the Liberian MOH and the Christian Health Association of Liberia to develop effective financing schemes by which communities could generate funds to pay all or part of their PHC services. There were four criteria to be used for developing schemes. The cost of the financing schemes must be less than the income generated from these services. The focus of the health services would be children under five and lactating and pregnant women. The schemes would involve participation by many households. Finally, the villagers themselves would be able to sustain the schemes.

Methodology/Project Approach:

The first phase of the study involved a two-month analysis of the problems. Several meetings and discussions and a household utilization survey were conducted to identify what services would be needed and who would participate. In the second phase, 4 months were spent in the development of solutions through meeting with community leaders and VHC. A preference matrix was used to assess alternatives. Finally, during the 12-month test period, 4 financing schemes were implemented under supervision.

Findings/Output:

The village-level revolving drug funds (RDF) scheme was found very successful in most villages. The community labor scheme in which community health workers (CHWs) were reimbursed by labor on their farms was found to be unacceptable. The project showed some success with donations of time.

No relationship was established between villagers' indication of their willingness to pay and the success of financing strategies. The RDF appears highly replicable and is already occurring in the area of the experiment. Supervision of the RDF was an important element in preventing decapitalization.

Source: PRICOR notes on the Project.

Project Title: Health Demand Survey in Mali

**Umbrella Contract/
AID Funding Office:** AFR/TR/HN

Nature of Activity: Research Project

Country: Mali

Contractor: JDM Consulting Group

Status: Completed

Description of Project:

The study surveyed and analyzed the health behavior of households in 30 villages in Koro Cercle, Mali. The study purpose was to determine the equity effect of charging for health and if households in this area would be able and willing to pay for health care services.

Methodology/Project Approach:

Thirty villages from the Koro Cercle were selected using equal probability sampling methods. Using the same technique, thirty households in each of the 30 sample villages were interviewed concerning the health behavior of household members during the previous 90 days. Multiple regression analysis was applied to analyze the data.

Findings/Output:

Households most often used modern health care (34%), 19 percent self treated, and 19 percent sought care from traditional providers. Seventeen percent used a combination of these. Almost a third fewer individuals went to a free health clinic than fee-for-service missionary clinics. Household expenditures were higher on average at government centers than at missionary clinics, despite the free service policy of the government. Drugs were more likely to be available at missionary clinics. For the very poor, 25 percent of the imputed value of their income and assets are allocated to health! The study did not have price data and used average per capita expenditures for health as a substitute; the study did not examine the determinants of utilization, but the determinants of what the average household per capita expenditure on health.

Source: "Household Survey of Health Expenditures: Mali" by Jonathan Meyer. August 19, 1985.

Project Title: Evaluation Report on Project Sante Rurale Mali

**Umbrella Contract/
AID Funding Office:** USAID/Bamako

Nature of Activity: Evaluation

Country: Mali

Contractor: Unknown

Status: Completed

Description of Project:

This portion of the evaluation of the Mali HCD system was to assess GRM costs broken down by salaries, transportation, per diem and "other," assess at the national, cercle and arrondissement levels, as well as to assess village costs for treatment, village health worker (VHW) support, referral, drug resupply and "other." Secondly, this evaluation was to provide an analysis of whether costs were within \$3 per person per year. Thirdly, the evaluation was to provide an analysis of comparative arrondissement drug distribution. Fourthly, it was to assess GRM and village capacity to meet recurring costs of the project. And finally to identify major problems and provide solutions to those problems relative to the above objectives.

Methodology/Project Approach:

The full evaluation is a qualitative analysis based on interviews with VHWs in two cercles. In these same villages local officials (village chiefs, village councillors, and political party leaders) were interviewed either individually or collectively.

Implications/Next Steps:

The cost recovery findings were a) villagers can recoup their recurring costs because utilization rates do not suggest medicine expenditures beyond reach. b) the GRM as a whole can recoup most if not all its recurring costs through taxes and fees. It is unclear how their findings can be substantiated, however.

Source: "Evaluation of Rural Health Project" by Mahamondon Cisse (n.d.).

Project Title: Community Financing of Rural Primary Health Care in Sine Saloum, Senegal

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Senegal

Contractor: HIID and Ministry of Public Health

Status: Completed

Description of Project:

This ongoing study analyzes the long-run recurrent costs of health services and likely future financing sources by identifying each component of primary health care (PHC) services in terms of their importance and viability. Also, the study draws implications from the findings for the design of later studies and proposes an operational research design to test the feasibility of alternative PHC interventions.

Methodology/Project Approach:

Components of rural PHC interventions were reviewed based on several other projects and the field work conducted by a team of Senegalese and American researchers and local government officials. The field work involved visits to four villages in two of which two sociologists spent three days a piece.

Findings/Output:

Generally, the findings of the study were not conclusive because of the inadequate information and project methodology. Health huts and supervision were found to be very expensive components of PHC services. The government and community did not appear to be likely sources of financing for PHC.

Implications/Next Steps:

Further examination of the health huts and community budgets and testing of alternative strategies for rural PHC services were recommended for later studies, particularly the implementation and the effectiveness of alternative strategies were proposed.

Source: "A Report to PRICOR" by Clive Gray. September 1983; "Community Financing of PHC in Rural Areas of Senegal's Sine Saloum Region," HIID, October, 1983.

Project Title: Financial and Resource Management in Public Health
Care: Sudan Case Study

**Umbrella Contract/
AID Funding Office:** PPC

Nature of Activity: Research Project

Country: Sudan

Contractor: One America

Status: Completed

Description of Project:

Despite shortages of manpower, supplies, and high national debt, the government of Sudan has remained committed to public health care. This project analyzed the innovative means the regional MOH used to increase health resources. The analysis focused on the seven Central Province experiments (1969-83), level of revenues raised or saved, the issue of cost of charging for services and the management of revenues generated. The Central Province financing experiments included activities in: containing costs by increasing efficiency and reducing unnecessary subsidies, shifting financial burden onto users, and establishing special taxes to support health care services.

Methodology/Project Approach:

Primary data for the Central Province experiments were collected from the regional MOH-supported hospital, Peoples Pharmacies, and night clinics. Although the quality could not be evaluated, cross examination improved the research team's confidence in the data. The data collection was biased towards the more reliable sources, so results could be biased towards the more efficient institutions. The experiments in the study included: charging a fee to all hospital visitors patients, providing the option for higher quality care at a modest cost in the Wad Medani General Hospital, opening public day clinics for fee-for-service programs in the evening, and collecting health taxes on bus service and cinemas.

Findings/Output:

Overall, the experiments increased revenues, and increased access, quality, and the supply of health care. The hospital fees, which were originally meant to discourage loiterers, resulted in a doubling of revenues in 1983. These fees were collected, managed, and resources allocated by the hospital which enhanced incentives for collection. The high quality hospital care and evening clinics (where wages were tied to utilization) were also successful. The health taxes raised considerable amounts even though collection costs were as much as three times higher than those of the other experiments.

Implications/Next Steps:

These experiments were especially noteworthy because they were designed and implemented by the MOH which had no prototype and limited management skills. The results suggest that even a poor country revenue can be raised to support health care services.

Source: "Financial and Resource Management in PHC: Sudan Case Study" by A. Bekele and M. Lewis. Mimeo 1985.

Project Title: Health Care Financing in the Central Region of Sudan:
the Private Sector

**Umbrella Contract/
AID Funding Office:** PPC/PDPR/SPD

Nature of Activity: Research Project

Country: Sudan

Contractor: Abraham Bekele, Consultant

Status: Completed October 1985 (22 page report)

Description of Project:

While the Government of Sudan is committed to providing free health services, its ability to do so has diminished due to the ongoing effects of the recent recession. As a result of AID's concern about Sudan's public finance problems and their implications for the recurrent cost of its health services, this study was commissioned by PPC to look into the private health sector. In particular, this study details the extent and nature of the private health care system including hospitals, clinics, laboratories, and pharmacies in Khartoum and in three regional capitals. Using survey data, the study presents three key aspects of this system: structural characteristics (ownership, size, accessibility of facilities) consumers (age, sex, income of consumers) and finance (sources, mode of revenue collection, and cost of operation).

Methodology/Project Approach:

Data were collected in May-June 1984 through a semi-random survey of private health care establishments. Fifty six establishments, including 8 hospitals, 23 clinics, 16 laboratories, and 9 pharmacies were interviewed to determine their characteristics, services, sources of finance, costs of operation, and consumers. Several establishments in the original sample were unwilling or unable to be interviewed and were replaced by others which demonstrated some unique properties (such as female ownerships).

Findings/Output:

One of the key findings of this study was the unexpectedly large size of the modern private health sector, which belies the notion that people in LOCs are unwilling and unable to pay for their health care and the assumption that government provides all services. In the case of Sudan, contrary to the notion that the private sector is affordable only to the "privilege" segments of the urban population, consumers of private health care come from a wide spectrum of income classes.

Implications/Next Steps:

While this study only sketched the size and nature of the private health care sector, it suggests the significant role that nongovernmental health services might play in Sudan. For example, the government may consider shifting its limited resources to preventive and promotive activities and leave curative care to the private sector in selected areas. In order to develop strategies for an effective public-private mix, this study recommended in-depth studies of providers and consumers, including examination of constraints to expansion and development in both service delivery and domestic production of drugs and medical supplies; and determination of consumer preferences and expenditures on health care.

Source: "Health Care Financing in the Central Region" by Abraham Bekele, Report to PPC, October 1985.

Project Title: Financial and Economic Consultancy Report 1985

**Umbrella Contract/
AID Funding Office:** CCCD

Nature of Activity: Economic Evaluation

Country: Togo

Contractor: Abt Associates, Inc.

Status: Completed (14 pages)

Description of Project:

This report updates and projects the costs of the CCCD project in Togo and analyzes its sources of funding.

Methodology/Project Approach:

The report presents an idea for self financing of some of the recurrent costs of the CCCD project. In particular, the report suggests implementing a user-financing system to recover the costs of chloroquine and kerosene for cold-chain refrigerators.

Implications/Next Steps:

The MSP officials envision a self-financing system for kerosene and chloroquine based at the village level and outside the formal government system. This would minimize the possibility of mis-handling of funds by government employees. The officials would like to see chloroquine financed by users through payment of full costs either through purchase from TogoPharma or through purchase from a village drug supply. Kerosene and refrigerator maintenance would be financed by the sale of vaccination cards to mothers. Both the village drug supplies and the vaccination-card sales would be managed by village development committees.

Project Title: Basic Rural Health Project (SANRU)

**Umbrella Contract/
AID Funding Office:** USAID/Zaire

Nature of Activity: Project

Country: Zaire

Contractor: Protestant Church of Zaire (ECZ)

Status: Ongoing Project

Description of Project:

The overall project goal is to improve the health status of the rural population by increasing the proportion of rural Zairians that have access to basic health services. The project is converting 250 curative dispensaries into Rural Health Zones and providing preventive services in addition to improved curative care through a network of SANRU-trained nurses or Village Health agents. SANRU supports its activities with technical advice, commodities, seminars and materials for teaching, construction of water sources and classrooms, and transportation. Thus SANRU has focused on training, management, supervision of health care workers, logistics of supply transport, and project analysis rather than the direct provision of services to the population. An important factor of this project has been its self-financing component which has functioned in varied ways in RHZs. A variety of self-financing mechanisms are in place and being studied. Most Health Centers are now paying for their own medicines from user fees. Some are also paying the full salaries of nurses and aides from these receipts. Some are said to also pay for supervisory services provided by RHZ offices.

Methodology/Project Approach:

SANRU has assisted in carrying out 50 Rural Health Zones and arranging for necessary technical assistance—training, logistics, management—to implement a major reorganization of the Zairian health care system. The project has emphasized coordination of existing resources including a reference hospital and decentralized health centers in each RHZ. The self-financing component was built into the original project design in order to ensure that RHZs were able to replenish their stock of medicines and disposable supplies. However, this component has been interpreted in varying ways by RHZs (as discussed above) and is currently undergoing study.

Findings/Output:

Ongoing evaluations suggest that the strategic decision to focus on technical assistance rather than direct provision of services is well-conceived. The project has been well-coordinated with GOZ and donor community plans and is proving an important factor in project sustainability. Standardization of supply channels and health delivery systems from

traditionally conflicted actors--government, Catholic, Protestant, and other organizations has proceeded smoothly by having one reference hospital linked to each zone; however, integration of medical services is expected to be a lengthy process. Training programs and self-financing are addressing two key issues in PHC delivery: the quality of care and the availability of medicine.

Implications/Next Steps:

Further coordination with GOZ will be an important next step for two reasons: first, the legal status of the zones remains uncertain. This has hindered the establishment of clear lines of authority and clear geographical boundaries within RHZs. Second, expansion of the program from 50 to 100 zones implies an increase in Rural Health dispensaries from 250 to 650. Training of trainers of nurses and village health workers has had a dramatic multiplier effect and will continue. The self-financing component (which usually includes a consultation fee and something for drugs) has proven successful as the population has demonstrated its willingness to pay for some services. Ongoing studies will prepare comparisons of in-place methods for payment for health services: fee per episode versus fee for each visit and each medicine. One of the reasons for the project's success (it now covers 25 to 30 percent of recurrent costs) is probably due to the fact that health provider salaries are tied to contributions of patients; thus maintaining and satisfying patients is important to health workers.

Source: Project Evaluation Summary, May 1985 and SANRU Activity Report, April 1984.

Project Title: CCCD Project Zaire

**Umbrella Contract/
AID Funding Office:** CCCD

Nature of Activity: Evaluation

Country: Zaire

Contractor: Abt Associates

Status: Completed

Description of Project:

This project was to review CCCD project financing system in Zaire, project costs up to 1987, evaluate the efficiency of project expenditures, evaluate the effect of integrating regional functions and offices, identify financial mechanisms to make health zones semi-autonomous, assess viability of user fees and a revolving fund system, and propose cost recovery mechanisms.

Methodology/Project Approach:

For projecting costs up to 1987, the 1983 recurrent costs were used. Team assessed the financial health and possible cost recovery mechanisms for the health system based on ongoing activities and available data.

Findings/Output:

To improve the ability of the health zones to establish appropriate profit margins for ORS and chloroquine, zone personnel must be trained in financial management. User fees can cover distribution cost of ORS, chloroquine and vaccines. The prospects for auto-financing of total costs of ORS and anti-malarials are good.

Implications/Next Steps:

1. The central budget should cover all indirect costs at all levels.
2. If commercial channels can deliver ORS and chloroquine at lower cost, then it is not necessary for the PEV system do so.
3. Fees of about five to ten zaires for vaccination cards and up to two zaires per CPS should be charged, pending the results of studies of user behavior.
4. The results of the SANRU study of self-financing systems should be obtained by PEV for use in deciding vaccination-fee policy.
5. PEV's full cost of purchase, storage, handling, and delivery of ORS should be charged to the zones. Prices should vary by region according to the cost of delivery.

6. Charging margins above costs should be considered during inflationary periods.
7. Locally produced products should be relied on for supplies of chloroquine and ORS only as long as it can match or beat the price and reliability of imported supplies.
8. PEV should establish a system of budgeting by activities to aid in the management of the program. AID should provide technical assistance to establish such a system.
9. An item for the cost of transport and shipping should be included in the PEV budget.

Source: "Financial and Economic Consultant CCCD Project Zaire" by Marty Makinen. July 1984.

ABSTRACTS: ASIA

Project Title: Health Cooperatives in India

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: India

Contractor: MSH

Status: Ongoing

Description of Project:

Retrospective case study examines the problems in financing, management, and organization of eight health cooperatives and possible solutions to these problems. The findings of this study and other available data formed the basis for a workshop held in February, 1986.

Methodology/Project Approach:

A sample of eight rural community-based private cooperatives were selected for examination and study. A series of structured interviews were conducted with cooperative members, community leaders, and health practitioners. Group discussions were held to examine the problems and strategies of the eight cooperatives.

Findings/Output:

A structured narrative was prepared on the history and experience of each cooperative, and the results of the studies were discussed at a workshop. The final report is now being prepared, based on voluminous information. Much of the draft analysis has not yet been released.

Implications/Next Steps:

One of the local PVOs (not one of the study organizations) has picked up some of the solutions of the study and is attempting to introduce them into their ongoing activities.

Source: Interim reports of Henry Elkins.

Project Title: A Health Development Model Application to Rural Java

**Umbrella Contract/
AID Funding Office:** PPC

Nature of Activity: Research Project

Country: Indonesia

Contractor: The University of Michigan

Status: Completed 1978

Description of Project:

This research presents a systematic framework for making health policy choices in developing countries. The Health Sector Resource Allocation Model, which simulates expected costs and effects of alternative health programs, was applied to the rural population in Java, Indonesia. The model was designed to produce outputs for policy makers by estimating the effects of program options at various budget levels; indicating the combination of program components that were most effective in improving health; and a sensitivity analysis that examined the ranking of preferred alternatives.

Methodology/Project Approach:

This research was based on a functional model that was implemented to specific localities using highly aggregated data. The data was based on a combination of literature review, expert judgment, and local empirical experience. The final specification of the model involved a review of independently derived estimates for accuracy, and results were checked against control totals from existing data. The sensitivity analysis allowed examination of probable costs with different level of inputs.

Findings/Output:

At almost every budget level a different combination of medical care and preventive programs produced the lowest mortality. Village health workers and immunization were found to be most effective in lowering mortality rates, and sanitation was most effective in lowering morbidity rates. The sensitivity analysis indicated that the preferred alternatives depended on the values of policy makers. The model also pointed up the need for better cost estimates and improved measures of effectiveness for health interventions. Although a useful exercise, the poor quality of data limited the applicability of the model as a policy tool.

Implications/Next Steps:

Further research is needed to improve the reliability of input estimates as demonstrated by the sensitivity analysis. To improve the model's usefulness as a policy planning tool, more attention in the phasing of the programs and their design, and additional information on the effect of cultural and behavioral factors on health status are needed.

Source: "A Health Development Model Application to Rural Java" by R. N. Grosse, J. L. deVries, R. L. Tilden, A. Dievler and S. R. Day, Draft October 1979.

Project Title: Alternative Strategies for Financing Primary Health Care
In The Philippines

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Philippines

Contractor: University of Philippines -- Visayas

Status: Completed, March 1975

Description of Project:

After committing itself to a national primary care policy, the Philippine government recognized that some degree of community financing would be required to implement that policy. This two year study in Iloilo Province was designed to help a number of communities decide what primary health care services they would support, how they would raise the necessary funds, and how to organize efficient and stable management and accounting systems. In addition it was hoped that the communities would be encouraged to use a portion of their financial resources for preventive and promotive health care.

Methodology/Project Approach:

Six barangays (villages) were selected to participate in the study, representing various economic groups of the province. A baseline survey of each barangay was conducted to determine: perceived health care problems, available resources for health care, attitudes toward and utilization of health care providers, and willingness to participate in community financing schemes. The survey results were then presented to their respective communities to aid in selecting financing strategies. A time series analysis using data from pre-project and post-project surveys was conducted to test for changes in health status and behavior in the study barangays. In addition pilot tests were used to demonstrate the feasibility of the various financing mechanisms developed by the communities.

Findings/Output:

Five of the six study barangays decided to donate funds to establish "boticas sa barangay" (small community run drugstores); the sixth barangay opted for an emergency hospitalization loan fund. The barangays as a whole were able to raise 46.1 percent of their targeted capitalization level. The boticas were managed by volunteers who bought stocks of drugs according to community demand. Each botica designed its own pricing and management strategy. On average, 65 percent of households utilized the boticas; however, no substantial impact on health status was found.

Implications/Next Steps:

The villages valued having a local drug service under their complete control as demonstrated by their willingness to capitalize the operation. Although some volunteer botica workers promoted sanitation and preventive health care, the boticas did not exclusively set money aside for this purpose. It therefore appears that the villagers placed a higher value on curative care rather than preventive or promotional health care, and were willing to invest their own resources to assure its availability.

All six of the funds were in operation and showing positive signs of stability, i.e., an ability to maintain their stocks. The research team felt that outside assistance in developing a financial management scheme was an essential contribution toward assuring stability of the funds.

Source: Philippines (Osteria) One-page Abstract, Draft #1, March 27, 1986; "Community Financed Drug Boticas in the Philippines" by S.N. Blumenfeld, T. Osteria and I. Siason, PRICOR Study 1985.

Project Title: The Philippines Council for Health Research and Development "Seminar-Workshop on Health Care Financing Schemes"

**Umbrella Contract/
AID Funding Office:** PRITECH

Nature of Activity: Seminar-Workshop

Country: Philippines

Contractor:

Status: Conducted on May 19-30, 1985

Description of Project:

Despite the generally strong health care system present in the Philippines, medical care is poorly distributed within the country and is becoming very expensive even for the middle class. The Philippine Council for Health Research and Development (PCHRO), which is the primary channel for alternative financing schemes, hosted the seminar to provide local public and private sector groups with technical information on prepayment plans. The intended goals of the project were to (1) develop a data base on health care financing projects in the Philippines, (2) to introduce and explore the potential of prepayment schemes, and (3) to develop concept papers on health care financing projects for possible future funding.

Methodology/Project Approach:

The PRITECH team prepared for the seminar by an initial period of consultation with AID officials and with representatives of key Philippine health sector groups. Following consultation with PCHRD, the seminar was held on May 28-30, 1985 with over 50 participants. Plenary sessions explored prepayment schemes, the Philippine Medicare experience, and case presentations of proposals submitted to PCHRD for funding. Small work-groups reviewed in-country case presentations on the following options: community models, government/hospital models, enterprise-based models, and health maintenance organization (HMO) models.

Findings/Output:

Seminar output was targeted to the three goals mentioned above: prepayment schemes; potential data base development and writing current papers. PRITECH suggested that the Philippines could benefit from the substantial U.S. experience in prepayment schemes to help fill a substantial gap under the current system. As a result of its consultations and the seminar, PRITECH concluded that: (1) while there is a large supply of health personnel available, this supply could be more effectively used by adopting alternative health care financing models; (2) PCHARD should not be the only channel for introducing health financing schemes as PCHARD has shifted its focus away from its main activity and undertaken more general economic development activity;

(3) there is not, at present, any coordinated planning for alternative health financing schemes; and (4) there is potential for cooperatives to play a large role in alternative delivery schemes.

Implications/Next Steps:

AID should continue to support PCMRD while also bringing in more flexible organizations and funding more practical experiments with alternative financing schemes. PRITECH also recommended several types of technical support for these experiments including further technical workshops.

Source: PRITECH Report, May 1985, prepared by PRITECH.

Project Title: Philippines Primary Health Care Financing Project

**Umbrella Contract/
AID Funding Office:** AID/Manila

Nature of Activity: Project

Country: Philippines

Contractor: Philippine Council for Health Research and Development
and the Ministry of Health

Status: Mid-Term Evaluation completed 12-85 by John Snow,
Incorporated

Description of Project:

The projects was envisioned to respond to (1) the lack of resources at the community level to manage and sustain an appropriate health care program; (2) limited knowledge and experience in promoting health and treating illness; and (3) the inadequate system in public and private health care for emergency care and referrals. The project was to provide financial and technical assistance to support: (1) 24 alternative health financing schemes whereby residents support their own health services though various means; funds were to be made available to private groups or communities to experiment with different schemes; (2) special studies to feed into health planning and policy development; and, (3) financial support to the MOH to strengthen health service delivery in particular areas.

The project is attempting to simultaneously develop and operationalize a significant new approach to health care delivery by building on theoretical work carried out in recent years on PHC demand. (See, for example, "The Demand for Primary Health Care," 1984 by Akin, et al.) This work suggests that rural residents are far more sensitive to quality than to cost of services and that alternative financing schemes might incorporate sectors of the rural poor which bypass free public health care systems.

Methodology/Project Approach:

The project design lists strict criteria for approving and undertaking experimental alternative financing schemes including affordability, sustainability, community involvement, and health orientation (projects must be curative and have a substantial focus on reducing infant mortality). Project approval through a series of overlapping committees has proven cumbersome: the mid-term evaluation has suggested a more streamlined approach to facilitate implementation.

The two other parts of the study suggested have proceeded more smoothly and involve a series of research methodologies, specially surveys and structured interviews to access the efficiency of various aspects of the overall Philippine PHC system.

Two studies underway are surveying the quality and status of medical education and the performance of the MOH Barangay Health Workers and Midwives service delivery component.

Findings/Output:

Initial findings, as expressed in the mid-term evaluation, suggest the difficulty of setting up an effective mechanism for innovative project implementation. Only one (of a projected 10) projects has been initiated to date and has encountered problems fitting into the social context of the Duramao community where it is located. The financing mechanism--a minimart--has faced stiff competition from neighboring businesses and has not been able to encourage participation in the local medical project. According to the mid-term evaluation several projects which fit the original criteria have become stilled in the approval process, while the Duramao project, the only approved to date, did not fit the project criteria and should not have been approved. Further, project monitoring, such as the collection of baseline data, has not proceeded as expected.

Implications/Next Steps:

The next steps this ongoing experimental project were recommended by John Snow, Inc. and are being implemented. These include, for example a simplification of the project approval mechanism and additional efforts to disseminate information on the availability of and criteria for funds. Overall, the project appears sound, the special studies have been of high quality. Project objectives are consistent with national emphasis on promoting community self-reliance in PHC services. With project design in place, overall goals should be achievable during the second half of the project's life.

Source: Mid-term evaluation, John Snow, Inc., December 1985. Project paper, 1983.

Project Title: Health Sector Finance in Thailand

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: Research

Country: Thailand

Contractor: National Economic and Social Development Board (NESDB),
Thailand

Status: Completed

Description of Project:

Results of the health care financing research in Thailand are summarized in two studies on financing health services in Thailand. The first paper discusses how much is spent for health care and by whom, and reviews the trends in health care expenditures and the policy implications of these trends. The community financing study analyzed the performance and viability of drug, nutrition, and sanitation funds, and reviewed national health care statistics and trends.

Methodology/Project Approach:

Secondary data were collected from the Thailand MOH and the National Statistics Office. Primary data were obtained from a national survey of 4,631 health funds and 72 case studies. The survey included a new type of fund entitled a "health card fund." The card fund was initiated to rationalize referral patterns for treatment of illness. The cards are sold at modest prices and can be used eight times a year to receive "express way" service in hospitals or health care centers honoring the cards. The revenues are used for card loans and reimbursement to service providers.

Findings/Output:

In 1979, total health expenditures per person were \$27.50. By 1983, this expenditure had risen to \$36.70 per person. This represents an annual growth rate of 7.5 percent—higher than any industrial country. The primary explanation for the rapid growth is the rising demand for services and health care costs and the fact that government hospital fees have not increased since 1981.

The drug funds are more successful than either the nutrition or sanitation funds which cannot maintain capitalization levels. Some of the drug funds have even evolved into multi-purpose funds.

Implications/Next Steps:

It was concluded that the MOH should have three priorities in the coming years. First, the price of health cards should be raised and some incentives

for lower utilization instituted. Since the demand for services is increasing most rapidly in urban areas, the MOH's second priority should be the testing of models for an urban health insurance or voucher system. The third priority should be repricing and increasing cost recovery in health centers, MOH hospitals, and other public health institutions.

Sources: 1. Myers CN, Khumthong C, Siripirom C. Community Finance of Primary Health Care in Thailand, paper presented at the APHA Annual Meeting, November 1985.

2. Myers CN, Causino N, and Mongkolsmai D. Finance of Health Services and Medical Care in Thailand, USAID, 1985.

ABSTRACTS: EUROPE

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Project Title: Health Care Financing in Portugal: Development of a DRG System for Hospital Reimbursements (imputed title)

**Umbrella Contract/
AID Funding Office:** ANE/DR/HPN

Nature of Activity Financing Project

Country: Portugal

Status Ongoing

Description of Project:

The Ministry of Health is undertaking a project to develop an information system that would allow it to improve management control of hospital productivity and costs. After visits to U.S. hospitals, research organizations and consultations with U.S. experts, as well as a thorough review of the literature, the Portuguese team concluded that certain U.S. hospital management and financing systems seemed appropriate to Portugal. A pilot effort began testing various U.S. techniques in 16 of Portugal's 55 major acute care hospitals. The current project will extend the pilot project to the rest of the country.

The project is aimed at reducing hospital costs and increasing productivity.

Methodology/Project Approach

Building on the pilot, the project will attempt to meet the objectives of reducing costs and enhancing productivity through: (1) reimbursements to hospitals that create incentives for hospitals to achieve these aims. This will be achieved through establishment of diagnostic related groups (DRGs) based on U.S. experience; (2) assist hospitals to adjust their information flow and management to enable facilities to respond to incentives. Appropriateness Evaluation Protocols (AEP), designed by Boston University, are being introduced to achieve these objectives; and (3) training of Portuguese staff on the methods of industrial engineering, and managerial training for hospital managers.

The three components of the project will undertake the following activities:

The DRG Budget and Reimbursement System will:

- (1) Assist the MOH finalize the national coding schemes for classifying patient discharges by DRGs.
- (2) Obtain Portuguese physicians' input to assure that DRGs created for Portugal are clinically meaningful in light of Portuguese practice patterns.

- (3) Assist the MOH develop or adapt a software package that will allow hospitals to assign patients to each DRG.
- (4) Assist the MOH in developing and implementing a cost accounting model and a software package adapted to Portuguese hospitals' accounting system so that costs by DRG can be determined for each hospital.
- (5) Assist the MOH in developing and implementing a budget model and software package that can be used to estimate annual and monthly operating expenses based on the mix of discharges by DRG from each hospital.
- (6) Assist the MOH in analyzing the effect of alternative payment approaches at hospitals payment levels.
- (7) Assist the DGF and hospitals in developing and implementing a product line management information system, management reports and software package that can be used by hospital managers and physicians to manage under a DRG system.
- (8) Assist in tying together DRG based cost analysis and the manpower productivity reports currently in use in Portugal.
- (9) Assist, through the MOH, the central departments of the Ministry of Health in developing models based on DRGs for planning and the future needs for manpower, beds, and specialized services.
- (10) Assist in integrating quality indicators by DRG into an overall quality control system.
- (11) Provide two weeks of training at Yale University for three Portuguese technicians who will implement the software for assigning DRG accounting for costs by DRG and produce management information reports.

The Utilization Review System will:

- (1) Assist the MOH in finalizing the Portuguese version of the AEPs (general, surgical, pediatric and obstetric), including the reason's lists for inappropriate admissions and days of care and review manuals.
- (2) Assist the MOH in establishing a Portuguese team of trainers to train physician reviewers from each hospital in the application of the AEP on a retrospective basis and on a concurrent basis.
- (3) Assist MOH in developing sampling methods to select medical records for reviewing.

(4) Clinical Laboratory

- Assist Portuguese pathologists in establishing weighted procedures for clinical laboratory tests;
- Assist Portuguese staff specialists in analyzing the operations of the clinical laboratory from the initiation of a physician order to the storage of the tests results in the medical record, in order to reduce turn around time and increase efficiency while maintaining or reducing costs;
- Provide two days of training at a U.S. hospital for ten Portuguese staff specialists and/or hospital administrators.

(5) Radiology

- Assist Portuguese radiologists in establishing weighted procedures for radiology procedures;
- Assist Portuguese staff specialists in analyzing the operations of the radiology department, from the initiation of a physician's order to the storage of the results in the medical record, in order to reduce turn-around time and increase efficiency while maintaining or reducing costs;
- Provide two days of training at a U.S. hospital for ten Portuguese staff specialists and/or hospital administrators.

(6) Housekeeping, Food Service and Laundry

- Assist Portuguese managers of housekeeping, food service and laundry in analyzing the operations of their departments to improve productivity and service;
- Provide two days of training in each of the three departments at a U.S. hospital for ten Portuguese staff specialists and/or hospital administrators.

(7) Manpower Productivity Reports

- Assist the central data processing department (SIS) hospital personnel departments, and the hospital statistics department to design and implement a software package to produce the Portuguese manpower productivity reports;
- Assist in developing methods for using the reports as a management tool;
- Assist in developing practical applications for the productivity reports and train cost center managers and hospital administrators.

materials being developed in other parts of the project. Each trainee should be encouraged to implement his or her new skills in hospitals and the consultants should follow-up on that implementation.

- (6) After initial use and evaluation, training materials will be provided to DGF in order to be used in future training programs.

United States Hospital applications for Managers

- (1) General Training. Assist the DGF implementing the methods developed in this project by training their counterpart managers either in the U.S or in Portugal in the practical applications of the techniques being adapted to Portugal.

- (2) Nursing Services.

- Assist Portuguese nursing managers in developing and implementing a patient classification system for assigning nurses to patients, allocating nurses among nursing units, and evaluating the quality of nursing care;
- Assist the MOH in integrating the patient classification system for nursing to the DRG classification system;
- Assist the MOH in using the patient classification system to define lower levels of institutional care;
- Provide two weeks of training at a U.S. hospital for three Portuguese nurses who will implement the patient classification system and its applications in Portuguese hospitals.

- (3) Materials Management

- Assist Portuguese hospital materials managers in establishing desired inventory levels for each nursing unit and central supply department, for medical care supplies (including sterilized supplies), medications and linen;
- Assist Portuguese hospital materials managers in designing and implementing a distribution system (exchange carts or stationary storage unit) for assuring that desired inventory levels are met for medical care supplies, medications and linen;
- Provide one week of training at a U.S. hospital for four Portuguese materials managers;
- Assist the MOH in selecting and implementing an inventory control software package in Portugal.

(4) Clinical Laboratory

- Assist Portuguese pathologists in establishing weighted procedures for clinical laboratory tests;
- Assist Portuguese staff specialists in analyzing the operations of the clinical laboratory from the initiation of a physician order to the storage of the tests results in the medical record, in order to reduce turn around time and increase efficiency while maintaining or reducing costs;
- Provide two days of training at a U.S. hospital for ten Portuguese staff specialists and/or hospital administrators.

(5) Radiology

- Assist Portuguese radiologists in establishing weighted procedures for radiology procedures;
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- Provide two days of training at a U.S. hospital for ten Portuguese staff specialists and/or hospital administrators.

(6) Housekeeping, Food Service and Laundry

- Assist Portuguese managers of housekeeping, food service and laundry in analyzing the operations of their departments to improve productivity and service;
- Provide two days of training in each of the three departments at a U.S. hospital for ten Portuguese staff specialists and/or hospital administrators.

(7) Manpower Productivity Reports

- Assist the central data processing department (SIS) hospital personnel departments, and the hospital statistics department to design and implement a software package to produce the Portuguese manpower productivity reports;
- Assist in developing methods for using the reports as a management tool;
- Assist in developing practical applications for the productivity reports and train cost center managers and hospital administrators.

(8) Discharge Planning

- Assist Portuguese discharge planners in developing discharge planning procedures that reduce the number of inappropriate days of care;
- Provide one week of training at a U.S. hospital for four Portuguese discharge planners.

(9) Product Line Management Organization

- Assist Portuguese hospital administrators in developing and in implementing product line management organizational structure and long range financial planning models;
- Provide two weeks of training at a U.S. hospital for six Portuguese staff specialists and/or hospital administrators.

Findings/Output

The experience of this project will be extremely valuable to other developing countries that are considering alternative methods of delivery, which depend on government reimbursement to public or private facilities, rather than direct financing and delivery of health services by the government. Currently the latter is the preferred method of delivery, but the financial state of public health may force consideration of alternatives in the near future.

Implications/Next Steps

Unclear if further A.I.D. assistance will be necessary at the termination of this comprehensive effort.

Source: "Request for Proposals," describing the project.

ABSTRACTS: MIDDLE EAST

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Project Title: Beyond the Public Prescription: Private and Public Roles in Near East Health

**Umbrella Contract/
AID Funding Office:** NE/TECH/HPN

Nature of Activity: Planning/Policy Study

Country: Overview of Near East. Focus on: Jordan, Egypt, Tunisia, Morocco, Lebanon

Contractor: Center for Public Resources

Status: Completed July 1983 (46pp. Executive Summary; 305pp. report)

Description of Project:

Although countries in the Middle East have undergone relatively rapid development during the last ten years, strained public resources are increasingly unable to sustain a minimally acceptable health infrastructure. This project provides a detailed argument, supported by extensive case studies, which suggests ways to leverage declining public resources by acknowledging and facilitating the application of private financial and technical resources. Simply put, the project identifies the private sector constituency in the Middle East ranging from multinational corporations to indigenous private health care providers which could participate in cooperative public-private initiatives. The report details concrete avenues for private sector involvement in public goals to the advantage of both. Private sector mobilization suggests innovative possibilities for resource mobilization, especially regarding public health problems.

Methodology/Project Approach:

The project builds on a case-study approach set within a macro social and economic overview. That is, the report presents detailed case studies of private sector involvement in health areas ranging from insurance to pharmaceutical manufacture. In presenting practical examples of public-private linkages, the study sets up models and hypothetical cases for generalizing and replicating these ideas. The report examines a range of countries operating under varied economic systems in order to present a broad spectrum of possible models for projects.

Findings/Output:

Poor communication and lack of coordination between public and private sectors have reduced resource mobilization for health care in the Middle East. Numerous avenues for cooperation and coordination exist in these countries and are identified in this report. Detailed data on various components of the private sector are presented in 40 case studies; economic, social, and policy environments are described; and 9 hypothetical situations

for private sector involvement are presented to motivate future action. By presenting this baseline of private sector activity, the report demonstrates extant channels for ameliorating the critical problems in the public health care systems.

Implications/Next Steps:

This project is more a motivational tool and paradigm for policy rather than a rigorous analysis. By presenting the spectrum of private sector activity and detailing the processes necessary for catalyzing public-private cooperation, the report suggests a new mode for improving health care, which increasingly incorporates private sector energy and initiative towards public ends to the benefit of both. In particular, the report proposes a plan of action which suggests ways to maximize all available resources in the underfinanced health sector, specifically by designing incentives and catalyzing partnerships which extend the role of private resources in health care delivery.

Source: "Beyond the Public Prescription: Private and Public Roles in Near East Health," by Susan Uber-Raymond and Anne Glauber, July 1983, CPR.

Project Title: The Role of Pharmacists and Pharmacies in the Provision of Health Care in Six Near East Countries

**Umbrella Contract/
AID Funding Office:** NE/TECH/HPN

Nature of Activity: Literature Review

Country: Egypt, Morocco, Tunisia, Lebanon, Jordan, Yemen

Contractor: The Futures Group

Status: Completed (51 pages)

Description of Project:

This report examines the role of pharmacies and pharmacists, marketing and distribution of drugs, and training, licensing, and supervision of pharmacists in six Near East countries.

Methodology/Project Approach:

This literature review on the six countries, except for Lebanon, was based on various reports and projects. Due to the lack of printed information on Lebanon, the report on Lebanon was based on extensive interviews with a Lebanese citizen involved in a pharmaceutical business.

Findings/Output:

In most of the countries under study, nearly half of the pharmacists were employed in the public sector and a shortage of pharmacists existed in rural areas. All of these countries were found to have some type of licensing or oversight by the government that regulates the practices of pharmacies and pharmacists. Government regulations also apply to the marketing and distribution of drugs with varying degrees among these nations.

Implications/Next Steps:

Source: "The Role of Pharmacists and Pharmacies in the Provision of Health Care in Six Near East Countries" by Gail A. Washchuck, The Futures Group.

Project Title: An Overview of Pharmacies, Pharmacists and the Pharmaceutical Distribution System in Egypt

**Umbrella Contract/
AID Funding Office:** NE/TECH/HPN

Nature of Activity: Research Project

Country: Egypt

Contractor: The Futures Group

Status: Completed May 2, 1982 (111 pages)

Description of Project:

This study gave an overview of the role of pharmacists and pharmaceutical distribution in Egypt's health delivery system. The report describes the role of pharmacies and pharmacists, identifies the constraints to pharmaceutical distribution, and recommends means of improving the distribution of health care services and products.

Methodology/Project Approach:

The first phase of the study involved interviews with local representatives in the government and pharmaceutical industry, and a questionnaire was administered to 51 local pharmacists. In the second phase, a medical anthropologist conducted a 10 day observation and discussion with the pharmacists and their clients in both urban and rural areas. The interviews focused on client's utilization patterns and pharmacist/client relationships.

Findings/Output:

Pharmacists were found to play various and important roles in delivering health services and disseminating health knowledge in their communities. The problems in the pharmaceutical productions and distributions were: shortage of low priced drugs caused by inappropriate pricing policy and dominance of the inefficient parastatal pharmaceutical industry, lack of pharmacists in rural areas, and lack of training for pharmacists. Recommendations included an increased role for pharmacists as health care providers, and improvement in the distribution of drugs to pharmacies especially in rural areas.

Implications/Next Steps:

The finding of close pharmacists/clients relationship suggests the possibility of better health care delivery through expanded roles for pharmacists. Details on training or oversight/supervision were not provided.

Source: "An Overview of Pharmacies, Pharmacists and the Pharmaceutical Distribution System in Egypt" by Henry E. Cole, Robert H. Smith and Sohair Sukkary. Prepared for the Agency for International Development, May 5, 1985.

Project Title: Alternative strategies for a National Health Insurance Plan for Jordan: Findings and Recommendations

**Umbrella Contract/
AID Funding Office:** USAID/Amman

Nature of Activity: Planning Paper/Consultant Report

Country: Jordan

Contractor: Health Management Group/Westinghouse Health System Project

Status: (1) Report completed September 1982
(2) Report completed October 1985

Description of Project:

The Jordanian health care system is presently characterized by fragmentation and uneven distribution of services, overlapping programs, and inaccessibility to a significant portion of the population. This study is part of the overall Jordanian effort to improve these services by establishing a National Health Insurance Program. In particular the study advances NHIP planning by exploring alternative strategies involving private health care participation. The project proceeds in four steps: (1) describes the extent and nature of the existing health care system--providers and financing, (2) describes alternative health insurance strategies such as HMOs, (3) summarizes information which will be required to proceed in designing the NHIP, and (4) suggests a strategy for Jordan's NHIP.

Methodology/Project Approach:

The data was collected during September 1982 by a two-person team which interviewed key officials in numerous agencies involved in NHIP planning. The report was built on baseline data compiled in 1980 in the British ODA report "Health Insurance in Jordan," and conceptualized how alternative private insurance systems could be incorporated into the NHIP.

Findings/Output:

Investigation of the existing health care system, which must serve as the backbone of any health insurance scheme, showed a fragmented, overlapping, and unevenly distributed system. For example, needed hospital beds have been built but cannot be used because of a critical shortage of skilled nursing staff. The project team found numerous instances of areas for improved health care delivery organization which must be incorporated into NHIP planning. Further, a substantial private health care system was examined which currently provides about one-quarter of the total in-place services and which could be incorporated under a NHIP. The team concluded that private health insurance schemes are likely to be effective in the Jordanian context and could provide a substantial improvement over current health care delivery.

Implications/Next Steps:

The study suggests very concrete steps which must be followed to proceed with NHIP planning along with more general strategies which might be undertaken. In particular the study suggests establishment of a single authoritative source for health planning information, outlines broad strategies for cost containment and for emphasizing preventive as well as curative systems, and details the steps required and experts needed to proceed with the next planning stages. The follow on discussion by Fexster covers much of the same ground but does not provide the systematic framework.

Source: "Alternative strategies for a National Health Insurance Plan for Jordan: Findings and Recommendations," by HMG, 11-1982; "An Economic, Financial and Organization Prefeasibility Framework for Developing a Comprehensive national Insurance System for the Hashernite Kingdom of Jordon," by J. Fexster with S. Goohope.

Project Title: Pharmacists, Pharmacies, and the Pharmaceutical Sector in Jordan; Implications for Basic Health Care

**Umbrella Contract/
AID Funding Office:** NE/TECH/HPN

Nature of Activity: Research Project

Country: Jordan

Contractor: The Futures Group

Status: Completed January 1983

Description of Project:

USAID/Amman indicated that the pharmaceutical sector plays a supportive or key role in most health care delivery. In 1980 total drug expenditures accounted for 1.2 percent of GNP or 30 percent of health expenditures. This study attempts to: describe the nature of interactions between client and pharmacists; describe the different types of pharmacies; describe the broader role of pharmacies in Jordanian diagnosing and treating health problems; and, analyze the variables that lead to pharmacy patronage. The study also compared urban versus rural, owner-managed versus nonowner-managed, and private versus government pharmacies.

Methodology/Project Approach:

Data were collected in August, 1982 from AID reports, MOH documents, interviews with approximately 80 pharmacists, university students, nurses, clients, business and government officials, and health providers in Jordan. Thirty practice sites were visited including community and government pharmacies, private drug manufacturing companies, and the University School of Pharmacy. Interviews were informal in order to promote free exchange of information.

Findings/Output:

The relationship between client and pharmacists is stronger in rural areas than urban areas. Often in rural areas pharmacists often evolves from a salesperson to a consultant on all health matters. Even though clients consult with pharmacists on health matters, pharmacists do not play a significant role in advising clients on health education issues. In the case of uncomplicated illness (no fever present), clients rarely consult with a physician before seeing a pharmacists. Jordan has a national drug policy managed by the MOH and has put controls on new pharmacies opening in urban areas. The pharmacies compete by displaying flashy electronic equipment and jewelry to attract customers. Although there are some shortages, no evidence of continued or protracted drug shortages exist, as is found in many other developing countries with strong government control or free drug programs.

Implications/Next Steps:

The pharmacists could play a more central role in primary health care in Jordan. For example, pharmacists could have referral lists available for immunization clinics, family planning centers, etc. They could also distribute leaflets that contain information on improving weaning practices, basic hygiene, childhood diseases, and preventive medicine. A group education campaign is also suggested service conflicting usage information is provided by physicians, pharmacists, and drug companies.

Source: "Pharmacists, Pharmacies, and the Pharmaceutical Sector in Jordan: Implications for Basic Health Care" by H. Cole, R. King and S. Sukkary, 1982.

Project Title: Indicative Survey of Health Care Financing: Morocco

**Umbrella Contract/
AID Funding Office:** PRITECH/REACH

Nature of Activity: Health sector financing analysis/assessment

Country: Morocco

Contractor: Management Sciences for Health/John Snow, Inc.

Status: Completed, January 1986

Description of Project:

During mid-1985, an economist and former head of the state planning ministry was appointed as Minister of Public Health. At that time also, preparation of a World Bank primary health care demonstration project agreement was nearing completion. The proposed project would commit Morocco to a long-term effort to revitalize rural health services by improving MOPH-delivered PHC services--a step that would ultimately require substantially increased operating costs to be funded through the MOPH budget. Part of the World Bank loan was to fund an 18-month study ("diagnosis") of health care financing by the planning unit of the MOPH. USAID was asked by the Minister to conduct a quick "indicative survey" of health care financing in order to give him some information on the situation without having to wait for the longer study.

Methodology/Project Approach:

Four persons of the five-person team spent three weeks in Morocco in November, 1985, interviewing officials and gathering data. The approach used by the team was to study existing reports, records, and data, and interview officials of relevant groups and organizations, gathering from them as much additional available and pertinent data as could be obtained. The subsequent analysis which appeared in the report was designed to serve three objectives:

(1) to inform policymakers of the Government of Morocco on the current status of health care financing in the sector at large (including the Public, semi-public, and private sectors); (2) to assess the present interaction between Public, semi-public, and private sectors, and suggest alternative models for future collaboration in the health sector; and (3) to analyze indicative data on the present financing situation in order to broaden the policy consensus for a thoughtful and phased expansion of the health sector.

Findings/Output:

The final report was divided into four main sections: the first summarized how socio-economic trends of the past two decades have affected the health sector; the second described the main institutions and characteristics of the health sector; the third provided a policy assessment of the way health

services are currently organized and financed; and the fourth gave major findings of the team with respect to the three objectives of the "indicative survey."

The major findings of the report were:

(1) The government has significant but often contradictory influences on the development of the health sector in its distinct and separate roles as (a) provider of health services through the Ministry of Public Health (MOPH), (b) insurer of its own employees, (c) regulator of private medical practice, (d) owner of parastatal organizations (with their own health services delivery systems), and (e) trainer and employer of health personnel.

(2) The MOPH's role in the development of the health sector has been declining in importance recently because of the rapid growth of the private sector and the declining commitment of budgetary resources to MOPH operations.

(3) The fast-rising importance of the private and semi-public sectors has been accompanied by, and to some extent caused by, wasteful and unnecessary use of expensive, acute care services subsidized by third-party financing.

(4) In order to be able to shape the development of the health sector to promote its goals of equity and efficiency in health service delivery, the government needs to gather information and conduct analyses on how the financial flows have affected these goals in the health sector, and how such flows themselves are affected by the government's policies and programs in each of its separate roles vis a vis the health sector.

(5) If present trends continue, the health sector will become increasingly dominated by high-cost, acute care facilities in urban areas-- which will generate political pressure from both consumers and producers to expand government-subsidized access to third-party coverage to now-uncovered groups in the population.

Implications/Next Steps:

The team provided the Mission some informal recommendations about possible next steps for a follow-up to the "indicative survey." The Mission was interested in pursuing the issue of health financing in a way that was supportive of what the Minister of Health decided to do and consistent with AID's health assistance policy.

Source: "An Indicative Survey of Health Services Development in the Kingdom of Morocco: A Report to the Minister of Public Health," by J. Norris, A. Fairbank, S. Raymond, H. Hunter and M. O'Byrne, January 1986.

ABSTRACTS: LATIN AMERICA AND CARIBBEAN

Project Title: Managed Prepaid Health Care in Latin America and the Caribbean: A Critical Assessment

**Umbrella Contract/
AID Funding Office:** LAC/DR/HN

Nature of Activity: Study

Country: Latin America and Caribbean nations

Contractor: The Group Health Association of America, Inc.

Status: Completed September 5, 1985 (2 volumes; 3rd volume in Spanish)

Description of Project:

The purpose of this study was to develop an assessment of the Health Maintenance Organization (HMO) development in Latin America. This study described the extent of prepaid health care activities and the contributing and inhibiting factors in the development of prepaid health care systems in the region. Also the prospects and feasibility of the development of HMO and HMO-Like systems were examined.

Methodology/Project Approach:

Through site visits and local correspondents, the project reviewed various aspects of the development of prepaid health care systems in Latin America. Each type of prepaid activity was compared to mainstream payment models. Review of the law and discussion with the experts in the region were conducted to assess the prospects for HMO-type schemes.

Findings/Output:

Many prepaid health care organizations already exist in Latin America with a wide diversity in structure and with a varied degree of employer and government involvement which are detailed in the study. The oversupply of physicians and inadequacy of the government supported health system contributed to the development of the prepaid health care systems. On the other hand, the lack of technical know-how, management, and capital inhibited the development of such systems.

Implications/Next Steps:

Recommendations were made for further on-site case studies of both urban and rural areas and for the collection of more detailed information on the financing, utilization and management of the prepaid health care systems. It was also recommended that experts from the U.S. and Latin America join to conduct a pre-feasibility assessment in those countries without prepayment

arrangements. Finally, the distribution of the comprehensive manual by Dr. Zudin was recommended for guidance in the development of prepaid health care systems.

Source: "Managed Prepaid Health Care in Latin America and the Caribbean: A Critical Assessment," submitted by the Group Health Association of America, Inc. for the Agency for International Development, September 1985.

Project Title: LAC Health Officers' Conference, Gettysburg, PA

**Umbrella Contract/
AID Funding Office:** LAC/DR/HN

Nature of Activity: Conference

Country: n/a

Contractor: MSH/GHAA

Status: November 25-30, 1984

Description of Project:

The five-day conference was aimed at (1) familiarizing the regional health officers with the concepts and issues of health care financing; (2) identifying and developing policy objectives, intervention strategies, and courses of action which address these issues; and (3) determining appropriate AID intervention and assistance. The topical areas covered were (1) need versus demand for health care; (2) health financing issues and the role of government; (3) social security systems and medical care in the region; (4) management improvement projects; (5) status and potential of prepaid systems of health care; and (6) issues and approaches in pharmaceutical distribution.

Methodology/Project Approach:

The conference used lectures from experts within and outside of AID, case studies, and small working group sessions.

Findings/Output:

A good assortment of papers was compiled for the conference, which provided an overview of the field with an operational focus. Exposed the region's health offices to the whole spectrum of health financing issues.

Implications/Next Steps:

Source: "Proceedings: Health Officers' Conference, Bureau for Latin America and the Caribbean," by Polly Harrison; Workbook with all the papers from the conference.

Project Title: Medical Care Under Social Insurance in Latin America: Review and Analysis

**Umbrella Contract/
AID Funding Office:** AID Funding Office

Nature of Activity: Study

Country: 16 countries

Contractor: SUNY Stoney Brook

Status: Completed 1983 (100 pages)

Description of Project:

This is a review of the organization, financing and coverage of medical care under social insurance in 16 Latin American countries that use this mechanism: Argentina, Brazil, Costa Rica, Mexico, Panama, Uruguay and Venezuela and the lower-income countries: Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Paraguay and Peru. This review includes a section on the sources of social insurance revenues, expenditure patterns, and costs of medical care under social insurance.

Methodology/Project Approach:

The paper relies heavily on existing documents and studies for information and data. Statistics for the study came from the Pan American Health Organization, the International Labour Office, the U.S. Social Security Administration, the International Monetary Fund, and from other studies on the topic.

Findings/Output:

Revenues:

(1) Social insurance is financed primarily by wage-based contributions levied on employers and employees. In all these countries, contributions are subject to varying minimum and maximum limits of wages so that revenues are less than what they would be if they were based on total wages. It is likely that due to inefficiency and evasion, actual collections fall short of nominal contributions, even on the more limited contribution base. However, there is no reliable data on this and no effective means of enforcing payments. One collection mechanism apparently being used by many funds is "pre-invoicing." The social insurance fund and the employer agree on an initial wage bill for collection purposes, then the fund bills the employer for contributions that are based on conservative estimates of growth in the wage bill. Pre-invoicing facilitates administration of collection, but at a level of contribution substantially below what is mandated by law.

(2) No specific information is available on investment financing for medical care under social insurance.

(3) Based on the limited information available on social insurance, expenditures on social insurance and public health are less than 3% of Gross Domestic Product in all but two of the 14 countries for which comparable information is available. The countries whose governments directly provide medical care allocated the largest percent of GDP to health.

Expenditures

(1) The relative magnitude of total government expenditures appear to be a determinant of the relative magnitude of health care expenditures in the countries reviewed here.

(2) There is some evidence that social insurance expenditures for medical care exceed public health expenditure in higher-income countries.

Costs and Cost Increases:

Per capita costs of medical care under social insurance increase five to ten times, roughly parallel with GDP per capita.

(1) As GDP increases, so does the cost of medical care. Productivity gains tend to be rewarded with increased factor remuneration rather than lower prices to the consumer.

(2) Medical care financing under social insurance is likely to increase and change the composition of demand for services. These changes in the quantity and determinants of demand typically are more rapid than corresponding changes in supply and thus tend to drive up prices.

(3) Medical care is likely to become more capital-intensive and the quantity and quality of care per patient is likely to rise and thus increase total unit cost, more than offsetting any potential reductions through economies of scale.

(4) The expansion of coverage for medical care under social insurance will increase total costs, even if unit cost increases could be contained.

Implications/Next Steps:

Public health facilities increasingly require direct payments of hospital services, including ambulatory care. It seems worthwhile to consider social or private insurance coverage as a suitable alternative to haphazard direct fee charges. Direct payment have a potential role in helping to control service utilization, but they should not be allowed to become a barrier to access.

Careful specifications of the rationale of wage-based contributions and their economic impact need to be set.

There is no clear rationale for general revenue transfers to social insurance programs. However, for the indigent population, the transfer of tax revenues to social insurance programs should be studied.

Carefully controlled studies are needed to determine comparable unit costs of social insurance to public health or private medicine.

Social insurance schemes need to be encouraged and assisted in determining health care priorities and analyzing their financing and cost implications as a basis for determining the feasibility of expanding coverage both vertically and laterally.

Source: Dieter Zschock, "Medical Care Under Social Insurance in Latin America." Latin American Research Review, 1986, V. 21, No. 1; "Medical Care Under Social Insurance in Latin America: Review and Analysis" by D. Zshock, paper prepared for LAC/dr/HN, 1985.

Project Title: Community Financing and Health Service Coverage in Rural Communities

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Bolivia

Contractor: IIMS

Status: Ongoing

Description of Project:

To help reduce attrition of community health workers (CHW) in Bolivia, this study was conducted to find a way to support CHW salaries through in-kind payments. The study intended to find the villagers' general consensus on the new CHW payment system and to explore other alternatives.

Methodology/Project Approach:

A random survey was conducted in two areas to determine residents' perceived health needs, their willingness/ability to pay and the type of PHC system they would be willing to support. From this information, 6 possible financing schemes were designed. Each scheme was weighed by 5 judges in a modified preference matrix. The optimal scheme was presented to the community for their approval. Biweekly meetings with community members are held to determine small modification in the general accepted scheme.

Findings/Output:

Most respondents expressed a willingness to support CHWs with the following two conditions;

1. The CHW is from the community and treats only those members of the village.
2. The payment is in-kind and totals approximately \$7.00/family.

Considering these two findings, the investigators concluded that traditional CHWs were too expensive for each village. The researchers reasoned that the only way to provide stable, community supported health workers was to train and deploy a lower-level promoter to work with a salary of approximately half of the CHW's salary.

The approach already implemented in 7 communities around Mama Huasi, involves retraining the existing CHW to provide both better services to this community and to supervise 6 promoters located in satellite villages. The affordable promoters are a new addition to the PHC personnel in this area.

Implications/Next Steps:

The experiment deserves evaluation which will be forthcoming and under this PRICOR project.

Source: Informal reports to PRICOR.

Project Title: Self-Financing Primary Health Care: Bolivia

**Umbrella Contract/
AID Funding Office:** USAID/LaPaz

Nature of Activity: Project

Country: Bolivia

Contractor: MSH

Status: Ongoing (evaluation due mid to late 1986)

Description of Project:

The project is aimed at improving the delivery of primary health care services to rural and semi-urban target populations in three existing cooperatives in Bolivia: San Julian, Mineros and Le Merced. Health care services will be integrated with these multi-service cooperatives. The project will address these problems through two components: (1) a health care delivery system and (2) a management support unit.

Methodology/Project Approach:

The major components of this project are: (1) the development of alternative primary health care delivery systems consistent with resource availability of the organizations or institutions which will participate, and (2) the creation of a management support unit (MSU) to back up the delivery system and coordinate the provision of services. The health systems will be based on a PHC model. The scope of services to be offered at each level will be a function of the resource capacity of the participating organizations.

The health care delivery system will be a hierarchical arrangement of three related tiers (Levels I, II, III) of health service outlets. This system is based on the MSW/PH model developed under the USAID/Bolivia supported Montero Health Project. Each tier will provide a combination of curative and preventive measures to address, with increased degrees of comprehensiveness. Patients whose conditions cannot be adequately treated at a lower level will be referred to the next stage of the hierarchy.

Initially the health services outlets will be funded through USAID/LaPaz, but hopefully will eventually become independent through charges for curative treatments, sale of medication, cooperative membership fees, non-co-op member surcharges and subsidies from cooperative.

The project will be evaluated through three household baseline data collection: one at the beginning of the project, one eighteen months into the project (half way through) and one at the end of the project to evaluate the health and economic status of the households involved.

Findings/Output:**Implications/Next Steps:**

The Bolivia Self-Financing Primary Health Care project is a creative effort to capture the expenditures now being made on a private ad hoc basis by rural and semi-urban families in the Santa Cruz area, in order to finance a stable primary health care delivery system that can appropriately address and resolve the major health problems of those populations. As a feasible alternative to both the traditional public health care delivery system and private fee-for-service care, the design of the project is an innovative model. However, because it is innovative there is insufficient previous experience to indicate what works and what does not. In implementation, therefore, the project has had to remain flexible and incorporate changes as it gains experience. Service delivery began in March 1986 for two Level III facilities and a Level II center will begin operation in June.

Source: Project Paper; MSH documents.

Project Title: Community Health Workers, Community Water Supply Financing

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Brazil

Contractor: Department of International Health, Johns Hopkins University

Status: Completed 1984 (25 page summary report)

Description of Project:

This is a study of two components of the operational history of the Fundacao Servicos Especial de Saude Publica (FSESP) in rural Brazil. The particular focus is on rural community health care workers (vistadoras) and community financing of water supplies. Community water supplies are under the authority of municipal rather than central government management. The FSESP is a public foundation that provides sanitation and primary health care services in 16 states and 2 federal territories of Brazil. This piece of descriptive historical research presents results of many earlier studies and documentation of resultant changes.

Methodology/Project Approach:

Data on the vistadoras were gathered from a review of FSESP historical and current documents, interviews with FSESP officials, a survey of vistadoras and their supervisors (non-random sample), field visits to the health posts and support units, and a survey of expenditures. To gauge the effectiveness of the vistadoras, the research team looked at productivity, coverage of population, and quality of work. Data for community financing of water supplies was obtained from historical literature, FSESP annual reports, Brazilian Water Supply Agency reports, interviews with FSESP engineers, reports from international lending institutions, and a random survey of 54 water supply systems financed by the Inter-American Development Bank. The survey dealt with demographic characteristics and costs of maintaining a water supply system.

Findings/Output:

The selection of vistadoras is highly competitive and the young women that are accepted are subject to a rigorous five month training course. In 1982, the average training costs per vistadora amounted to \$48 per year amortized over 30 years while average total cost per health post came to \$18,208. The vistadora program functioned well although large variations in productivity were noted across vistadores; the only criticism being that large amounts of data collected by the vistadoras were under utilized. Community financing of water systems was accomplished by community participation, subsidies, external financing, or a combination thereof. Charges for utilization are based on the

minimum national salary, and payment of these charges into revolving funds has worked well. The revolving funds sometimes generated enough excess cash to help with debt repayment or expansion.

Implications/Next Steps:

Methods and results of community financing for water systems are being used to evaluate and revise the new national scheme to develop water supply systems (PLANASA). The research team suggested that the health information collected by the vistadoras be condensed and regularly summarized at the main computer center.

Sources: PRICOR Drafts Nos. 1 and 2.

Project Title: A Resource Allocation Model for Child Survival

**Umbrella Contract/
AID Funding Office:** DSB/HEALTH

Nature of Activity: Research

Country: Colombia

Contractor: University of Michigan, CRED

Status:

Description of Project:

This study develops a mathematical optimization model designed to provide policymakers with an analytical framework to facilitate the efficient allocation of resources to programs intended to reduce the rate of child mortality. The model is used to provide a direct assessment of health interventions to raise the probability of child survival in a specific locality, but the approach presented has general application to an analysis of the cost effectiveness of alternative health programs.

Methodology/Project Approach:

The diseases chosen for the analysis account for at least 75 percent of childhood mortality and intervention technologies are well-known and available. Low birth weight, birth trauma, infections, and tetanus are considered for the neonatal age group; and malnutrition, diarrhea, lower respiratory diseases, and immunizable childhood diseases are considered for the infant and toddler age groups. General categories of interventions considered include prenatal care, immunizations, nutritional programs, water and sanitation, promotional programs, and institutional care. Costs and baseline data were assembled for a hypothetical community resembling as closely as practical a low-income urban area of Cali, Colombia.

Findings/Output:

Using general levels of resources that vary from 0.25 to 1.25 of the baseline level of resources in the Cali community, it is found that share reductions in mortality come from reducing the incidence of diarrhea, low birth weight, and malnutrition. At low levels of resources, the activities selected for emphasis are health promotion, water and sanitation, and well-baby clinics. These activities act to promote breast feeding and to lower diarrhea and, through disease interaction, to lower malnutrition. Outpatient treatment for neonatal children and prenatal tetanus immunization are also chosen for resource-poor communities.

As the community resources increase to middle levels, nutritional activities, immunizations, and outpatient care for the older age groups are adopted. Prenatal care activities and the general coverage of the programs

selected at the lower resource levels are also increased. At the highest resource levels considered, an upgrading of activities occurs as inpatient care replaces outpatient care and home water and toilets replace public fountains and latrines.

Implications/Next Steps:

The reduction in child mortality with the optimum use of resources is dramatic at low resource levels and diminishes as resources become more abundant. Similarly, the value of the constraining resources falls as the general level of resources, increases. Registered nurse time and financial budgets are found to be the binding constraints, and a high proportion of available auxiliary nurse time is used in most of the optimization experiments. An implication is that manpower-training programs should place more emphasis on the training of nurses.

Source: A Resource Allocation Model for Child Survival by H. Barnum, R. Barlow, L. Fajardo and A. Pradilla, Cambridge, Mass.: OG&H, 1980

Project Title: Prefeasibility Study of a Prepayment System for Primary Health Care in the Dominican Republic

**Umbrella Contract/
AID Funding Office:** USAID/Dominican Republic

Nature of Activity: Research Project

Country: Dominican Republic

Contractor: Antonio Ugalde

Status: Completed October 1983 (Final Report: 49pp.)

Description of Project:

This study detailed the social integration and medical effectiveness of the public primary health care system in the Dominican Republic by undertaking an intensive fieldwork investigation within two small communities. The study explored reasons behind the low utilization and high cost of health services and suggested avenues for incorporating prepayment financing mechanisms within the complex social structure at the village level. Part of the study explored how rural and urban dwellers resolved their health problems through the detailed observation of ongoing illness management. Along with these patient-focused studies, the project detailed the structure of health services organization and utilization within the communities studied.

Methodology/Project Approach:

The study involved hiring a physician and a sociologist for long-term on-site fieldwork observation, surveys, and interviews in two representative communities, one rural, one urban. Patterns of health care usage were observed in detail, significant constraints were noted (for example, villagers waited for the arrival of a shipment of free medicines before going to a clinic). Within these communities, a sample of 40 households underwent an intensive clinical study including medical checkups and lab examinations in order to determine how effectively their health care needs were being met. A large sample of 80 households was included in an ongoing morbidity study. Detailed statistical and anecdotal data are presented on the health status and health financing patterns of villagers.

Findings/Output:

The unavailability of medicines, popular distrust of health providers, and low productivity of human resources and of capital investments have led to both the high cost and low utilization of public medical services. Nevertheless, within this poor village context, the study demonstrated the economic and social viability of prepayment systems: villagers consistently supplemented their health services with private care and purchased medicines where feasible. The study suggests that residents of these poor neighborhoods lack the organizational capacity to organize prepayment systems on their own,

but that they could afford some health care and therefore outside institutions allied with such local organizations as the parish might be a possible arrangement for developing prepaid health care.

Implications/Next Steps:

The study moved from prefeasibility to the implementation phase in two areas to test ideas in improving health care delivery and financing. First, the team secured approval to have appointed a permanent physician in one barrio studied to break the rapid cycling through of young doctors on a rural tour (pasantia). Increasing physician certainty radically improved health care within the community, and the study recommends implementation on a broader basis. Second, the study suggested that people are willing to pay for drugs. Experimentation with the fee-for-service organization was unevaluated, but they were able to identify the potential for a communal water system. Finally, the study called for demonstration of a prepayment system of medical insurance based on the findings from the communities studied.

Source: "Report for the Feasibility Study of a Prepayment System for Primary Health Care in the Dominican Republic," First, Third, and Fourth (Final) Reports, 1982-3, by Antonio Ugalde.

Project Title: Health Sector Resources Management

**Umbrella Contract/
AID Funding Office:** USAID/Bridgetown

Nature of Activity: Pre-project Feasibility Analysis

Country: East Caribbean states of: Dominica, St. Kitts/Nevis,
Montserrat, and St. Lucia

Contractor:

Status: February 12 - March 16, 1984; Final Report

Description of Project:

This paper is a pre-project feasibility analysis of the project sub-components related to improved resource management of the PID. The PID called for a revolving drug fund and for assistance to Caribbean countries in managing health sector resources. An emphasis was placed on the development of new finance mechanisms like social security, health maintenance organizations, policy analysis, and baseline statistical analysis. The subcomponents to be analyzed consisted of the following: assembly of baseline information, public sector revenue generation programs, and private sector systems for delivery and financing of primary health care.

Methodology/Project Approach:

The research team spent a year in the Caribbean collecting data on demographic characteristics, disease incidence, physical health resources, national accounts, and government and MOH revenues and expenditures. The team was supposed to make recommendations on project revisions and the resources needed to support those revisions. Any proposed revision was to be accompanied by a related economic analysis.

Findings/Output:

Implications/Next Steps:

Development of a regional project is ongoing.

Sources: "Health Sector Resources Management, Improved Health Resource Management Component" by J. Jeffers, T. Wineberg, C. Cleland, and A. Bekele Project 338-0069, 1984.

Project Title: A Feasibility Study and Development Plan for a Private Alternative Health Service Delivery Model in Ecuador.

**Umbrella Contract/
AID Funding Office:** USAID/Quito

Nature of Activity: Feasibility Study

Country: Ecuador

Contractor: Triton

Status: Completed, July 1985 (113 pages)

Description of Project:

The MOH and the Ecuadorian Social Security Institute provide services to low and middle income segments of the population. Poor health status, the presence of unsatisfied needs, and an effective demand for more accessible, better quality care justifies the developing and testing of two private sector demonstration projects (one in urban Solanda and one in the rural Colta-Guamote corridor) to deliver primary health care services. Both would offer prompt and effective ambulatory care along with educational and promotional health activities. The two major objectives of this project are to: (1) incorporate preliminary assessments of a private health care demonstration program into a feasibility study to collect essential data and estimate the potential success of the proposed program, and (2) assuming a feasible program, develop a working design of the health care system with specific timetables and recommendations for its implementation.

Methodology/Project Approach:

Data were collected from available census data, personal interviews with MOH officials and health care professionals, small scale surveys and observation of demonstration sites. Data were then used to determine feasibility of the project and to organize specific tasks into a timetable designating responsible parties. The penetration ratio was set at 25 percent (2,500 families) for the rural demonstration and 45 percent (2,430 families) for the urban demonstration. Both demonstrations would provide the following services: family/village health promotion and education, well children's care and immunization, well women's care, outpatient visits, basic dental care, diagnostic support services and a pharmacy. Both health centers would be established in existing base facilities and any extra financing needed above the patient fees would come from A.I.D. The patient rates would be set according to family income.

Findings/Output:

The project was deemed feasible although some constraints were found such as: cultural and language barriers, low income, and unfamiliarity with prepayment schemes. No severe legal constraints were perceived, but

discussion with the MOH would be needed on the issue of competition versus complementarity. Both demonstration sites had a large percentage of children and women in the child-bearing age range. In the rural area, it was estimated that 50 percent of the population does not have medical coverage. In Solanda 71 percent of those surveyed said their health services were good, but only 31 percent said the service needed no improvement.

Implications/Next Steps:

According to the study conclusions, the health status of the rural sector could definitely be improved by introducing private care that is oriented towards the needs of its users. Urban dwellers seem relatively satisfied with their health care, the people surveyed in Solanda indicated they would use and pay for services near their housing development. Unfortunately the actual expenditures of users were not measured. Furthermore the data and information used for the study were not ideal or sufficient to draw firm conclusions.

The study team recommended that a committee should share their experience and information about the resources used in the sites to evaluate the project. They also recommended that a national policy and management forum be established to facilitate the development and implementation of further successful demonstration projects.

Source: "A Feasibility Study and Development Plan for a Private Alternative Health Service Delivery Model in Ecuador," Final Report submitted by TRITON, July 1985.

Project Title: Bringing Health to Ecuador's Poor Through Private Sector Initiatives

**Umbrella Contract/
AID Funding Office:** USAID/Quito

Nature of Activity: Study

Country: Ecuador

Contractor: Antoine Habis

Status: Completed (105 pages)

Description of Project:

This study examines the present health situation in Ecuador, the available resources for health services, and explores some opportunities for new private sector participation in this area.

Methodology/Project Approach:

The study reviews the status of health in Ecuador by reviewing the statistics (from various sources) on the supply of hospital beds, doctors, other licensed health practitioners, health promoters and medications. The study then reviews the status of public and private sector health programs, also using various sources.

Findings/Output:

The most critically underserved market in Ecuador is the large needy rural and urban population. There are major deficiencies in the public sector health delivery systems to this market. These deficiencies are due: (1) to the inability to supply this market adequately because of lack of resources; (2) to the highly centralized hierarchical organizations which fail to control and coordination at the lowest delivery level; and, (3) to the passive nature of the system, which requires those in need of health care to seek the service offered, and which ignores the socio-cultural distance between the providers and the needy populations.

Implications/Next Steps:

To overcome these deficiencies, it is suggested that local decentralized non-profit health delivery systems be promoted at the community level, to be sponsored, owned and managed by private community organizations. New legislation authorizing the establishment of these activities, and fixing the standards of control for each of them, is a precedent to the feasibility of their installation.

Four options for financing the operations are suggested: (1) voluntary services to reduce costs; (2) membership fees for pre-paid care; (3) service fees for treatment as provided; and, (4) markups on drug sales.

It is also suggested that three studies be undertaken: one on the present rural private medical practice, another on the establishment of an urban HMO and a third on the establishment of ten health care systems in ten different rural communities.

Sources: "Private Sector Health Assessment" by Antoine M. Habis. January 1984.

Project Title: Implementing a Revolving Drug Scheme for Dominica

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Dominica

Contractor: MSH

Status: Completed, March 31, 1986 (Final report due)

Description of Project:

After considering a number of possibilities, the MOH decided that a revolving drug fund (RDF) would help to increase the availability of essential drugs in its primary health care programs, and at the same time would decrease the costs to the government of supplying those drugs. This study involved a systems analysis of the current drug supply system and interventions to make it more efficient. It was decided that the RDF should be implemented in two phases because components of the central supply system had to be improved first. In phase I, the peripheral facilities would "buy" drugs from the central supply using allocations from their annual budgets; the public would still receive free drugs. In phase II, the public would pay for drugs at the local facilities which would in turn purchase drugs from the central facility. In effect, the local RDFs would plug into the national RDF.

Methodology/Project Approach:

A detailed systems analysis covering accounting, inventory, and distribution procedures was carried at central medical stores. Based on the national analysis and eight separate subsystem analyses at the district level a number of charges were designed and implemented.

Findings/Output:

After the first year of the project, the following changes were introduced: low cost suppliers were sought out, emergency drug purchases were reduced, the warehouse facility and inventory system were improved, the accounting and MIS systems were revised, and the national formulary was revised. A loan was obtained from the social security fund to begin capitalization.

The cost of providing some drugs has already been reduced by more than 80 percent due to the improvements listed above. Drug issues have increased 25 percent and stockouts have decreased 63 percent. There have been some problems in maintaining capitalization levels because of inefficient management and delayed payments by the treasury department for drugs purchased by the district centers. This results in delays in payment to overseas suppliers who in turn are reluctant to fill orders promptly. The biggest problem is the government's continued reluctance to institute user payments more widely.

Implications/Next Steps:

A previous study by Peter Cross showed that most drugs were not available at government clinics and that patients ended up paying for their prescriptions at private pharmacies.

Sources: Research Protocol on Community Financing by Peter Cross and H. McIntyre, March 1986; "Implementing a Revolving Drug Scheme for Dominica, Project Summary," PRICOR mimeo, n.d.

Project Title: Food and Health Expenditure Patterns in Urban and Rural Ecuador: Analysis of Household Budget Survey Data

**Umbrella Contract/
AID Funding Office:**

Nature of Activity: Statistical Analysis

Country: Ecuador

Contractor: American Public Health Association

Status: Reported completed November, 1983

Description of Project:

This report presents results of a statistical analysis of one urban and two rural household budget surveys conducted in Ecuador during the latter part of the 1970s. The primary purpose of the analysis was to estimate food and health expenditure patterns of different urban and rural population groups in order to assist in formulating national development plans. The study, identifies both macro- and micro-level factors in expenditure patterns and their interaction in order to provide baseline data on the impact of developmental changes over time. The report suggests that with further disaggregation of health care expenditures, projections can be made with respect to expansions in the demand for specific types of health care, which are likely to accompany income expansion over time.

Methodology/Project Approach:

A factor analysis using SPSS statistical subroutines was applied to three household budget surveys conducted by the Ecuadorian government. A multi-stage sampling procedure was applied in all three surveys. The urban sample was stratified by region and city and the rural samples by region and farming status. The study identified mean, average, and marginal expenditure patterns across region and socio-economic status.

Findings/Output:

Urban households spent an average of 3.3 percent of total household expenditures on health care, although 42 percent of the households reported no health care expenditures. By contrast, rural households spent 6.1 to 6.9 percent of their total household expenditures on health. On the average, expenditures on medicines and drugs represented 64 percent of the total household health budget, with 16.5 percent on out-patient visits, and 7.4 percent on dental care. As overall household expenditures rise, health expenditures rise by an equal amount in Quito, but increasingly less as the location of residence becomes more rural. Expenditures on outpatient and on medicines rather than on over-the-counter drugs are more likely to increase significantly in response to increases in total household expenditures.

Implications/Next Steps:

The preliminary analysis conducted in this study suggests magnitudes of changes in health care expenditure categories as a result of either broad or targeted income changes (under conditions of stable relative prices). Thus this study can serve as a useful planning tool in estimating differential effects of health care projects according to region and socio-economic status. The study makes two concrete sets of recommendations for further research. The first suggests further analyses of the existing data sets including a sensitivity analysis to improve the efficiency of highly targeted interventions. The second set of recommendations suggests design factors for future surveys such as undertaking community level surveys along with household level surveys. For example, a household survey that details health care expenditure and health facility utilization should be complemented by data on existing health care facilities, access to those facilities, market prices charged, etc.

Source: "Food and Health Expenditure Patterns in Urban and Rural Ecuador: Analysis of Household Budget and Survey Data," APHA report by Maarten D.C. Immink , November, 1983.

Project Title: Study of Financial Alternatives to Support Extension of Basic Health Services in Honduras

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Honduras

Contractor: Management Sciences for Health

Status: Completed (76 pages)

Description of Project:

The Health Financing Alternatives Study was conceived to assist the Ministry of Health identify alternative mechanisms for financing the basic health services, particularly at community and Health Center levels, in order to extend coverage even during times of severe financial restrictions.

Methodology/Project Approach:

To determine how best to finance basic health services, data were collected, policy options formulated and some of these options implemented. The data were collected through (1) intensive observation of a small group of families to document actual illness-related behavior; (2) a household survey of a sample of families to obtain basic demographic and socioeconomic data and to explore health status, general use of health services, reported behavior during recent illnesses, monthly expenses for health and opinions of services used; and, (3) case studies of ten health care facilities that were charging for services or participating in co-financing schemes.

Findings/Output:

The direct observations of families with illness confirmed what MOH personnel assumed - that sick people invariably use multiple sources of treatment, often at the same time. This was helpful in understanding some of the cultural patterns of illness behavior and the factors that influence decisions to pay.

The household survey revealed that (1) lack of medicines, X-ray film, and laboratory reagents in MOH facilities forced patients to seek them in the private sector; (2) some institutions had unofficially initiated charges for services in an effort to remedy these deficiencies, so that some families were paying for service in the public sector; (3) community health workers were not heavily used by the study population; (4) health care is the third highest expense category, after food and clothing, consuming 11.4% of monthly expenditures. Rural families spend more on health care than urban families; (5) the indirect costs of sickness was low, about 2.3% of the sample population's GNT (since it was an unrepresentative sample the figure cannot be

extended to the entire country); and, (6) 93.5% of the families responded that they would be willing to pay for MOH services.

The case studies revealed that (1) it would be difficult to completely self-finance PHC services; (2) preventive services for priority populations (i.e., MCH) should be provided at no charge; (3) patients in rural areas are already paying substantial amounts for PHC services and appear willing to continue to pay; (4) the important charge is neither the consultation fee nor the cost for medications, but the sum total of all costs; (5) the maximum that the majority of the rural peasant population will pay during each visit varied between \$4.00 and \$5.00 US; (6) the disposition to pay is directly linked to the perception of quality of services provided; (7) the disposition and/or ability to pay varies during different periods of the year, and the MOH would need to develop limited credit mechanisms; and, (8) it is feasible for nursing auxiliaries to administer a fee-for-service system.

Implications/Next Steps:

1. Continue emphasis on recovery of costs for hospital services. Hospitals are now authorized to collect fees from patients; operating budgets of each hospital have been cut 5 percent; technical assistance has been provided to two hospitals to increase cost recovery; and an experimental program for sale of hospital services to cooperatives has been developed in El Progreso.

2. Implement rotating funds for medications. A field study of the following options is under way: a system of "Popular Pharmacies" or sale of government purchased essential medications through outlets for basic foods and grains; community rotating funds for medications; commercialization of oral rehydration salts; and expansion of production of Lab-PANI, an independent, government-sponsored pharmaceutical production facility.

3. Continue the implementation of operations research projects started by this project. They include: a study of the effectiveness of trained vs. untrained TBAs; a feasibility study of commercialization of ORS; a comparison of alternatives for expanding hospital services without reducing PHC services; and two costs effectiveness studies: one of various treatment schemes for tuberculosis, and the other of vaccination campaigns vs. integrated EPI services.

Sources: "Final Report on the Study of Financial Alternatives to Support Extension of Basic Health Services in Honduras" by MSH and MOH/Honduras.

Project Title: Health Sector I

**Umbrella Contract/
AID Funding Office:** USAID/Tegucigalpa

Nature of Activity: Hospital Cost Analysis within Project TA

Country: Honduras

Contractor: MSH

Status: ongoing

Description of Project:

In 1981, USAID began financing a large project to support public health services, which expanded the quality of services to rural areas, and improved the management of Ministry of Health (MOH) resources.

Technical assistance efforts within this project were directed toward balancing the demand of scarce financial resources and developing a series of strategies designed to optimize inputs from international funding sources while stimulating a search for new mechanisms to fund hospitals.

In 1976 the IDB began a project to expand hospital coverage in Honduras by financing the construction of 10 hospitals scattered around the country. Due to rising construction costs and the lack of Ministry of Health operating budgets for those hospitals, the hospitals remained in a state of partial completion through 1983 when one was completed and opened. One other hospital was also started during this period with funds from the Honduran government.

With the legal life of the AID project drawing to a close at the end of 1984, the IDB and the Honduran government set about drawing up plans for the eventual completion and opening of the remainder of the IDB-financed institutions. Unfortunately, the Honduran economy, and more specifically, the budget of the Ministry of Health was actually diminishing in real terms, and the source of funds for the operating budgets of these hospitals was not clear. The Ministry of Health was clearly caught in a serious bind: for numerous reasons, it wanted to open the hospitals, but did not want to do it at the expense of its public health services to which it gives high priority. As a result, a small working group was formed to examine the consequences of various possible policy decisions under different sets of variables.

Methodology/Project Approach:

Three separate groups participated in the health policy working group: the Ministry of Health, USAID, and the technical assistance team working on a long-term basis in the MOH. Each group had its own stake in a positive outcome, and were bound together by the common need to find the means to achieve the expansion of both the hospital and public health systems, ultimately viewed as integral but competing components of the same system.

Following an initial meeting of the work group in which the background was explained and discussed, the objectives defined, a model was developed that projected financial requirements and health production under a series of different conditions. The following variables were examined:

- o proposed schedule for opening new hospitals
- o rate of real expansion of overall MOH budget
- o rate of real expansion of hospital budget
- o level of operation of each hospital and projected budget
- o level of self-generated hospital income
- o contribution and scheduling of operating funds to be provided by IDB

A beginning set of conditions were established, a point of departure, and the model were used to generate a half dozen different alternative projections representing a wide range of possibilities by changing particular variables. On the basis of the conclusions reached in the first round of analysis, a second series of alternatives was produced. This second series more closely represented what the team perceived as realistic scenarios. The iterations continued until the consensus of the team was that given the present input information one or more potentially viable alternatives had been generated which satisfied the government's objectives.

Findings/Output:

The study stimulated two important policy decisions on the part of the Ministry: first, the initiation of a serious effort to introduce user-financing into hospitals. This possibility had been previously discussed, and was a stated policy of the MOH. Implementation was, however, largely left to the discretion of the individual hospital directors, and had not led to any significant changes until this point.

The second policy area involved the participation of the Institute of Social Security. Relatively early in the analysis, the team ceased to consider participation of Social Security as a probable source of funds: parallel discussions had been proceeding at a desultory pace for more than a year without any tangible results, and the barriers to such cooperation seemed formidable. Nevertheless, the need to seek participation remained, and at least partially in response to this need, a full-time coordinator/negotiator was hired by the MOH to deal seriously with the possibility of linking up the IHSS.

Source: MSH reports.

Title: Workshop on Alternative Health Financing and Delivery Systems For Jamaica

**Umbrella Contract/
AID Funding Office:** LAC/PR

Nature of Activity: Workshop

Country: Jamaica

Contractor: Project Hope/MOH, Government of Jamaica

Status: Conducted on March 28-30, 1985

Description of Project:

Due to the worsening budget situation of the Jamaican Ministry of Health, the workshop on alternative health financing and delivery systems was organized to promote dialogue between Jamaican officials and public health specialists on the issue of a broad reform of the Jamaican health sector. The workshop had three intended goals: to promote discussion between public and private officials in Jamaica on reform of the infrastructure, finance, and delivery of the health care system; to provide information to Jamaican officials on cost accounting, performance based budgeting, health maintenance organizations, and privatization; and to provide a forum for officials to select short, medium, and long range plans for reform of the health system.

Methodology/Project Approach:

The workshop was presented in four sessions covering the previously mentioned topics. In each session, two to three guest speakers presented their material, after which small group discussions were held on related questions. The groups then reported their consensus to all the participants.

Findings/Output:

The officials agreed to give active consideration to the decentralization of management and budgetary control in the Ministry of Health and the adoption of performance based budgeting. They also agreed to consider development of alternative delivery systems relying on private provision of care, such as pilot projects using private hospital management to administer HMOs. And finally, the officials admitted a willingness to investigate continued consolidation of the remaining small hospitals into primary care centers.

Implications/Next Steps:

If and when the Jamaican Ministry of Health decides to pursue these proposed reforms, it was agreed that they would require outside technical and financial assistance.

Source: Summary of Proceedings of Workshop.

Project Title: Improving Health Worker Productivity Through Operations Research

**Umbrella Contract/
AID Funding Office:** PRICOR

Nature of Activity: OR Study

Country: Jamaica

Contractor: Price Waterhouse Associates, Jamaica and University of the West Indies

Status: Completed (19 pp.)

Description of Project:

This study developed a methodology and collected data to improve the management of the Jamaican primary health care (PHC) services at the health center level. The objectives of the study were to: (1) describe the distribution of working time by PHC personnel; (2) develop an approach to productivity and cost effectiveness analysis; (3) describe productivity and cost effectiveness by type of clinic and type of health center; and (4) apply the model in an actual

Methodology/Project Approach:

A sample of 96 health centers was selected to represent the spectrum of health center types and locations (urban and rural). Data from the MOH were combined with observations at different clinics within health centers. Four hundred ninety six (496) workers were observed to identify the types of service and activities, types of staff and duration of service time for a "systematic sample of patients." At each selected center, one of each category of staff was randomly selected for one-day work observation. At 60 randomly chosen one-minute intervals staffs' activities were recorded according to a set of 16 categories (e.g., treating patients, travelling, supervision, inactivity due to lack of demand, absent from work and not on leave, etc.). These time allocations were compiled into a productivity index for each clinic and health center, and were then used to develop a cost index to show how time expenditures of clinics varied (cost effectiveness analysis). The indices were based on comparisons of actual with expected output (productivity) and actual and personal unit cost allocations (costs).

Findings/Output:

The productivity index for health centers ranged from 15 percent to 75 percent and the non-productivity time of health workers ranged from 26 to 66 percent; the cost index ranged from 5 percent to 50 percent, suggesting scope for significant improvements in increasing productivity in terms of health worker output.

Implications/Next Steps:

The major issues to be considered in the future would be: criteria for deciding on the establishment of a new facility; methods to monitor manpower allocation; criteria for performance evaluation; and types of information systems desired. The low cost indices suggest that there is a great opportunity to improve the efficiency of the health centers. Moreover, the model can be helpful to PHC managers in streamlining their operations; particularly useful is the sensitivity testing component which allows analysis of the impact when certain variables change.

Source: "Improving Health Worker Productivity through Operations Research" by Bobby Zachariah and Patricia Desai, PRIOCOR Paper.

Project Title: Demand and Utilization of Health Services in Peru

**Umbrella Contract/
AID Funding Office:** USAID/Lima

Nature of Activity: Research

Country: Peru

Contractor: SUNY Stoney Brook

Status: Ongoing

Description of Project:

Analysis of a nationwide health and nutrition survey that probed the household health behavior and expenditures. The research is examining the health utilization and demand among all segments of the population. Such analysis will indicate: by disease patterns, from where and in what sequence individuals seek health care, for example, whether they use public or private services, how often they use a pharmacy, etc., and whether they use more than one source per episode; what they pay for services; and the time costs for patients in reaching a health service delivery point.

Methodology/Project Approach:

The nationwide household survey is completed and cleaned. Tabular analysis is completed. Multinomial logit regression is applied in analyzing the full set of determinants of health care utilization, followed by a set of simulations.

Findings/Output:

Preliminary findings indicate that: (1) only 26 percent of children from 1-5 have received their full set of immunizations (40 percent urban and 9.0 percent rural); educational level and vaccination coverage are directly related, and maternal education is a better predictor of immunization coverage than are geography or location; (2) the urban poor are better served by health care than rural residents; (3) health care suppliers are disproportionately available in Lima where one third of the population is served by two thirds of Peru's doctors, nurses; other paramedic personnel are distributed more evenly; (4) 44.1 percent of patients self treat (49 percent in urban areas; 38 percent in rural areas) the major complaints and reasons for self treatment are the long waits in urban areas (26.3%) and long distance in rural (20.3%); (5) nationwide, more people seek care from private providers (28.9%), hospitals are second (26.1%), and all other sources attract less than 13 percent of patients.

Multivariate results demonstrate the importance of: travel time in deterring use of public and private facilities; wealth (as a proxy for income) and education in the extent of health services utilization. Price has a less

consistent and weaker effect on utilization than do wealth, travel time or some of the variables which capture symptoms, calendar periods, or location of residence. Availability of a social security hospital also has a strong effect on the decision to seek public care. Number of people living in the household tends to also be important but the strength of the effect varies and the direction of effect is negative in Lima and positive in the Sierra.

Implications/Next Steps

The data will be further analyzed in the next year.

Sources: "Financiamiento y Costo del Sector Salud" Documento Tecnico Preliminar Componente No. 6 Octavio Chirinos et al., July 1986;
"Informe Preliminar" ANSSA-Peru Documento de trabajo, July 1985;
"Measurement of Equity in Health" Philip Musgrove, March 1986; "The Demand for Health Care in Peru: Lima and the Urban Sierra, 1984: by P. Gertler, L. Locay and W. Sanderson (Draft, 5/1986).

Project Title: Investigation of Health Service Delivery in Three Elements of the Peruvian Private Sector

**Umbrella Contract/
AID Funding Office:** USAID/Lima

Nature of Activity: Study

Country: Peru

Contractor: MSH

Status: Completed (approximately 200 pages in two volumes)

Description of Project:

This study was undertaken to increase the Mission's understanding of the role of various components of the private health sector and to identify alternative ways the USAID might contribute to increased delivery of cost-effective health services through the private sector in Peru. In this report the findings and recommendations of the first of these investigations are presented. The project studied three components of the private health sector: the pharmaceutical industry, private voluntary organizations, and cooperatives.

Methodology/Project Approach:

A relatively formal survey was conducted of pharmaceutical retail sales outlets. In the cases of pharmaceutical procedures, private voluntary organizations, and cooperatives, much greater diversity existed in the size of the organization than in the character of their health services. Six consultants and three Peruvian professionals held extensive formal interviews and informal discussions with dozens of managers and leaders of these organizations.

1. Findings/Output from the Pharmaceutical Retail Sales Outlets:

1. Trained pharmacists and, to a lesser extent, auxiliary pharmacists are more likely to be present in retail sales outlets that are located in relatively prosperous settings than in outlets in economically disadvantaged urban settings or small towns in the mountains.
2. The relative price of the pharmaceuticals was not the major consideration in the selection of pharmacies and boticas for 90% of the clients interviewed.
3. Retail drug dispensers, particularly pharmacists, appear to play a major role in deciding what products their clients buy and how they consume them.
4. ORS was available at 65% of the sites but was recommended for children with diarrhea at less than one-third of these

sites. Twice as many liters of Electoral are sold than of Salvadora, although the price of the former is more than 10 times that of the latter.

5. The average pharmacist graduated in 1963 and has no regular means of updating his knowledge.
6. The quarterly publication of the Colegio Quimico Farmaceutico, El Farmaceutico Peruano, appears to reach approximately one-third of the pharmacists and few, if any, of the other drug dispensers.

Implications for the Pharmaceutical Retail Sales Outlet:

1. Education and information programs should be developed for pharmacists, other drug dispensers, and the drug-purchasing public, which focus on a narrow range of issues such as promotion of ORS and the all-too-common practice of dispensing sub-therapeutic doses.
2. Support of the Colegio Quimico Farmaceutico's current program of ORT seminars, while evaluating its ability to implement the educational activities is recommended.
3. Apparently, many pharmaceutical retail outlets act contrary to the interests of primary health care, the USAID should first determine how these practices can be corrected before considering support for the opening of new pharmacies.

2. Findings/Output from the Pharmaceutical Production and Distribution:

1. Prices are, at least in theory, controlled. Distributors are permitted a 19% markup over the manufacturer's price, while retailers are allowed a 25% markup over the distributor's price. Periodic adjustments are permitted to adjust for domestic inflation and the continuous devaluation of the sole.
2. Attempts to promote low-priced essential (previously referred to as "social" and "basic") drugs date back to 1960, but have largely failed in the private sector. This is perhaps due, at least in part, to an apparent incentive to sell expensive drugs, as a consequence of the 25% retail markup law.

Implications/Next Steps for the Pharmaceutical Productions and Distribution:

1. A careful study of the impact of pharmaceutical price controls should be undertaken to complement the micro-economic study of

drug retail outlets. The purpose of this study would be to evaluate the likely effect of the current controls on retail marketing of "essential" drugs, and to develop alternative policies if indicated.

2. The "essential" drugs program should be supported by an efficient and well-publicized quality control effort.
 3. The "essential" drugs program should also be supported by a carefully developed promotional campaign directed at both dispensers and the general public.
3. **Findings/Output of the Health Service Delivery by Private Voluntary Organizations:**

1. PVOs generally complement Ministry of Health efforts by serving populations beyond the reach of Ministry services and/or by providing services the Ministry cannot provide.
2. Most PVO programs have cost-recovery mechanisms, but the percentage of costs that are covered varies greatly. The three OFASA clinics within-patient service collectively earned a substantial profit during 1982.
3. Communications among PVOs are all very poorly developed and frequently duplication of effort is the result.

Implications/Next Steps for the Health Service Delivery by Private Voluntary Organizations:

1. USAID support is recommended for a Resource Center which would provide technical assistance to PVOs in management, communications, and selected health care topics.
2. The Resource Center should facilitate communications among PVOs.
3. The Resource Center should serve as a centralized procurement office for essential drugs, thus achieving economies of scale that can only be achieved by the largest PVO-supported health programs.
4. Four pilot projects are suggested:
 - 1) Coordinated PVO services for a large pueblo joven in Lima.
 - 2) Similar services for several smaller pueblo jovenes in Arequipa
 - 3) A multi-PVO pre-payment program in the Department of Loreto
 - 4) Expansion of the traditional medicine program in Cuzco

Source: "Investigation of Health Service Delivery in Three Elements of the Peruvian Private Sector" by J. Bates, J. Burns, P. Cross, G. Gereffi, C. Keaty, and P. Prentiss, November, 1983.