HEALTH FINANCING AND SUSTAINABILITY PROJECT

APPLIED RESEARCH AGENDA

1991 THROUGH 1994

May 3, 1991
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1.0 EXECUTIVE SUMMARY

The Health Financing and Sustainability (HFS) Project provides technical assistance, applied research, training, and information dissemination to developing countries in health economics, health sector policy development, and health services management. This document sets out the agenda for HFS's applied research component.

HFS already has conducted four smaller applied research activities: refinement of a microcomputer health finance policy simulation model; a study of preventive and primary health care resource gaps in Kenya; a study of health financing in the Arequipa Region of Peru; and the establishment of a health financing database on the countries in which HFS expects to work.

HFS's future research will seek to further develop policy options that will allow developing countries to improve the financial viability of their health systems, hence, the health of their populations. The audiences for the research include A.I.D. Missions and Bureaus, developing-country policy analysts and decision makers, other donors, the private sector, and the academic community. The project's mandate calls for it to conduct nine major and 30 smaller applied research activities in five technical areas: cost recovery, social financing, public-private collaboration, resource allocation, and costing. The research is to cover these technical areas and be distributed across the geographical regions as defined by A.I.D. HFS is to begin its research work by conducting a review of research and service experiences within the technical areas. The project will synthesize the findings of the research, draw lessons on the conduct of the research component, and suggest future directions at the end of the work. The HFS Technical Advisory Group has advised the project on the agenda developed and will provide additional advice on the conduct of the research.

Each major piece of research will move through a three-phase process, from conceptualization and design to field data collection to analysis. Smaller activities will be precursors to or components of major applied research, components of technical assistance assignments, or, in some cases, activities generated by unsolicited proposals. HFS will choose to conduct research activities that best meet the following criteria: practical orientation, field orientation, location in countries where HFS is working, ground-breaking subject matter, HFS technical areas, and time and resource limitations.

HFS will conduct much of its research in conjunction with its technical assistance activities, which are to make up more than 60 percent of overall project work. HFS has a core staff of specialists, who will conduct much of the research, and a roster of expatriate and developing-country researchers to complement the staff.

HFS has selected the following emphasis areas for major applied research activities: cost recovery, productive efficiency, social financing, private sector, and policy development. Topics in each area from which the major activities will be drawn are described briefly below.
Cost Recovery

1. **Quality of Care.** HFS will explore the degree to which quality improvements must be made in government health services for consumers to be willing to pay more for them, and the effectiveness of cost recovery in financing quality improvements.

2. **Protecting the Poor.** The project will analyze the feasibility of different methods to identify and protect the poor under cost recovery systems.

3. **Efficiency in Consumption.** Bypass charges, pharmaceutical fees, and insurance deductibles are alternative approaches to queues and referrals to influence consumer behavior in choosing whether and where to seek health care. This research will evaluate these price-related alternatives relative to other mechanisms.

Productive Efficiency

4. **Public Sector Reforms.** A central concern of governments is to improve the efficiency of health sector operations. HFS will expand governments' options in this area by quantifying the effects of alternative approaches, such as changing incentives for employees, contracting out to the private sector, and understanding the value, potential, and feasibility of mimicking private sector performance incentives.

5. **Reallocating Public Sector Spending.** HFS will examine the productivity and efficiency gains to be obtained from reallocation of current government spending on health. This research will include potential and actual gains from reallocations among primary, secondary, and tertiary care and between personnel, drugs, and supplies, as well as institutional barriers to such reallocations.

Social Financing

6. **Expanding Its Role.** In much of the developing world, an important question is the feasibility and attractiveness of expanding coverage of private and public social financing. From the consumer, provider, employer, and insurer standpoints, HFS will examine the feasibility of greater reliance on social financing. Of particular interest will be determining what role social financing can play in countries of different levels of income and health sector development.

7. **An Alternative to Direct Delivery of Services.** Governments have often chosen to deliver tax-supported services directly through government-owned and operated facilities. Social security systems have behaved similarly in many countries. A possibility ignored by such approaches is financing through government or social security, with delivery through the private sector. Industrialized countries often use this approach. HFS will study the advantages and disadvantages for developing countries to move in this direction. A subsidiary question that HFS will address is to what extent
such a change in approach could be used to integrate financing through Ministries of Health and social security systems.

**Private Sector**

8. **Development of Private Health Care Markets.** HFS will determine the factors involved in the development of private markets for the delivery of health services, including the role of competition and regulation, availability of health personnel, and presence of insurance markets. This work will include the effects of private market development on the quality, cost, and pricing of services.

9. **Public and Private Differences in Efficiency.** This work will determine the magnitude of efficiency differences among public, private, and social security providers of health services, and identify factors influencing the differences.

10. **Public and Private Interactions.** This research will examine the effects of permitting government physicians to practice medicine privately. Other questions that will be addressed include the effects of private wards in public hospitals and determining which health care services or inputs may be appropriate for delegation to the private sector.

**Policy Development**

11. **Policy Development in the Health Sector.** Governments and donors typically have little knowledge of and few tools to influence resource allocation in the health sector. This work will seek to identify the requirements, both in terms of human skills and data, necessary to improve health financing policy development. In addition, the research will develop information to help donors choose between project and non-project assistance in the health sector. It will also seek to identify the major issues that lie ahead in health financing. This work will be performed using cross-national data gathered over the life of the HFS Project.

HFS recognizes that other important issues may emerge over the life of the project. Hence, this list of topics will be reviewed and revised, if necessary, annually.
2.0 INTRODUCTION

The Health Financing and Sustainability (HFS) Project provides technical assistance, applied research, training, and information dissemination to developing countries in health economics, health sector policy development, and health services management. The HFS Project treats its responsibility to design and carry out applied research as an opportunity to increase our knowledge of the complex issues underlying health financing problems and to augment the supply of qualified individuals who can contribute to policy analysis and reform in the health sector. The emphasis areas for major applied research outlined in this document have been chosen in large part because they are areas where there are clear gaps in our knowledge and where there would be large immediate benefits in improved health financing policy.

In this document, applied research activities in Year One are first described. Then the HFS environment is outlined, including both opportunities and constraints to which the staff reacted in developing this agenda for research activities. The general outlines of the planned research program are then discussed, and steps for implementing it are described.
3.0 YEAR ONE RESEARCH ACTIVITIES

HFS completed four applied research activities during Year One that are described briefly below.

3.1 Health Finance Policy Simulation Model

With financing from the ANE bureau, HFS is refining and validating a microcomputer simulation model to provide estimates of public and private health expenditures based on population growth, levels of fees, insurance coverage, staffing levels and salaries, capital costs, and many other variables. The model incorporates parameters characterizing consumer behavior, such as cross-price elasticities between the public and private sectors, that can be used to illustrate the effect of responses to price changes on health expenditures. The model will be field-tested in Indonesia in the first half of 1991. It is designed to be used by developing-country analysts to simulate the effects of proposed policy changes.

3.2 Preventive and Primary Health Care Resource Gaps

With financing from S&T/Health, assisted by USAID/Nairobi, SIDA (Sweden), and ODA (UK), two HFS staff and a team of Kenyan consultants assisted the Kenya Health Care Financing Program (a Non-Project Assistance program) to estimate the additional financial resources required for the Ministry of Health to operate its Primary and Preventive Health Care program at full capacity. The study's method was to estimate the level of resources necessary to operate the program at its designed level and subtract from that the actual level of expenditure. The study estimates that recurrent spending falls short of the full capacity requirement by about 37 percent. The estimated gap in capital spending nearly doubles this shortfall. Although the research was focused on Kenya, the general approach, which is based on unit costs estimated from a small sample of facilities and the stated norms planned for the program, can be widely adapted.

3.3 Health Financing in Arequipa Region

An HFS study team, with co-financing from USAID/Lima, constructed a baseline description of the health sector in the Arequipa region of Peru from data on the public and private sectors as well as the social security system. Peru is proceeding with a decentralization plan for public services, such as education, housing, and health, that will transfer the management of these activities to 12 regional governments. Initially, the central government will continue to provide tax financing for these services, but eventually the regional units will collect some revenues locally and spend them on the programs according to their own priorities. Data collection for the HFS study, which included a small household survey, took place in less than five weeks. The study provides recommendations for future priorities for USAID/Lima and the regional government to implement the regionalization plan and to improve the efficiency and equity of the health system in the Arequipa Region. As with the work in Kenya, while this study is focused on a single region in Peru, the issues and the method of
amassing and analyzing the data are generic and can be widely applied. It is a prototypical HFS health sector assessment.

3.4 Health Financing Database

The project established a database that includes bibliographic information on health financing, a list of people who work in health financing in the countries to which HFS sends consultant teams, a list of people in other countries who also work on health financing in developing countries, and a list of projects that have health financing components. These databases are updated regularly, and a manual has been developed to assist users to take advantage of the product.
4.0 HFS ENVIRONMENT

4.1 BASIC DESIGN FOR APPLIED RESEARCH

In the design of the HFS Project, a framework is provided for the program of applied research. Key elements of that framework include the following:

- **Technical Areas.** Activities are to take place within each of the broad technical areas identified in the contract: resource generation through cost recovery; social financing of the demand for health services; public-private collaboration in meeting national health goals; resource allocation, use, and management; and health care costing, production, and delivery.

- **Research Scale.** The project distinguishes between major and smaller research activities. Major research activities, of which nine are expected, will last from one to four years. The HFS mandate is to seek balanced geographic coverage for these research activities by limiting the project to three per A.I.D. region. Since the contract was written, the Asia Near East Bureau has been split into two regions. The project will attempt to distribute its research activities evenly across all four regions. Smaller research activities, of which 30 are anticipated, are expected to require no more than four person-months. One objective of the smaller research projects is to use them as a mechanism to involve local developing-country researchers in larger technical assistance or applied research exercises.

- **Inventory and Review.** The project’s mandate is to precede major research projects with a review of research and service experiences of A.I.D. and other bilateral and multilateral groups within the technical areas listed above. This review includes development of a database inventorying those experiences. The database will be updated continually over the life of the project. In the spirit of this charge, the project has developed a database and will complete a review of literature and experience as part of the design of the individual major research projects. Each review will be available as it is completed.

- **Technical Advisory Group (TAG) Involvement.** The project’s TAG has played a major role in the development and review of both the research agenda for the project and plans for implementing the agenda.

- **Written Plans.** A written plan in the form of a scope of work for each applied research activity is required.
The scope of work includes objectives, a management plan, methodology, collaborating institutions, staff, consultants, and budgets. The project has developed a template for both major and small research proposals. Each activity must generate a final report that describes its purpose, methodology, findings, recommendations, and final cost.

4.2 RESEARCH APPROACH

The HFS Project is oriented to making practical breakthroughs in health sector financing. Its research will contribute to an expansion of financial and analytical tools used in the health sector, approaches to policy development, characteristics of health sector programs that contribute to their sustainability with local resources, the feasibility of implementing policies that are often recommended on their theoretical benefits alone, and a better understanding of the potential for private action in the health sector. HFS’s goal in the research agenda is to further develop and make more accessible to policymakers a menu of approaches to policy and options that will allow them to succeed in improving the financial viability of health care delivery systems, and in turn, the health of their populations. The project is concerned not only with economic analysis of these issues but with the practicality of policy changes within the political and institutional environments where they must take place.

4.3 HFS AUDIENCES

The project’s environment is to a large degree defined by the audiences or consumers of its research. These consumers fall roughly into the following groups:

- **Organizations.** USAID missions and Washington bureaus, developing country governments, private sector organizations, and the donor community are concerned with policy and program development in the health sector. They are particularly interested in feasible policy changes and how policy reform actually works in practice.

- **Individual policy analysts or program officers.** Policy analysts are concerned with examples of applications of analytical approaches, the effects of new policies, methods to evaluate policy changes, and an understanding of data needs for better policy development in the sector. These needs are met not only through applied research but also through technical assistance and training. The project views the interests of these audiences as compatible to a great extent, and will carefully disseminate research results in a manner appropriate to each.

- **Academics or the research community.** The academic community is concerned with the originality and quality
of the HFS Project’s research. These areas include the project’s ability to frame research questions in a manner that can result in testable hypotheses, its ability to test those hypotheses in a scientifically valid manner, and the quality of research reports.

4.4 HFS RESOURCES IN APPLIED RESEARCH

The HFS Project brings to its applied research activities a number of resources by virtue of the project design, including the following:

- **Technical assistance activities.** A wide array of short- and long-term technical assistance activities provide venues for research, complementary funds to support some components of research (such as data collection), and topics that are directly related to current policy problems. In some cases, long-term resident advisors who can manage research projects within a country will be available as a part of technical assistance activities. In some cases, USAID missions or A.I.D. Washington bureaus may buy into the project for applied research as a complement to technical assistance.

- **Specialized staff.** The core staff is large enough to provide specialized talent in a variety of fields, including health economics, social financing, health planning, health policy, private sector development, and financial management. The core staff is supplemented by the institutional staff of the partner organizations, which includes a large cadre of specialists in health financing, and by an extensive consultant roster.

- **Local consultants.** HFS is committed to include developing-country consultants and counterparts in its applied research activities. These local personnel will not only make important contributions to the research, but their visibility in their own countries will be enhanced by their work, and they will benefit from experience gained through their participation.

- **Complementary activities.** The HFS Project incorporates training, information dissemination, and a fellows program. Each of these activities complements the research program.

The design of the HFS Project creates the potential for seamless coordination of research and technical assistance activities, ready availability of developed and developing-country researchers to assist in the analytical work, and the ability to disseminate the results of the work to appropriate audiences.
5.0 MAJOR APPLIED RESEARCH

5.1 DEVELOPMENT OF THE RESEARCH AGENDA

The research agenda has been under development since the early stages of the HFS Project. The staff proposed a general approach to applied research during the first TAG meeting in February 1990. Guidance from the TAG revolved around the general nature of the agenda and the need to be more specific to move toward an operational plan. There was considerable debate both within the project and among the TAG members about the scope of the review of experience mandated by the contract as well as the quantity of project resources that should be devoted to that activity. In early March 1990 (following suggestions of the TAG), a conceptual framework for the development of the database and the review of experience was written, but follow-up on these activities was delayed until a replacement could be found for the Senior Health Economist, who left the project at about that time. TAG members continued to question the labor intensity of the review of experience. They applauded the effort to generate hypotheses within specific areas for the research strategy, but continued to wonder how the large number of questions posed in the strategy could be molded into specific studies.

This third revision reacts to these concerns. The HFS staff has created lists of potential major and smaller research studies that attempt to turn general research questions into more narrowly-defined problems attached to concrete policy changes or research activities. However, molding research questions into concrete activities, especially when they include field components, requires much more detail than can be supplied in this document. The approach here is to isolate "emphasis areas" for major applied research, outline major research topics in these emphasis areas, and propose a standard procedure for executing the research. As explained below, this procedure consists of three phases—conceptual/design, field implementation/data gathering, and analysis. The conceptual/design phase is key to moving from ideas to research projects. It will provide a focused review of experiences related to the planned research, a careful treatment of methodological issues, and a complete design for the project. The following sections describe the emphasis areas, identify major projects, and explain the procedures that will allow the project to move from ideas to implementation.

5.2 EMPHASIS AREAS FOR MAJOR RESEARCH PROJECTS

Using reviews of research needs in health financing, knowledge of the existing research literature, experiences in technical assistance, and information needs for policy dialogue in the health sector, the staff developed its working set of major applied research topics. In considering the many possible areas of research, the staff concluded that there are a number of generic topics that come up time and again in policy discussions and in technical assistance on which we often reach the limits of our knowledge. These topics fall roughly into the five emphasis areas listed below. HFS will develop its major applied research activities from this list. The literature and experience reviews that will be conducted as part of the conceptual work on each major research activity will be compiled as HFS’s review of experiences. Additionally, the research plan includes a compilation of the research findings at the end of
the HFS Project. In this section, a brief discussion of each of the major topics under the emphasis areas is provided.

While the HFS Project has spent considerable time and effort compiling and organizing these topics, we recognize that there are other important issues that are not explicitly covered here and that, over the course of time, the emphasis areas may change. Hence, the list of topics will be reviewed and revised annually, allowing adjustments to be made as necessary.

5.2.1 Cost Recovery Policies

Cost recovery policies are one of HFS's mandated technical areas. Many governments, at the urging of donors, are putting into place cost recovery systems to aid in the financing of health services. Despite growing confidence in cost recovery as part of a solution to health financing problems, a number of concerns and issues remain. HFS will take up three of these concerns: interactions between cost recovery and quality of care, how to protect the access of poor groups to services in the face of the charging of fees, and how the prices charged in cost recovery systems can be used to influence consumer behavior.

1. **Quality of Care.** What must be done in terms of quality improvements in the public sector to facilitate cost recovery? And how effective is cost recovery in financing quality improvements? The underlying research question is to quantify some of the trade-offs consumers and providers (public and private) make between quality and cost of care.

2. **Protecting the Poor.** What are practical methods to protect the poor under public sector cost recovery programs or when the delivery of health services is accomplished principally through the private sector? The underlying research question is how to identify the poor in a cost-effective way and how to design workable programs that target public subsidies to them, whether they use the public or the private sector.

3. **Efficiency in Consumption.** How can a pricing system increase efficiency in consumption? The underlying research question is to what extent prices are effective in encouraging behavior for which health care systems have been designed. Examples include the effectiveness of bypass fees in redirecting patients and the effectiveness of co-payments and deductibles in reducing unnecessary demand for health services under insurance systems.

5.2.2 Productive Efficiency

In this emphasis area, the HFS Project will concentrate on two ways in which governments may be able to achieve more with the funds they have available
for health services. One method of improving efficiency is to provide incentives for efficient performance. Another is to reallocate resources toward more effective programs and to relatively under-funded inputs. HFS will research these topics to discover how effective they may be in improving efficiency.

4. **Public Sector Reforms.** Reforms suggested to increase efficiency in the public sector often attempt to mimic incentives in the private sector. How effective are these reforms, such as performance incentives or decentralization, in increasing the efficiency of public services? For which types of activities and under what conditions does contracting out services lead to less expensive and higher-quality services in the public sector? See section 5.2.4 below for a discussion of related private sector issues.

5. **Reallocation of Public Sector Spending.** To what extent can public resources be reallocated to achieve better health for the population within existing budget limitations? For example, to what degree can reallocations from tertiary and secondary care to primary care, or from spending on personnel to spending on drugs and supplies, increase the productivity and effectiveness of public health services? Institutionally, how can such reallocations, which are often recommended, be accomplished? What is the record?

5.2.3 **Social Financing**

In social financing, there are two basic concerns that are to some degree separable: first, issues related to the extension of coverage of small systems to both a larger share of the population and a broader range of medical interventions; and second, the choice faced by insurance systems, particularly by public social insurance systems, between acting as direct providers or as financiers of health care that is delivered by others. The first issue is immediately important for a broad range of countries, especially poorer ones, that are now considering insurance as a financing option. Most countries have either small social insurance systems or mandated coverage by employers that might be the basis for a larger system of social financing of health services. The second issue is a more pressing concern for countries that have older, larger systems, but it is a generic issue faced in all countries at some point by the insurance system, the Ministry of Health, or both.

6. **Expanding Social Financing’s Role.** The practicality of extending insurance coverage to poorer groups and/or covering a broader range of health problems revolves around the behavior of four sets of actors: consumers, providers, employers, and insurers. How do consumers react to insurance in changing their consumption patterns? Theoretically, we know that people will consume more care as the out-of-pocket price falls and that sicker people will tend to select themselves into
insurance pools. The size of these behavioral changes and both the effects and feasibility of policies to counteract them pose important empirical questions in the design of insurance programs whose goal is to increase coverage. What are the equity effects of small systems that tend to cover high-income groups, and how do these effects change as the systems expand?

On the provider side, how does insurance affect decisions, and what are feasible methods to minimize cost escalation in a developing country after insurance becomes available as a payment mechanism? Under what conditions are prepaid plans feasible in developing countries? What is the role of the public sector in promoting prepaid plans where they do not yet exist? How does coverage of only inpatient services affect provider incentives; is there scope in such systems for broader benefit packages (such as coverage of outpatient services) that can reduce costs and possibly improve medical outcomes?

What is the demand for private group health insurance plans by employers, and how can this demand be translated into extension of private risk-sharing arrangements to smaller firms, particularly in the informal sector? Is there demand for insurance coverage from other groups, such as farmer cooperatives or credit institutions? What fraction of the total population can be covered by employer- and other group-based insurance? What are the advantages and disadvantages of mandatory employment-based coverage?

For insurers, whether public or private, what determines the feasibility of extending social financing mechanisms to poorer, informal sector workers? What are the administrative costs of doing so; in what ways are such plans superior or inferior to the direct provision of government health services? What types of subsidies from the public sector might be required? What are reasonable price/coverage trade-offs that can be made to extend coverage to poorer populations? What are the costs and benefits of single monopsonistic insurance payment mechanisms relative to multiple competitive payment mechanisms?

7. Social Financing as an Alternative to Direct Delivery of Services. This issue has occasionally received attention in Latin America, but is becoming more important as more countries consider using insurance or payroll taxes to help finance health care services. Should services be provided directly? Should the social insurance system simply act as a financier and regulator
of private sector provision? Under what circumstances does a mixture of the two make sense? One aspect of this issue, the integration of social insurance and Ministry of Health services, has often been debated in Latin America. However, the debate has usually been limited to some sort of institutional coordination between two direct providers of health services. The HFS Project can widen options in this policy area by helping policymakers understand the potential, if any, for integration through separation of the financing and delivery of services. Can financial mechanisms be created that would take advantage of the large pools of money and administrative expertise controlled by these institutions, using Social Security, Ministry of Health, and private sector providers to deliver services to the whole population? What does it take institutionally to achieve this goal? What are the effects on consumers, providers, and employers? Under what conditions is this the most effective way to achieve the goal of extending coverage of an insurance mechanism to poorer groups? Can this approach lead to greater benefits for those who pay into these systems now? What are the losses in terms of output, efficiency, and coverage of existing systems that would be improved by an integrated financial approach?

5.2.4 Private Sector

One means of improving the sustainability of health financing is to promote or permit a greater role for the private sector as a provider and source of financing. Three topics will be researched by HFS in this area. A better understanding of what is necessary for private markets for health services will assist those wishing to promote private participation. Quantification of the differences in efficiency between private and public providers will allow an appreciation of the gains to be had by increasing private participation. Lastly, the effects of the two systems operating in parallel will be researched.

8. Development of Private Health Care Markets. Can we, through research, better understand the determinants of the development of private health care markets in developing countries (and implicitly, how governments can accommodate, inhibit, and regulate private sector development)? What is the role of competition among private medical care providers? How do other elements of the environment, such as availability of physicians and nurses, insurance, and foreign exchange restrictions, affect growth of the private sector?

9. Public and Private Differences in Efficiency. What are the determinants of differences in productivity across institutional settings? What are the sources and magnitudes of differences in public and private sector
efficiency? Between for-profit and not-for-profit private sector institutions? How does access to different types of payment mechanisms affect private sector productivity, such as differences between prepaid providers and providers reimbursed on a cost basis? See also section 5.2.2, above.

10. Public and Private Interactions. A common situation in countries with direct-delivery public sector health services is employment by physicians in both the public and private sectors. Can we categorize and better understand the costs and benefits of the incentives created in this environment? To what extent does it lead to subsidies of private physicians and patients by governments? What are alternatives? Are we observing a market-clearing mechanism in labor markets; if so, is it efficient? What effect does the creation of private wards in government hospitals have? Which services can be delegated to the private sector?

5.2.5 Policy Development

Discussions of health sector financial policy are often based on broad intuitive generalizations. HFS will gather data across the developing world in a systematic fashion, then analyze them to focus and quantify the generalizations to make them relevant to policy decisions.

11. Policy Development in the Health Sector. Development of a health financing database can allow the discussions of policy choices to become oriented to specific, measurable quantities. Countries can be grouped according to useful financial barometers (e.g., total health spending per capita or share of private spending in total), just as they are now grouped according to health statistics (e.g., infant mortality rates). Such comparative data are essential to policy dialogue between donors and governments. These data are also tools for governments to measure their progress relative to that of other similar countries. The HFS Project is in a unique position to assemble such a database of financial information through its technical assistance activities and contact with A.I.D.'s vast network of missions.

The data will include such items as: spending for health services as a percent of GNP, sources of health expenditures (government, private out-of-pocket, insurance), ownership and numbers of hospital beds, extent of coverage of insurance, drug procurement policies, relative prices of labor and materials inputs, or public sector spending priorities.
Based on international comparisons of health financing data, can countries be classified in such a way that priorities can be assigned to finance-oriented policy issues in the health sector? For example, what successful strategies have been developed in countries with high cost medical personnel? In which countries is the main problem low government spending on health? Where is government spending high but health indicators remain poor? Where does high government spending tend to crowd out private spending and impede the development of insurance? What proportion of public spending is directed to hospitals; is there anything to be learned from countries at the high and low extremes of this distribution? What proportion of hospital beds are owned by the private sector? How is medical education financed, and what lessons are available in a comparative context to reduce the burden of medical education on public budgets?

Although these topics obviously fit into the project's technical areas, the matrix in Exhibit 1 illustrates coverage more explicitly. Because there is so much overlap among areas, it is fairly arbitrary to decide that some cells in Exhibit 1 should be empty.

5.2.6 Review of Experience and Database

- The project's mandate to review the experience of A.I.D., donors, and governments as a first step in completing major applied research projects will be met for each of the topics. HFS will perform a review as a first component of the conceptual work required to design each of the major applied research activities. These background documents will be available individually.

5.2.7 Compilation and Review of Research Findings

- Review of findings. This review of the research activities of this project will be organized around the technical areas, with recommendations for future research in health financing. In addition to the project's normal final report, the staff responsible for carrying out the applied research agenda will synthesize the findings of the major and small research projects. This activity will focus on lessons learned about how to carry out such a large and complex field-oriented research agenda, findings of the research within the above emphasis areas, methodological approaches used, and recommendations for advancing research to the next logical step in follow-on projects.
### Exhibit 1. Correspondence between Project Technical Areas and Applied Research Topics

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<tr>
<td>Costing, Production and Delivery</td>
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6.0 MANAGEMENT OF APPLIED RESEARCH ACTIVITIES

6.1 GENERAL APPROACH TO MAJOR RESEARCH

Major research in these areas will include field work or data collection activities in order to benefit from the primary advantage afforded by the project design--access to countries undergoing policy changes. Field work for one project may involve activities in a single country over time or in several countries simultaneously. Major applied research activities will generally take place in the project’s long-term technical assistance countries.

The clear separation of major projects made in the previous section will break down in the field, because, in practice, countries work on several different policy reforms at the same time, such as productive efficiency and cost recovery. The project will take advantage of such overlaps to learn about complementarities and packages of policies. However, by necessity, some focus on small, discrete changes in policy will be essential to develop and test meaningful hypotheses.

A general strategy is outlined below for taking projects in these emphasis areas from the conceptual stage, to field work, to analysis of the data, and on to evaluation of the usefulness of the policy change. Exhibit 2 shows an example of how this procedure would work for one of the major emphasis areas.

- **Phase 1: Conceptualization and design of the project.** This phase will include development of a conceptual framework to guide the project and will include a review of literature and experience in the area. The research design will be developed with expert inputs and will be reviewed for scientific validity. If other appropriate data are available, every effort will be made at this stage to include simulations or first tests of hypotheses with those data. Such simulations will assist in focusing the field work and will help to show the value of collecting new data in a field setting where policy changes are being made. The endpoint of the conceptual phase will be a complete design for the field work, selection of countries where it will take place, plans for progress reports and their timing, general plans for collecting data, disposition of data after the project ends, oversight and management of the project, and general analytical plans. Accompanying documentation will include discussions of problems addressed by the design, what types of data will be required to test the hypotheses, and how the data will be analyzed.

- **Phase 2: Field work and data collection.** In this phase, the research project will get under way in one or more countries. If data collection is planned in several different countries to document natural experiments, this phase will consist almost entirely of
Exhibit 2. Example of the General Approach to Major Research Projects

<table>
<thead>
<tr>
<th>CONCEPTUAL/DESIGN</th>
<th>FIELD WORK</th>
<th>ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of concepts experience in means testing and targeting</td>
<td>Across countries or within, try out several approaches:</td>
<td>Before, during, after surveys of providers and patients</td>
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<tr>
<td>Analysis and simulation of potential methods</td>
<td>• Differential rural and urban fees</td>
<td>Analyze/Evaluate:</td>
</tr>
<tr>
<td>Country selection</td>
<td>• Hospital entrance fee vs. detailed sliding scale</td>
<td>• Change in use patterns</td>
</tr>
<tr>
<td>Research design</td>
<td>• Central vs. facility test</td>
<td>• Change in subsidy patterns</td>
</tr>
<tr>
<td></td>
<td>• Formal means test vs. differential pricing</td>
<td>• Administrative costs relative to leakage allowed</td>
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</table>

Data collection. If a field trial is planned, this phase will be, in a sense, a carefully designed evaluation effort accompanying policy changes associated with long-term technical assistance activities. Other elements of this phase include the design and testing of survey instruments, the training of field workers, workshops to involve local decision makers and researchers in the work, training as necessary of local researchers to participate in the work, and follow-up workshops to present results and assist local decision makers to incorporate the findings into their policies.

- **Phase 3: Analysis.** In this phase, the data will be analyzed, and written reports will be issued. These products will present methods, data, findings, and suggestions for future directions for research on the same topic. A particular concern at this stage will be evaluating the sustainability of policy changes. Review procedures for the major outputs of the research are discussed below.

Exhibits 3 through 9 explain in greater detail the activities that will be undertaken within each of the emphasis areas, following this general approach of moving from the conceptual stage to data collection and analysis. These exhibits describe the major research questions to be answered during the conceptual/design phase and provide brief descriptions of the questions to be answered by the field work. As stated above, plans for the field work will be part of the written output of the conceptual/design phase.
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<thead>
<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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| Conceptual and Design Phase: Review of Concepts and Experience in Quality of Care | - What is known about the relationship between quality of care and health financing mechanisms, especially cost recovery? How do providers view quality? How do consumers view quality in choosing source and amount of care purchased? Do providers' and consumers' perceptions of quality differ?  
- How can quality be improved? How much do quality improvements cost? What is the potential of quality improvements for increasing utilization? To what extent can improvements in quality be paid for through user fees or related mechanisms?  
- How can consumer education affect perception of quality? | Global |
| Field Work: Testing the Quality of Service/User Fee Combinations | - What improvements in quality are required to facilitate cost recovery in the public sector? Can cost recovery pay for these improvements in quality? What types of improvement are most attractive to consumers, and how do their views differ or complement providers' views of quality? What trade-offs do consumers make between quality and price?  
- The design of this project will require that trials be performed in different areas of the same country or that data from countries with different cost recovery policies be compared. | Egypt  
CAR |
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<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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| **Conceptual and Design Phase: Review of Concepts and Experience in means testing and targeting of subsidies** | • In industrialized countries, means testing is normally accomplished through costly administrative procedures, but that approach is probably unworkable in most developing countries.  
• How are the poor identified and protected in other sectors in developing countries? What are we trying to accomplish in terms of the poor by targeting health subsidies to them?  
• What are proven methods to achieve these goals? What are unproven methods that would be good candidates for testing?  
• Use existing household data sets to investigate hypotheses generated in foregoing review.  
• If a general characteristic such as rural location or a specific disease were used as the means testing criteria, how well would that characteristic isolate the poor in a known population?  
• If prices were set to zero in public facilities, how well would that approach target subsidies relative to other possible approaches?  
• Test alternative approaches to understand their effects in a simulated environment to help develop the project design.  
• Implement cost recovery and design means testing approaches; test results through data collection and qualitative interview techniques.  
• Determine relative administrative costs of different approaches and assess measures of fairness, leakages, political acceptability.  
• A cross-country approach could be used, although a country willing to experiment with different approaches in different regions would be ideal. | Global  
Jamaica  
Belize  
Sri Lanka  
China  
Nigeria  
Philippines  
Belize  
CAR  
Egypt  
Zaire  
Senegal |

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<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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| **Conceptual and Design Phase: Review of Concepts and Experience** | - Health sector pricing policies in both industrialized and developing countries drive down costs to consumers, usually well below the marginal benefit of the service to them.  
- What are the dimensions of this situation in developing countries in the public and private sectors?  
- What have countries done to control the resulting high use of services; have non-price rationing systems been successful? Has this “over-use” been desirable from a health policy standpoint, or do the people least in need respond most to these incentives? | Global             |
| **Field Work: Efficiency in the Consumption of Referral Systems and Insurance** | - Can judicious use of the price system reduce inefficiency in consumption? In a practical sense, are prices effective in encouraging behavior for which health care systems have been designed, such as the treatment of minor problems in clinics rather than in hospitals? Or, are price elasticities so low that behavior is unlikely to change for any politically acceptable set of prices?  
- Can co-payments and deductibles reduce unnecessary demand for health services under insurance systems, or do low price elasticities mean that they have little effect, reducing the insurance element of the system more than they change behavior?  
- Do separate drug charges discourage the prescribing and purchase of drugs that are essential for treatment; do all encompassing visit charges avoid this problem? Simple changes can be studied: bypass fees, drug charges, registration fees, differential pricing at various facility types.  
- A series of studies on different aspects of this issue could constitute the field work; a single field trial is unlikely to be feasible or provide information on the wide array of important questions that are contained in this topic. | CAR Belize         |
### Exhibit 6. Major Applied Research in Productive Efficiency: Topic 4 - Public Sector Reforms

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<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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<tr>
<td><strong>Conceptual and Design Phase:</strong> Review of Concepts and Experience in Public Sector Reforms</td>
<td>• How can efficiency in health services production be defined and measured in practice?</td>
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<td>• What can be gained through improved information on efficiency?</td>
<td>Egypt</td>
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<td>• How can estimates of costs be used for improving efficiency?</td>
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<td>• What has already been done in improving efficiency in the production of government services, with what success?</td>
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<td><strong>Field Work:</strong> Public Sector Reforms</td>
<td>• Can incentive systems be developed that can help boost efficiency in government health facilities? If so, what are the most adequate incentive systems? What are the costs of such systems? What are their benefits?</td>
<td>Zaire, Senegal, Dominican Republic</td>
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<td>• Is health care quality affected when such incentives are introduced? Does centralization of government services promote or reduce efficiency?</td>
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<td>• This research activity is likely to be coupled with technical assistance activities aimed at improving efficiency of government service delivery.</td>
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<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
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| **Conceptual and Design Phase: Review of Concepts and Experience in Expanding Social Financing's Role** | • What is known about private risk-sharing schemes in LDC settings and their effect on enrollee and provider behavior? What types of schemes have been tried? What are the financial and institutional characteristics of successful and unsuccessful insurance schemes? What are socio-economic and occupational attributes of their members? What are the distinguishing features of their benefit packages, provider networks, and physician payment systems?  
• Based on experiences of such plans, what types of risks are insurable? How do existing plans deal with moral hazard and adverse selection? What are the characteristics of the families, workers, or firms that are denied coverage? | Global |
| **Field Work: Extending Coverage to the Poor** | • Is it economically and administratively feasible to establish health insurance or other forms of risk sharing for low-income populations, especially workers outside the formal economy? Can risk pools be organized, managed, and maintained through alternative grouping mechanisms such as lending associations and cooperatives?  
• What type of benefit package and provider network is desired by and affordable to these groups?  
• What can be the role of government as a financier and health care provider within an insurance plan? How can schemes be designed and provider networks organized to achieve efficiency - minimize moral hazard, adverse selection, and administrative costs - and at the same time improve access and provide a quality product?  
• What is the nature of the risks involved in covering low-income populations in developing countries? | Dominican Republic, Kenya, Zaire |
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<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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| **Conceptual and Design Phase: Social Financing as an Alternative to Direct Delivery** | * Define the theoretical benefits and costs of alternative roles for government as a funder and provider of services. Potential government roles extend from direct provider and funder at one end of the spectrum, to funder of specific targeted services and groups, with provision of the services by the private sector, at the other end of the spectrum.  
  * Examine the record when governments have changed their role in provision and funding, especially cases of “integration” of Ministries of Health and Social Security systems, or differences that exist across countries.  
  * What are the theoretical advantages and disadvantages of government monopoly in the provision of services? Of government as a monopsonist in the employment of health personnel? Of a pluralistic insurance system relative to a single governmental insurance entity?  
  * Formulate hypotheses and methods to test the effects on quality, equity, and efficiency when government’s role changes. | Global            |
| **Field Work: Social Financing as an Alternative to Direct Delivery of Services** | * What are the advantages and disadvantages of social security and Ministry of Health financial and health service systems mergers or coordination in terms of access, efficiency, and coverage?  
  * What are the implications of governments abandoning direct provision for a social financing role?  
  * What are the effects on the wages of health personnel of governments moving from employer to purchaser of services?  
  * What happens to administrative costs?  
  * What happens to quality of care? | Peru  
  Panama  
  Belize  
  Mexico |
New known about the dynamics of private health care markets, productivity of the private sector, privatization, regulation, quality control, competition. What typologies have been constructed to classify countries according to the feasibility and desirability of encouraging private sector development in specific areas? Have hierarchies of activities in the health sector (drug procurement, janitorial, physician services, and so on) been identified to set priorities for greater private involvement? Are there examples of experiments in using the private sector that have worked? How have governments successfully involved the private sector in health care delivery; how have they inhibited it? What methods have been used to measure the development of private markets? How can they be improved upon or adapted to address HFS research questions?

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<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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| **Conceptual and Design Phase: Development of Private Markets** | • How can the goals of fostering additional public-private collaboration be defined? What is known about the dynamics of private health care markets, productivity of the private sector, privatization, regulation, quality control, competition?  
• What typologies have been constructed to classify countries according to the feasibility and desirability of encouraging private sector development in specific areas?  
• Have hierarchies of activities in the health sector (drug procurement, janitorial, physician services, and so on) been identified to set priorities for greater private involvement?  
• Are there examples of experiments in using the private sector that have worked? How have governments successfully involved the private sector in health care delivery; how have they inhibited it?  
• What methods have been used to measure the development of private markets? How can they be improved upon or adapted to address HFS research questions? | Global |
| **Field work: Development of Private Health Care Markets** | • How do private practitioners establish practices, set fees and waivers, and relate to financial markets? How does physician undersupply or oversupply affect the establishment of private services?  
• What are determinants of and constraints to forming successful group practices?  
• What government policies assist or hinder development of private services?  
• In what ways is private fee-for-service care dependent on the free provision of drugs and diagnostic services in Social Security and Ministry of Health facilities? What are the regulatory incentives to efficient and high-quality operation of private sector providers? | Senegal, Ecuador, Philippines |

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<tr>
<th>Research Activity</th>
<th>Major Research Question</th>
<th>Possible Locations</th>
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</table>
| Conceptual and Design Phase: Public-Private Differences in Efficiency | - How can differences in efficiency be measured to account for differences in quality of care and mix of cases?  
- What is known about differences in efficiency among government, private, and social security providers? | Global  
Dominican Rep. |
| Field Work: Public-Private Differences in Efficiency | - How does the productivity of the private sector compare with the productivity of the public sector (government and social security)?  
- What is the potential for efficiency gains if the private sector is used to deliver government-financed care? | Senegal  
Dominican Rep.  
Haiti  
Peru |


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<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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| Conceptual and Design Phase: Public-Private Interactions | - Can hierarchies of activities in the health sector (drug procurement, janitorial, physician services) and so on be identified where greater private involvement is a priority?  
- What is the expected behavior of government health personnel who are permitted to practice privately? What is expected from establishing private wards in government hospitals?  
- What is known about public-private interactions? | Global |
| Field Work: Public-Private Interactions | - What is the effect of the dual public-private role of physicians on the efficiency and quality of care in public and private facilities?  
- What are the administrative and other barriers potentially associated with such public-private arrangements?  
- What are the advantages and disadvantages of private wards in government facilities?  
- Are there certain types of health services that are more appropriate for delegation to the private sector? | Ecuador |
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<tr>
<th>Research Activity</th>
<th>Major Research Questions</th>
<th>Possible Locations</th>
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<tr>
<td>Conceptual and Design Phase: Review of Experience and Approaches in Health Financing</td>
<td>* What are major issues in health financing and what are the impediments to solving the problems? What data sources are available that would improve our understanding of health financing from a cross-country perspective, among regions, or across countries ranked by per capita income?</td>
<td>Global</td>
</tr>
<tr>
<td>Field Work: Global Data for Health Financing</td>
<td>* Collect health sector financing data from a large cross-section of developing countries, using project resources: contacts with missions, database software, technical assistance assignments in many countries, access to data available from cooperating agencies and other donors.</td>
<td>Global</td>
</tr>
<tr>
<td>Analysis: Analysis of Cross-Country Data for Health Policy Development</td>
<td>* Development of typologies for different stages of development in health financing, with associated policy issues; measures of efficiency and equity in health expenditures; relative size of public and private sectors; breakdown of public expenditures into comparable program areas; evaluation of future needs in health policy development.</td>
<td>Global</td>
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</table>
6.2 SMALL RESEARCH ACTIVITIES

Small research activities require no general agenda, nor would it be sensible to try to list at this point every small research activity that the project will undertake. However, the HFS Project can make available a list of ideas for smaller research projects that was prepared as background to this document. A template for organizing proposals has also been developed.

In general, small research projects will be generated as part of the following activities:

- **Precursors to major applied research.** In the approach outlined above, simulations using available data during the conceptual stage of the project design would be classified as small research activities. Suggestions for major applied research to replace projects in the above list will be considered in the future; small research projects might be commissioned to perform the same types of conceptual studies as are planned for the current list of emphasis areas. In general, however, conceptual or literature review activities will not be considered unless there is a reasonable probability that they will lead to major field research; small research projects are expected to be empirical in nature.

- **Components of technical assistance.** In the course of technical assistance activities, opportunities for small applied research arise that cannot be adequately funded through the technical assistance itself. Such opportunities may justify small additions of core funds. For these types of activities, the separate list of research ideas can be very helpful in molding the character of technical assistance along lines that might also lead to useful research.

- **Components of major applied research projects.** Major projects will usually include both long-term technical assistance and major applied research. In both cases, as the work proceeds, opportunities for interesting smaller projects to be completed by in-country researchers may merit funding as small research projects.

- **Unsolicited proposals.** The project expects that unsolicited proposals for support of small research projects will come from missions, students, and researchers.

All small research projects, whether generated by project staff, submitted as unsolicited proposals from outside the project, or developed as part of other project activities, must follow the format developed by the project and will be
cleared internally by staff who will examine them within the context of the criteria listed in section 6.3.

6.3 CRITERIA FOR SELECTION OF RESEARCH PROJECTS

An orderly process of project selection is essential to the success of the applied research program. With so many potential candidates for research activities, a filter must be available to assist the project in focusing its efforts. Based on examination of the research experience of previous projects, the following criteria were developed to assist in selecting applied research projects:

- **Practical orientation.** The research is important in solving practical problems of health financing. High-priority research activities will assist in developing new health financing options or in solving problems that emerge from project development activities, policy dialogue, or implementation of policy reforms.

- **Field-oriented.** The research should benefit from resources available to the HFS Project, particularly the ability to do field work and collaborate with local researchers.

- **Location.** The research question must be appropriate to specific country opportunities available to HFS, especially countries in which HFS will participate in a long-term technical assistance activity.

- **Ground-breaking.** The proposed research is not already being done well by other researchers.

- **HFS technical areas.** The research fills gaps in knowledge, implements theoretical solutions to problems in the project’s technical areas (cost recovery, social financing, etc.), or answers empirical questions related to those theoretical solutions.

- **Time and resource limitations.** The research question can be studied adequately within the time frame and resources available to the HFS Project.

Few small projects fulfill all of these criteria, but the major applied research projects detailed above meet all of them. In general, when unsolicited projects are submitted to the project, or if missions generate ideas for research activities, the HFS Project will subject them to the same set of criteria in deciding whether they merit inclusion in the research plan. Furthermore, while this list of criteria can help HFS decide which activities merit consideration, the staff will have to set priorities among those projects and pursue the ones that provide the greatest benefit for the cost.
6.4 GUIDELINES FOR APPLYING CRITERIA

For major projects, a consensus among the technical staff will be sought in applying these priorities. For smaller projects, a review committee chaired by the Project Director or the Senior Health Economist will make the decision in consultation with appropriate technical staff. Submissions of small research proposals by either individuals or USAID missions should be directed either to the Project Director or the Senior Health Economist.

6.5 REVIEW PROCESS

The review process will allow HFS to track and guide the research portfolio. It will ensure that the technical quality and management of research activities are consistent with the highest scientific standards. The review process will be oriented to two features of applied research: the design of the projects and the written outputs of the projects. There are three methods of evaluation available to the project:

- **Expert participation in the design process.** During the design phase of research activities, there may not be a written output that can be reviewed at points when important technical decisions are made. Experts in the "emphasis area," in survey design, or in project design will be asked to participate in meetings at which critical design decisions are made. To the extent possible, HFS will ask TAG members to play this role.

- **Expert review of written outputs.** One approach to reviewing research outputs is to request reviews from external consultants. This approach will be used primarily for intermediate outputs of research activities, such as survey instruments, interim reports, and so on, on which HFS will seek timely expert inputs so that adjustments can be made during the field work.

- **Professional referee process.** Some written outputs of research will be submitted to journals to take advantage of the peer review process that is institutionalized for the dissemination of research results.

Each major applied research activity will involve outside experts in designing the field work and strategy for evaluation of the research. Funds will be built into the budgets for review of intermediate outputs. All intermediate and final research outputs will be reviewed within the project by the Senior Health Economist, who may designate other technical specialists within the project to assist in the review. Some research outputs will become HFS Technical Papers (or their equivalent) and those papers will undergo the regular review process within the project and S&T/Health. In consultation with project managers and authors, the Senior Health Economist may designate outside experts to review final outputs, or a decision may be made to seek peer review by submitting research reports for publication in journals.
6.6 SCHEDULE FOR MAJOR RESEARCH PROJECTS

In the next six months, the project will proceed with the conceptual work necessary to initiate up to half the major field activities. A preliminary and tentative schedule adequate to show the project's intentions is attached as Exhibit 14. Up to this point, major applied research projects have been discussed as if the project were certain that all will be carried out as described. Exhibit 14 introduces a temporal dimension and some of the uncertainty connected to this enterprise. The start-up dates for these projects indicate which are considered most important and feasible now. Those programmed to commence further in the future may be replaced by other projects or may have a different character than is currently envisioned.

6.7 FELLOWS PROGRAM

The project staff will attempt to involve doctoral or masters students in major applied research or technical assistance activities, either in the field or in the HFS office through the fellows program. The expectation is that fellows will complete a research thesis based on data gathered through the HFS Project, preferably one that is a continuation of work the student begins while working on the project. An announcement for the fellows program will be distributed in the summer of 1991.

7.0 CONCLUSION

This document has described the advantages that the HFS Project brings to applied research in health financing. It has put forward a set of criteria by which research projects will be evaluated and selected. It has asserted that the emphasis areas for major research activities, as derived from the staff's understanding of the available literature, experience, and demand for information, revolve around cost recovery (quality of services, means testing, and efficiency in consumption), productive efficiency, social financing, the private sector, and policy development. Design work in the most important and best understood areas for major applied research will begin immediately.

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<tr>
<th>Project Year</th>
<th>Calendar Year</th>
<th>Year 1</th>
<th>Year 2</th>
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<td>1.1 Capital Recovery</td>
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<td>2 Education</td>
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<td>6.1 Other</td>
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</table>

**Notes:**
- **Conceptual:**
- **Data collection/fieldwork:**
- **Evaluation/report:**

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