ECONOMIC ANALYSIS
JAMAICA HEALTH SECTOR INITIATIVES PROJECT PAPER

by
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II. PROJECT BACKGROUND AND RATIONALE

A. Scope of the Problem

Health Status in Jamaica

Health status in Jamaica is among the best in the developing world, with an official infant mortality rate in 1984 of 13.2/1000 live births, and life expectancy of 70 years. Along with improvements in health status measures over the past few decades has come a shift in disease incidence toward chronic diseases of adults such as diabetes and heart disease. Thus, as health problems evolve toward the developed country patterns, the health system is meant to address both the historically important infant and childhood illnesses and emerging adult health problems through the preventive primary health care network as well as the hospital system. This has led to a broad and all encompassing set of services that includes home visits, pre- and postnatal care, and dental care, among other services, in addition to the full range of curative care services.

Jamaica’s vital statistics shown in Table 1 for certain years between 1980 and 1986 indicate how well the country is managing its health, and the trend is toward further improvement. Crude death rates and the infant mortality rate approach levels for developed countries. Although the crude birth rate is high, once the adjustment is made for age distribution, which is strongly biased toward the childbearing ages of 14 to 49 due to earlier high fertility, the measures are low by developing country standards. Indeed, total fertility is 3, down from 5.5 in 1970 and below the 4.8 1984 average for lower middle income countries (World Bank, 1986).

The only area where progress has lagged is in maternal mortality. In 1982 the maternal mortality rate was roughly forty times the developed country
Table 1

<table>
<thead>
<tr>
<th>Rate</th>
<th>1980</th>
<th>1982</th>
<th>1984</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Size (million)</td>
<td>2.14</td>
<td>2.22</td>
<td>2.30</td>
<td>2.35</td>
</tr>
<tr>
<td>Crude Birth Rate</td>
<td>27.0</td>
<td>29.3</td>
<td>25.2</td>
<td>22.6</td>
</tr>
<tr>
<td>(births per 1000 population)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude Death Rate</td>
<td>5.8</td>
<td>5.7</td>
<td>5.9</td>
<td>5.5</td>
</tr>
<tr>
<td>(deaths per 1000 population)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>3.5</td>
<td>n.a.</td>
<td>3.0</td>
<td>n.a.</td>
</tr>
<tr>
<td>Infant Mortality Rate</td>
<td>27.0&lt;sup&gt;a&lt;/sup&gt;</td>
<td>n.a.</td>
<td>13.2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>n.a.</td>
</tr>
<tr>
<td>(deaths under one year per 1000 live births)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Mortality Rate</td>
<td>1.1</td>
<td>1.1</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>(maternal deaths per 100 live births)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life expectancy</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>


n.a. = not available

<sup>a</sup> Based on deaths registered in those years. However, there is evidence that 35-50% of infant deaths are not registered (Swezy et al., 1987).
average (Samuels, 1987). Maternal deaths are concentrated among women over age 34, which suggests a link to fertility at older ages.¹

The sources of Jamaican mortality also parallel those of the developed world at least for the main causes. Table 2 provides data on the leading causes of death for 1979 and 1981. For the most part, the rankings are roughly the same for the two years. The rate has declined for the lower ranked causes and have risen slightly for three of the four major killers, cerebrovascular disease, heart disease, and hypertensive disease. Morbidity measures offer additional detail on the frequency of health problems. Table 3 lists the major reasons for hospitalization for 1983. After normal deliveries, accidents, poisoning and violence show the highest rates for hospital admittance.² At the health center level, hypertension and leg ulcers account for the largest proportion of curative visits.

Thus, the disease pattern underlying mortality and morbidity in Jamaica is heavily biased toward chronic diseases and accident-related problems, not unlike the developed countries. The exceptions are the high maternal mortality rate, and the relatively high incidence of gastroenteritis and sexually transmitted diseases which are detailed in Swezy et al. (1987), and are largely treated at outpatient facilities.

The implications of Jamaica’s disease pattern is that the health system must provide and finance both simple prevention and treatment interventions for mothers and children as well as sophisticated tracking, prevention and

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¹A cautionary note should accompany the vital statistics figure in Table 1, as special surveys have brought their accuracy into question. See Samuels (1987) and Swezy et al. (1987) for a discussion of the data, the special surveys, and their implications for vital statistics figures.

²Swezy et al. (1987) suggest that the majority of accidents go unreported so that the relative importance of accidents in morbidity and mortality are not accurately reflected.
Table 2

Number and Rates for Leading Causes of Death in 1981
with Comparative Rates for 1979

<table>
<thead>
<tr>
<th>Cause</th>
<th>Number 1981</th>
<th>Rate&lt;sup&gt;a&lt;/sup&gt; 1981</th>
<th>Rate&lt;sup&gt;a&lt;/sup&gt; 1979</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebrovascular Disease</td>
<td>1,967</td>
<td>91.0</td>
<td>87.4</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>1,933</td>
<td>89.4</td>
<td>86.2</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>1,558</td>
<td>76.2</td>
<td>81.6</td>
</tr>
<tr>
<td>Hypertensive Disease</td>
<td>762</td>
<td>35.2</td>
<td>33.7</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>484</td>
<td>22.4</td>
<td>33.8</td>
</tr>
<tr>
<td>Pneumonia and Influenza</td>
<td>400</td>
<td>18.5</td>
<td>20.7</td>
</tr>
<tr>
<td>Infectious Intestinal Disease</td>
<td>365</td>
<td>16.9</td>
<td>17.9</td>
</tr>
<tr>
<td>Nephritis, Nephrotic Syndrome and Nephrosis</td>
<td>220</td>
<td>10.2</td>
<td>9.8</td>
</tr>
<tr>
<td>Accidents and Adverse Effects</td>
<td>208</td>
<td>9.6</td>
<td>12.7</td>
</tr>
<tr>
<td>Certain conditions originating in the perinatal period</td>
<td>188</td>
<td>8.7</td>
<td>17.5</td>
</tr>
<tr>
<td>Nutritional Deficiencies</td>
<td>183</td>
<td>8.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Bronchitis, Emphysema, and Asthma</td>
<td>175</td>
<td>8.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Ulcer of the Stomach and Duodenum</td>
<td>120</td>
<td>5.5</td>
<td>6.9</td>
</tr>
<tr>
<td>Chronic Liver Disease and Cirrhosis</td>
<td>102</td>
<td>4.7</td>
<td>5.4</td>
</tr>
<tr>
<td>Athero Sclerosis</td>
<td>98</td>
<td>4.5</td>
<td>5.0</td>
</tr>
<tr>
<td>All other causes</td>
<td>3,815</td>
<td>176.3</td>
<td>144.1</td>
</tr>
</tbody>
</table>

Source: Registrar General's Department, Jamaica. From Samuels (1987).

<sup>a</sup> Rates expressed per 100,000 population based on Registrar General's tabulations of deaths by cause and by year of occurrence.
treatment for adults who are plagued by chronic diseases that are costly to treat because of their long term nature and oftentimes by the expense of the technologies used to treat them (eg. radiation, chemotherapy, dialysis). The disease transition in Jamaica is in effect contributing to the problem of underfinancing because the breadth and costs of treatment are expanding, placing additional pressure on public sector resources.

**Status of Health Care System and Its Financing**

Health care services are provided free or at nominal charge to all citizens. Services range from a broad primary health care network to sophisticated tertiary care, and all Jamaicans have relatively easy access to all levels of health care services (McFarlane and McFarlane, 1987).

The comprehensive nature of subsidized care and the expansion of primary health care in recent years, combined with severe macroeconomic difficulties, has taken a toll on the quality of health care, however. Negative economic growth over the past decade, average annual inflation of 16.6 percent and a rapidly climbing debt service prompted government to curtail spending early in the decade. The health sector received modest increments in its nominal budget over the 1980s, and its proportion of the recurrent budget increased. The sector’s share of the capital budget, however, almost disappeared. Despite some nominal increments, the real value of total resources available for health was seriously eroded between 1980 and 1987. Moreover, devaluation, which raised the cost of imported medical supplies and pharmaceuticals, further reduced the spending power of domestic resources on non-labor items.

Government hospitals are financed almost exclusively by tax revenues with only modest amounts generated from recently introduced user charges (Lewis, 1989). Hospitals have been receiving an increasingly smaller portion of the
<table>
<thead>
<tr>
<th>First-Listed Diagnosis</th>
<th>Patients Discharged</th>
<th>Average Length of Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Rate^a</td>
</tr>
<tr>
<td>ALL CONDITIONS</td>
<td>104,506</td>
<td>557.4</td>
</tr>
<tr>
<td>Normal Delivery</td>
<td>25,002</td>
<td>133.4</td>
</tr>
<tr>
<td>Accidents, Poisoning, and Violence</td>
<td>13,519</td>
<td>72.1</td>
</tr>
<tr>
<td>Fractures, dislocations &amp; sprains</td>
<td>3,652</td>
<td>19.5</td>
</tr>
<tr>
<td>Lacerations</td>
<td>3,188</td>
<td>17.0</td>
</tr>
<tr>
<td>Burns</td>
<td>773</td>
<td>4.1</td>
</tr>
<tr>
<td>Adverse and toxic effects</td>
<td>980</td>
<td>5.2</td>
</tr>
<tr>
<td>Other accidents, poisonings &amp; violence</td>
<td>4,926</td>
<td>26.3</td>
</tr>
<tr>
<td>Complications of Pregnancy, Childbirth and the Puerperium</td>
<td>10,347</td>
<td>55.2</td>
</tr>
<tr>
<td>Abortion</td>
<td>2,948</td>
<td>15.7</td>
</tr>
<tr>
<td>Other complications of pregnancy, childbirth and the puerperium</td>
<td>7,399</td>
<td>39.5</td>
</tr>
<tr>
<td>Diseases of the Genito-Urinary System</td>
<td>7,005</td>
<td>37.4</td>
</tr>
<tr>
<td>Cardiovasclar Diseases</td>
<td>6,462</td>
<td>34.5</td>
</tr>
<tr>
<td>Hypertensive diseases</td>
<td>1,598</td>
<td>8.5</td>
</tr>
<tr>
<td>Other diseases of the circulatory system</td>
<td>4,864</td>
<td>25.9</td>
</tr>
</tbody>
</table>

Source: Health Information Unit, Ministry of Health. Adapted from Samuels (1987).

a. Per 10,000 population.
already constrained health budget due to the expansion of the primary health care system. Within hospital budgets, 70 percent goes to personal emoluments, only a fraction of which (10% to 15%) pays physicians. Per patient budget allocations by hospital, adjusting for casemix across public, quasi-public and private facilities, suggest a gross underfinancing of public hospital care (Lewis, 1988). Quality of care is lower in the underfinanced public facilities when compared to the quasi-public but better financed University Hospital. A recent study showed quality to be particularly poor in lower level hospitals (Ross Institute Report, 1986). The shortage of resources has contributed to deteriorated physical infrastructure and inadequately functioning equipment in public hospitals.

The equity performance of Jamaica's health system is good based on general evidence. Better information on utilization and expenditure patterns could clarify the effectiveness of the public system's efforts to address equity concerns. The primary health care system was meant to reach lower income households, but given the lower than capacity utilization of the clinic network, it may in fact not be the most efficient use of resources. This issue requires more attention.

Private health care provision is divided into two markets, one for ambulatory care, the other for hospitalization. The former serves all income groups, largely on a fee for service basis, and is expanding. The demand for private outpatient care and the willingness of users to pay for it is well established in Jamaica (McFarlane and McFarlane, 1987). Well over a third of outpatients use private facilities and the numbers are increasing. Public clinics are infrequently used, and public hospital use is declining largely in favor of private and public outpatient care.
Private hospitals are far more costly for patients than public facilities, and private hospitals treat only about 7 percent of all inpatients. Private patients are more likely to have insurance coverage; however, the lack of catastrophic coverage under most Jamaican insurance plans results in high utilization of public facilities to husband coverage in case of an emergency and total reliance for extended hospitalization (Lewis, 1988). The result is an implicit public subsidy of private insurance companies.

Only one of the seven private hospitals is operating at a profit. Private hospitals are plagued by poor management and antiquated equipment; rising costs due to inflation, devaluation and duties; and, a limited pool of potential patients because of declining real incomes and the nature of insurance coverage (Trevor Hamilton and Associates, 1987; Lewis, 1988).

Despite the extensive network of free public health care, 75 percent of patients, in a recent study, indicated that they paid for (some part of) their last treatment (on average about J$85.00 or US$15.00). Only 12 percent of that survey population had health insurance coverage (McFarlane and McFarlane, 1987). Thus the majority of users are already paying for health care services. Available evidence further suggests that this practice cuts across all income groups.

**Problems and Issues**

Recent studies (see Annex I for a summary of these) suggest that quality of care in Jamaica has been seriously eroded (Stevens, 1983; Ross Institute Report, 1985; Lewis, 1988) due to sharp reductions in the Ministry of Health’s real budget. Moreover, the hospital capital stock is in serious disrepair, further jeopardizing health care quality. The government is currently providing and subsidizing over 90 percent of all inpatient care, and will
continue to provide the bulk of hospital care for the near term. Without rehabilitation, the quality of hospital care will continue to decline due to continuing erosion of existing infrastructure and deterioration of equipment. Although recurrent expenditures are currently underfinanced, the ability and willingness of patients to pay for health care has been demonstrated. Moreover, there are evolving initiatives within the Ministry of Health (MOH) to ensure the sustainability of health programs; these are summarized below. The lack of capital investment is the major constraint in MOH efforts to rehabilitate the health care system.

As mentioned, government subsidies cover the entire population contributing to the high costs and underfinancing of public health care. A reduction in government expenditures can be achieved by targeting resources to the indigent and promoting greater reliance on private health services, especially for hospital care. This, however, requires that private hospital care is both attractive and affordable. There is a serious lack of trained hospital administrators, and that gap negatively affects the costs, quality, and effectiveness of private hospital care. On the demand side, third party coverage is key to greater reliance on private providers, and catastrophic coverage is central to private inpatient use.

Thus there are supply problems in both the public and private sectors that pose serious threats to the basic quality and quantity of health care services. The government’s expenditures in health care are high and will continue to rise, due to public demand, technological upgrading and inflation. Patient demand for free health care will continue unabated unless patients shift to private sources of care. Government may well have to provide the necessary incentives to both users and providers to promote that shift, but the returns are likely to be sufficient to offset costs.
GOJ Policy and Actions in Health Care Financing

The need to devise alternative means of financing and delivering health care is of paramount concern to the government, and health care finance is a priority for the Ministry of Health.

(1) Revision of user charges in public hospitals and a modification of Jamaican law to allow those facilities to both spend earned revenue and not jeopardize future budget allocations;

(2) Divestiture of nonmedical services. Housekeeping services have been divested in three tertiary care hospitals saving J$374 million, or roughly half the budget, and raising quality. Catering and laundry are also to be divested in these three facilities as well as four others. In addition, the National Maintenance Unit is slated for divestment so that facilities can rely on contractors for maintenance services;

(3) Privatizing public hospitals experimenting with three approaches: (a) management of a hospital with the entrepreneur assuming all financial risks; (b) management by a private group with the Ministry of Health assuming the financial risk; and (c) establishment of a parastatal hospital with private operation, management and control but with government holding a majority share. In the latter case, facilities and public medical employees would exist in a Health Facilities Trust that would allow government to own but not operate facilities and would allow management to set salaries for all staff; and,

(4) Administrative and financial management reforms that introduce performance based budgeting, computerization to improve financial management, and rationalization of facilities (downgrading or reducing bed size of public facilities).
USAID assistance has supported a number of GOJ activities: studies (see Annex I) that address policy concerns in health care finance (e.g., Steven, 1983; Project Hope, 1985; Zukin and Weinberg, 1986), evaluations of MOH experiments (Lewis, 1989), and periodic technical assistance in the development of policy and MOH experiments in financing. In addition, USAID has examined the role and efficiency of the private sector in the delivery of health care (Trevor Hamilton and Associates, 1987; Lewis, 1988; Barnes, 1989).

Equity concerns are addressed under the user fee system and in the privatization initiatives. Food aid recipients are automatically exempt from public charges. Others who demonstrate their inability to pay have public charges waived or reduced. Under the privatization arrangements, the government plans to capitate the indigent and partially subsidize the semi-indigent.

**USAID Role**

Together the financing initiatives indicated above should have a considerable impact on the quality and cost of public health care. Continuing these reforms, evaluating performance and service impact, and revising actions accordingly should move the public health care system toward greater financial solvency and higher quality services. These are areas where USAID could make a significant contribution.

More focused data collection and more detailed analysis could help to refine policy in this area. Some consideration should also be given to establishing government incentives for employers to extend insurance coverage to their employees, especially covering catastrophic care.

Management improvements and ongoing reforms have not addressed a particularly pressing and central concern of sustainability: professional
training for hospital administrators in the public and private sectors. The administrator's role in hospital operation is vague in Jamaica and training is marginal or nonexistent. This needs to be modified if sustainable programs are to be established.

Another area that needs to be considered in complementing the upgrading and financial solvency of the public system is the need to assist the private sector gain a foothold. This will be partly accomplished by promoting greater insurance coverage, but direct technical and perhaps some financial assistance can help the private institutions upgrade their services and attract patients otherwise reliant on subsidized government facilities.

Lastly, it is crucial that the experiments and reforms promulgated by the GOJ be evaluated to assist the government refine its programs and hone its investments. Moreover, assessment of the planned initiatives will serve to assist the rest of the developing world consider some of the innovations and experiments launched by Jamaica.
ACTIVITY: REFORM OF USER FEES AND INDIGENT CARE FINANCING

A. Statement of the Problem/Rationale

The user fee system put in place by the GOJ has served to increase resources of hospitals, and in every facility the needs of the indigent are considered. Reforms are needed, however, to ensure equity, maximize cost recovery from patients who can pay as well as insurance companies, and maximize revenue through improvements in administration and management of fees. Moreover, the adequacy of waivers for indigents and the extent of possible oversubsidization of patients who can pay should be explored to achieve the objectives of the policy. Related questions of how best to manage indigent care as fees rise and the financing of the fully subsidized group becomes increasingly important as financing arrangements evolve.

USAID has supported a number of efforts related to fees from initial feasibility studies for the MOH to a quantitative evaluation of the effectiveness and the impact of user charges (Lewis 1988a, 1988b; Project Hope, 1985). In tandem with the studies, USAID has also provided the MOH with technical assistance to translate these studies into policy decisions and program design.

B. Description of the Activity

This activity has three separate parts: (1) improvements in user fee administration and system of charges; (2) more thorough review and assessment of the indigents to ensure that those who cannot pay do not and that those who can do so; and (3) financing and management system(s) for indigent care.

User Fee Reform. The charges at public facilities are low and should be adjusted. The cost study and inventory of indigents will contribute to the review of charges. User fee reform, activities will encompass, but not be restricted to, the following: streamlining the administration of fees from the central government; training and group seminars for both medical and administrative staffs to develop better collection systems; adjusting charges to remove incentives for extended inpatient stays and unneeded tests; setting charges for insured patients closer to those of the University Hospital; increasing prices fundings—an item consumers often pay for anyway; and, assisting private wing expansion and means of raising revenue through these services.

These activities will be achieved through technical assistance and training.

(1) Technical Assistance: Assistance to the government in designing alternative facility reimbursement (of deposited revenue) arrangements and adjusting fee levels and implicit incentives will require the assistance of an expatriate consultant and/or the in-country project director, depending on the skills and experience of the project director. The oversight of the monitoring and evaluation of the changes in the administration and levels of fees will be the responsibility of the project director, and the expatriate consultant or local consultants.
(2) Training: Training of hospital administrators, assessment officers, controllers, accountants and accountant assistant in improved revenue collection methods will be undertaken through seminars and direct training. Seminars to allow facility managers and fiscal personnel to share experiences across hospitals in the alternative arrangements used to identify paying patients, tracking them, collecting the charges, handling the revenue, and requesting reimbursement from the MOH will suggest means of designing appropriate systems. Moreover, exposure to Jamaican public hospitals that have been effective at collection will encourage the less effective facility managers to rethink their own systems. This exchange would further help to adapt administratively correct procedures in revenue collection and management to the context of Jamaican public hospitals.

The second part of the training, conducted by experts from the MOH and local consultants, with the input of the project director, will apply standard training techniques for conveying the essentials of efficient administration and management of fee collection and management.

User fee reform is closely tied to other components of the project. The level of fees should bear some relationship to other project elements: charges should be linked to some degree to the costs of services, primary care referral arrangements can be strengthened by establishing higher charges for those who unnecessarily bypass public clinics, and expansion of those covered by insurance will add to public revenues, particularly if the reforms proposed here are implemented.

Defining the Indigent. Assessing the ability versus the willingness of indigents to pay for health care can be examined at an aggregate level by analyzing the Living Standards Measurement Survey (LSMS). Data from the survey can help determine the linkage between income and health seeking behavior of all income groups, including the determinants of health care utilization across private and public sources, and willingness and ability of patients to pay for health care. These will help to address the concern that those whose public fees are waived can and do purchase private health care services. Gaps of importance to government planning and program development could be addressed through a focused add-on survey, piggybacking subsequent LSMS rounds, or developing a direct registry of indigents at facilities.

The study will be conducted based on the priorities of the MOH with the input and recommendations of the project director. The econometric analysis and policy implications of the research will be undertaken by expatriate consultants with input and perhaps participation of local consultants. Given the sophisticated nature of the data set and of the analysis needed to inform policy, primary responsibility will lie with a health economist with quantitative skills.

Using this information with that of the indigents registry in Spanish Town, the analysis by McFarlane and McFarlane (1987) on the characteristics of the population and their health care behavior in six parishes, along with other project activities such as the cost study will help to improve the system of waivers.

Financing and Management of Indigent Care. As alternative financing arrangement develop and insurance coverage expands, the need to manage and
finance health care for the indigent becomes a desirable means of divesting all financing arrangement from public control. Moreover, if and when public reimbursement of some private health care occurs, some type of financial intermediary will become necessary to ensure equal access as well fiscal control over resources.

This project will support examination of alternative arrangements, studies of feasibility and cost, and design of alternative models for possible testing by the MOH. Given the complexity of this issue and the fact that it will follow the indigent study above, actual experimentation may not occur during the life of this project; however, given the potential value of a financial and financial intermediary for overseeing indigent care, planning, analysis and experimentation are warranted early on to plan for its design and introduction.

C. Specific Outputs Expected

User Fee Reform: Training. Training of financial management staff of 20 public hospitals (excluding Bellevue, Hope Institute, Mona Rehabilitation and University Hospital): hospital administrator, controller, cashier/accountant clerk, accountant, and financial officer (100 individuals). Training will consist of seminars among all individuals to discuss alternative arrangements and practices, and teaching in appropriate tasks and processes for collecting and managing revenue funds. Practicing of appropriate systems for collecting and handling funds will also be included in the training.

User Fee Reform: Technical Assistance. Consultations with experts will occur over the LOP during six consultation trips. Designs of programs, projects and other interventions will be provided during these consultations, and reports of these will be provided if significant steps or policy changes are forthcoming to inform USAID/Jamaica of possible adjustments in content or direction.

Small follow up studies during year 3 and year 5 will document the changes and the impact or effect of changes, if any.

Indigents Study. Outputs include a completed study of the indigent as well as discussions with the MOH regarding the study implications, suggested policy adjustments, and assistance in adjusting eligibility, fees or other elements of user charges. Indigents will be defined, located, and their health behavior and payment patterns explained in the study.

Financing and Managing Indigent Care. Outputs will be an assessment and design for alternative arrangements for the financing and management of indigent care, and will include a study of the feasibility and cost implications of alternatives. In addition progress toward the design of a pilot project in this area will be planned and outlined.

D. Specific Inputs Required

User Fee Reform: Training. The training and seminars for the collection agents at all public hospitals (except Bellevue) will entail two weeks of meetings and classwork three times during the life of the project, beginning in
the first year. In addition, follow up visits to designated hospitals by the
trainer(s) and director will occur at six month intervals after the training to
assist hospitals with the design and operation of their new systems. These will
be undertaken by trainers from the training sessions. The benefits, which will
be derived within months after training, will be quantified by the increase in
revenue and the efficiency of collection and transmission to the MOH.

Training needs include someone to lead seminars, work with the director or
other specialist in curriculum content, and provide follow-up with specific
hospitals.

**Trainer(s) (Jamaican)**

- preparation time: 6 weeks over life of project
- training time: 2 weeks 5 times during LOP
  (10 weeks)
- follow-up: 5 weeks over LOP

**Participants**

- In-country travel and per diem for 100 participants for
  five training sessions lasting two weeks each
  100 x 12 days = 1200

**Director**

- Functions are to oversee and identify problems, training
  experts, etc.; attend training and visit hospitals on
  a periodic basis to determine effectiveness of
  training and determine possible future training needs
- Ten weeks over LOP

**Technical Assistance:**

- Long-term care - none
- Short-term - Jamaican trainer - 5 pm @ $6,000
  Participants 100 x 12 days = 1200 x @ $40/day
  Total  $78,000

**User Fee Reform: Technical Assistance.** Technical assistance can occur the
first year, to identify and begin the process of modifying the level and
administrative requirements of the fee system. The benefits will take six
months or so to emerge in the form of higher earnings at public facilities.
Where increased earnings do not occur, follow up on the administrative
arrangements will be implemented.

User fee reform activities involve discussions with the MOH, coordination
with the director and others involved in the project, evaluation of the impact
of the fee changes, and coordination with the study of indigents to integrate
that into the modifications in fee levels and these items that carry charges.

**Director**
- Oversee work, contact and coordinate with MOH
- Six weeks over LOP

**Economist**

- Undertake technical assistance with input of the MOH, as well as assist MOH monitor, identify, adjust and evaluate changes in the nature and level of fees. This TA should be closely coordinated with the study of indigents.
- 6 weeks for TA over LOP
- 8 weeks for monitoring, data collection and analysis

**Technical Assistance**

- Long-term - none
- Short-term - Expatriate 4 pm @ $25,000 $100,000

**Indigents Study.** The study will be primarily a research product with a strong policy focus and specific follow up with the project director and the MOH to structure appropriate responses to the findings. There will be close coordination with the user fee reform since this is closely tied to the question of the incidence and level of charges.

**Director**

- Three weeks to coordinate, collaborate on the policy issues and to work with MOH and expert on implementation

**Economist/Econometrician**

- 14 weeks to understand the data, undertake the analysis, present the findings to MOH and work with appropriate officials to implement findings.
- 8 weeks of local researcher/economist to work with expatriate.

**Technical Assistance**

- Long-term - none
- Short-term - Jamaican 2 pm @ $6,000 $12,000
- Expatriate 4 pm @ $25,000 100,000
- Total $112,000

**Managing and Financing Indigent Care.** The assessment will emerge from the indigent study and will also be an outgrowth of the alternative financing experiments and the expected increasing reliance on the private sector providers. This effort would complement both areas by specifically addressing the need to manage and finance indigent care outside the central government.

**Director**
- Three weeks to coordinate and oversee the design of alternative financial management arrangements for financing indigent care

**Economist/Financial Health Planner**

- 3 months to assess feasibility and design alternative methods for managing and paying for indigent care through a private intermediary

**Technical Assistance**

- Long-term - none
- Short-term -- Jamaican 3 pm @ $6,000
  Expatriate 2 pm @ $25,000
  Total

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jamaican 3 pm</td>
<td>$18,000</td>
</tr>
<tr>
<td>Expatriate 2 pm</td>
<td>$50,000</td>
</tr>
<tr>
<td>Total</td>
<td>$68,000</td>
</tr>
</tbody>
</table>

TOTAL $353,000

E. **Monitoring and Evaluation Plans**

The project monitoring and impact evaluation can be applied to ensure that the project is on track with these activities and that they are scheduled to receive proper evaluation to measure impact. In some of these sub-project activities, the monitoring and evaluation are already planned for and time and expertise are built into the activity. For example, the follow-up monitoring of training and the planned feedback to facilities provided as part of the responsibilities of the trainer(s) with the participation of the project director will achieve this in training. Similarly, user fee reform is meant to continue during the LOP so that monitoring is part of the project and the responsibility of the economist expert; the quantitative evaluation planned for the economist expert in years 3 and 5 to determine revenue impact of reforms will further ensure that this element will be carefully assessed and the revenue increases that can be expected documented. The study of the indigent and the assessment of alternative management and financing arrangements for the indigent are close to monitoring and evaluation themselves, and are, in effect, evaluation tools with specific issues to address that will inform policymakers.
ACTIVITY: POLICY STUDIES

A. Statement of the Problem/Rationale

A number of policy issues that relate to health care financing have received little if any attention, and deserve some consideration as the debate on how best to finance care proceeds. In particular, the selected illustrative subjects have merit as they will raise, and analyze important policy issues within the Jamaican context. The focus will be on policy questions and the approaches will be tailored to ensuring a technically sound output that is accessible and directly useful to policymakers.

B. Description of the Activity

A number of important policy issues that deserve GOJ attention are outlined below as possible topics for consideration under this activity of the project. Among the most important issues for possible study are the following: social insurance; simulations of costs and savings to government of alternative insurance stimulating policies; the regulatory role of government with expanding privately provided health care; alternative means of meeting the health needs of the aged as the population ages; and, analysis of LSMS data on selected health care financing topics.

Role of Government as Private Providers Expand. As the private sector takes on a larger proportion of health care delivery in Jamaica, the government must shift from the role of provider and financier of care to a different role of regulator and financier (and possibly deliverer) of indigent and perhaps near-indigent health care. The regulatory functions are not well established and would need to be phased in depending on the direction and speed of private sector growth. For example, overseeing the accuracy of laboratory tests, ensuring that private hospital providers meet basic standards of medical practice and that the hospital environment is properly maintained are the kinds of regulatory interventions that might be required. Some exploration of the possible actions and means of enforcement deserve consideration as well.

Health Care Implications of Aging in Jamaica. The aging of the Jamaica population and the government's policy of not charging pensioners has potentially serious financial implications for the Ministry of Health. Moreover as the birth rate continues to decline, the demand for hospital care will shift away from maternity. Given the dearth of nursing homes, hospitals are at risk of becoming chronic care facilities for elderly patients who cannot be cared for adequately at home but have nowhere else to go other than the hospital. This planning for future delivery and organization of health care services is meant to ensure more cost effective service delivery without neglecting the needs of the elderly.

Analysis of the LSMS and input from MOH on subsequent rounds of the survey to better focus on health issues of interest is a cost effective means of obtaining data and analysis for priority policy issues. Topics for consideration could include, but not be exclusive to, the following: the determinants of health care utilization across private and public sources; the willingness and ability of patients to pay for health care across income,
location, age, occupation, third party coverage; the relationship between food aid coverage and use of public and private health care. The analysis would be used to explore the incidence of user fees in public facilities, to examine how households respond to changes in charges and how shifts in income affect the demand for (public) health care.

These activities support or complement other project components, including: alternative financing initiatives, the user fee reform and consideration of how to manage and financing the of the project, costs and quality in public facilities, and private sector initiatives. These studies can help to clarify policy questions that emanate from the other components or to help narrow policy issues for implementation.

C. **Specific Outputs Expected**

In each case, a study or research report will be prepared, presented and the implications and recommendations for next steps clearly indicated. In each case a 3 - 4 page policy summary of the problem, findings and policy implications will be prepared to make the findings more accessible.

D. **Specific Inputs Required**

Because the proposed studies are simply suggested topics, it is difficult to estimate precise time allocations. Moreover, the level of effort and extent of expertise required varies substantially preventing and realistic requirement. Some general estimates of time are suggested below. The expatriate/Jamaican breakdown will also vary but an average of 2/3 to 1/3 could be applied.

**Director**
- 5 months over LOP to assist in defining issues for study, overseeing implementation and facilitating dissemination to appropriate policy audiences.

**Economist/Health Planner**
- Role/Regulation - 4 months
- LSMS - 9 months
- Aged - 2 months

**Technical Assistance**
- Long-term - none
- Short-term - Jamaican 8 pm @ $6,000 $48,000
  Expatriate 7 pm @ $25,000 175,000
  Total $223,000

E. **Monitoring and Evaluation Plans**
Monitoring during the project will be provided by the project director, and evaluation is inappropriate since for the most part these studies will be the equivalent of either a baseline, follow-up study or an evaluation.
ACTIVITY: RESOURCE COSTS AND HEALTH CARE QUALITY

A. Statement of the Problem/Rationale

This study of one Type A or B facility will provide information on both resource costs and the quality of current services. The results will facilitate prioritizing of efficiency enhancement interventions, improving quality, and identifying the resources needed to deliver high quality health care to the Jamaican population. In addition, having basic cost information on service delivery under current organizational and financing arrangements will provide a basis for comparing and assessing the benefits and real costs of alternative delivery and financing arrangements and of determining both what changes should be and the amount of revenue that will cover expected shortfall.

This study offers a base for, among other things, the following: (1) cost containment identification and intervention design; (2) determining alternative, less costly means of delivering services; (3) reallocating resources within the hospital and perhaps across levels of service delivery; (4) establishing fees that reflect the relative costs of goods and services; and (5) the gap between current and required funding that must be met through outside funding to maintain quality and quantity of services. Action on any of these will take policy changes by the MOH, but the results of the study will allow informed, rational decisionmaking. The follow-on implementation will assist the government in implementing changes or designing experiments that emanate from the study process and results.

B. Description of the Activity

Study. This exercise will cost out the value of services--time and goods that patients receive. This will be accomplished through a set of specially designed surveys implemented in one hospital. For instance, every patient that is seen in casualty and outpatient will be tracked during one week, and the amount of time any and all hospital personnel spend treating or attending to that patient will be recorded, as will the value of disposable products and pharmaceuticals, the fraction of equipment value (based on expected life of equipment in the public sector), and some portion of indirect costs (indirect costs include: administration, laundry, food service, maintenance, etc. that contribute to the overall operation of the hospital but are not patient-specific).

Once recorded, these resources received will be matched with the value of purchase for equipment, supplies, construction and the like, and the value of staff time as measured by their wage rate for personnel. Similarly, inpatients admitted will be tracked, and the quantity and value of goods and time of staff they received recorded.

Breakdowns by diagnoses will be possible for outpatients and emergency, but only some inpatient diagnoses will be included to ensure the manageability of the effort. The unit cost of the following (ancillary) services will be calculated and allocated to patients as required: surgery, specific laboratory tests, x-rays, pathology tests, and other tests (EEG, EKG, physiotherapy, etc.).
Quality will be measured by: (1) determining whether the ideal treatment and diagnostic tests were ordered, and if not, why adjustments were made (for example, lack of supplies, drugs, technical personnel or other inputs may affect what physicians order for the patient); (2) whether tests and treatments were provided when ordered, and, if not, why (for example, lack of supplies, lack of technical personnel, lack of resources, broken equipment); and (3) inventory of hospital equipment, used and unused and the function and value of each.

The survey will pick up the extra long lengths of stay that result from waits caused by unusable or unavailable equipment for surgery, and other constraints. Government, facilities face in delivering quality services under personnel and budget constraints. In short, the study will reveal where resources are being spent and for what product, the operating efficiencies and inefficiencies of the current system, and the degree of underfinancing that exists in the system, and what services are suffering as a result. Moreover, because the true resource costs are being measured, the adequacy of the budget can be assessed, rather than be used as a proxy for costs.

Follow-on Implementation. The process of collecting the data will provide insights into the viability of designing and adopting alternative means for collecting cost data from public facilities on a regular basis, and for developing a cost management system. Moreover, the relative cost levels provided by the study will assist the MOH set more realistic fees, and fees that reflect the true value of the service or good provided. Providing both analysis and policy implications within the study will provide a framework for addressing these important policy issues. Elaborating on the study results in particular areas of MOH interest, and outlining how these can be translated into further activities or experimental changes is best done by the study team. The areas of potential activity are broad and may also require the involvement of other specialists in the design of next steps.

C. Specific Outputs Expected

Study. The activity will produce detailed figures on resource allocation and use in the sample facility, and specific costs of outpatient care, inpatient diagnoses, and emergency care will be estimated. In the course of the activity, around 30 interviewers will receive training in data collection, and a new method for estimating costs will be established in Jamaica for replication elsewhere.

Follow-on Implementation. The follow-on activities will be in the form of meetings, technical advice, expansion of the study results to enhance the scope of specific policy areas of interest, and outlines of next steps. Short policy-focused papers on actionable projects will be produced.

D. Specific Inputs Required

Study. The design of the study, survey design questionnaire development, logistics of data collection, pretest, supervision of survey, coding and data cleaning, analysis, presentation of results and implications for policy in
Jamaica will be the responsibility of a study director and an assistant. Time allocation from study directors:

- Project Coordinator - 3 months
- Study director (expatriate) - 5 months
- Study assistant director (local or expatriate) - 3 months

A subcontract to obtain and finance data collectors will be required. The following data collectors will be needed for a total of 614 person weeks of time:

1. 20 nurses for 2 weeks each [13 pm @ $4,500] $58,500
2. 8 physicians (including a pathologists, surgeon, and two other specialists, each for one week) [2.5 pm @ $7,000] 14,000
3. 8 medical technicians for one week each [2.5 pm @ $5,000] 12,000
4. 8 generalist data collectors for three weeks [8 pm @ $3,000] 24,000
5. 4 weeks of data coder [2 pm @ $4,000] 8,000
6. 6 weeks of computer programmer [3 pm @ $5,000] 15,000
7. Travel - 10 trips U.S. to Jamaica and return local transport 10,000
8. Computer time 20,000

This cadre of personnel will participate in questionnaire testing and design, data collection, and data coding and cleaning. Supervisors and trainers will also be selected from this group. Additional costs of travel, per diem, questionnaire printing must also be considered.

Questionnaires will be developed to record the time, goods, and services received by the following kinds of patients:

1. Inpatients, 6 – 10 diagnoses, identified at entry and followed until discharge;
2. All inpatients visiting the hospital during a one week period;

Note that the number of days implied in weeks of work vary across types of personnel. All are based on a 7 day work week, except for the programmer (5 day work week) and coder (6 day work week).
(3) all emergency patients arriving at the hospital during a one week period;

(4) surgery procedures to determine average resource use per hour;

(5) ancillary services of lab, x-ray, pathology, other (EKG, EEG, doppler, and other specialized tests available);

(6) space allocation within the hospital as well as its financial history.

Follow-on Technical Assistance:

Project Director - 2 months
Study Director - 2 months
Jamaican Field Director - 3 months

Technical Assistance for Study and Follow-on

Long-term - none
Short-term - Jamaican
  Field director 5 pm @ 6,000 $30,000
  nurses 13 pm # 4,500 58,500
  physicians 2.5 pm # 7,000 14,000
  medical technicians 2.5 pm @ 5,000 12,500
  data collectors 8 pm @ 3,000 24,000
  data coders 2 pm @ 4,000 8,000
  computer programmer 3 pm @ 5,000 15,000
  Expatriate 9 pm @ 25,000 225,000
  Local travel 10,000
  Computer time 35,000

Total $432,000.

E. Monitoring and Evaluation Plans

To ensure the applicability of the cost study, an assessment of the impact on government decisionmaking will be used to evaluate the usefulness of the study. Because the study examines costs and quality in one public hospital it is itself an evaluation tool for the government as well as an input into policy decisionmaking.

Monitoring needs to be undertaken by the project director to ensure the effort is on schedule and is progressing.
Social Insurance. As alternative financing arrangements are pursued, the evaluation of a government provided health insurance system should be considered to determine if savings, equity or quality might be enhanced through this kind of arrangement; similarly, consideration and examination of other hybrid public-private insurance systems should be addressed for comparison purposes. Examination of existing arrangements in other countries, assessing costing and management complexity and the implications for implementation in Jamaica, incentives for quality and cost, and the relative cost effectiveness of the financing mechanism would be evaluated.

Simulations of Cost and Savings of Alternative Insurance Stimulation Policies. The project will experiment with a number of different financing arrangements, many of them linked to private insurance coverage. Using a simple computer model to simulate how government incentives might increase demand under different arrangements. For instance, the costs and savings from the management of indigent care, the increase in private premiums and the most efficient means for the government to subsidize near indigents, and similar issues can be examined and presented to assist policy decisionmaking with regard to incentives and other interventions.
ACTIVITY: HOSPITAL MANAGEMENT TRAINING

A. Statement of the Problem/Rationale

There are few trained hospital administrators on the island. Shortages of trained administrators and health care managers have contributed to the shortages and inefficiencies that plague the public health care system. Hospitals are managed by some combination of the following: Hospital Boards, Senior Medical Officer, Matron and Administrator, with no clear policy of ultimate managerial responsibility. The untrained administrators have neither the authority nor the capacity to improve the operation, efficiency or effectiveness of public hospitals.

B. Description of the Activity

The activity will be structured to emphasize the equipping of hospital administrators with the essential skills for managing and operating Jamaican public hospitals, with a secondary emphasis on establishing clear lines of authority within the hospital.

Hospital managers from the 3 selected hospitals will have a trained and experienced health administrator working with them for periodic periods over the course of one year, for a total of eight man months. During that period management systems will be designed and put in place, lines of authority will be established and put into operation, and problem solving methods will be conveyed. This one-to-one training will help administrators better understand their roles and responsibilities, and will allow a professional team to work with them to diagnose management problems and effective means of address these problems. Familiarizing middle managers (accountant, controller, etc.) with their roles will also be included, and the need and nature of possible training programs for these positions will be assessed both with the administrator and the staff. Some of this training will necessarily be part of the trainer's scope of work, but more indepth, classroom training may be necessary.

The second aspect of the activity would be seminars to discuss and outline effective means of operating public hospitals. Responsibilities, authority, and functions of the senior managers (administrator, senior medical officer, matron, hospital board) will be discussed and established, and agreement reached among these parties as to spheres of authority and operating procedures. This process will clarify the roles of the managers through discussion and mutual agreement on procedures. For instance, issues of who orders drugs, how patients will move through the hospital from entry to departure/discharge, admission system, and hiring and deployment of staff are all representative of the kinds of problems that may need discussion and designation of ultimate authority.

C. Specific Outputs Expected

At the end of the project, 3 public hospital administrators will have received on-the-job training, and will be able to understand and implement their job professionally and competently. The administrator's staff will have
been introduced to new procedures and ways of operation and will have received on-the-job training in participating in those new procedures.

**Director**

- 4 months of oversight and assistance in ensuring communication and appropriate training methods, and in assisting the hospital administrators adapt to local circumstances and ways of doing business.

**Expatriate (or Jamaican, preferable but unlikely)**

**Hospital Administrator**

- 24 man months of working with three different hospital administrators for 8 man months each.
- follow up for one month each one year after training to remind administrators and assist them with unforeseen problems.

The senior managers of the 3 public hospitals will have worked out roles, modes of operation, responsibilities and authority for managing the hospital, and they will have participated in delineating these. This will involve two ten days at each hospital at two different times.

**Director**

- 3 weeks of assistance in designing seminar structure and approaches and in visiting ongoing seminars

**Hospital Administrator (Jamaican)**

- 35 days of preparation and participation in the seminars at each of the three hospitals.

**Trainer**

- 50 days of preparation and working with the hospital administrator, and of conducting the seminars. Prepare a report on acceptability and effectiveness of seminars.

**E. Monitoring and Evaluation Plans**
Economic Analysis

Background: Economic and Financial Context

[TO BE COMPLETED BY PAUL CROWE]

Project Purpose

This project is meant to address the managerial and economic ills of the current health care system by emphasizing: (1) the raising of revenue and reduction of costs (through increased efficiency) in the public system, with concomitant efforts to reduce subsidies to those who do not need them; (2) improve the management of the public health system both at the central level and at secondary care delivery points; and, (3) efforts to enhance the role of the private sector as a provider of health care through initiatives that directly stimulate expansion of private supplies of care, and by broadening health insurance or health maintenance organization (HMO) coverage to stimulate demand for private health services.

These objectives are to be achieved through an integrated, disparate set of activities which (1) identify the problem (e.g., measure resource costs, studies of health care financing issues, drug management studies); and, (2) address the problems (management training, private sector promotion, drug management improvement, user fee reform and accommodation of the indigent, alternative financing arrangements for public hospitals). Many of these initiatives are experimental in nature and there are plans for intensive evaluation of the costs and benefits of each of these. The following subsection provides an effort at an economic analysis of the project components.

Expected Benefits and Costs of Project Components

The costs and benefits of the project are difficult to quantify given the nature of the project components. Because the resources are aimed at assisting policymakers in devising more effective policies and translating these into tools for financial and organizational reform of the health care system, and at promoting greater private sector investment in health care, a set of flexible activities has been designed. While cost benefit analysis is difficult to conduct because the benefits are largely nonquantifiable, cost effectiveness analysis is highly inappropriate since the project components address specific issues and are largely illustrative. A cost-benefit comparison between this policy reform-kind of project and, say, construction is not helpful since the expected benefits are too dissimilar. Thus this section discusses the benefits, what they are and when they might occur, and then estimates the costs of each component and the recurrent cost implications of each.

Each separate project component is listed in Table 4 with an accompanying description of the expected benefits. Benefits will occur at two points: both immediately, i.e., as information to policymakers, and as an input to decisionmaking that will, in turn, reap further benefits in the future. In most instances both tiers of benefits are mentioned in sequence. The benefits
assumptions, however, are often based on the assumption that policymakers will act appropriately based on expected outcomes of studies and experiments. This, of course, cannot be guaranteed.

The timing of benefits can be seen in Table 5 where the same components are listed with the expected timing of planning, implementation, policy consideration, policy change and benefits indicated for each. As mentioned in the previous paragraph, benefits may only accrue if certain policy changes are made. To the extent possible this is indicated in the table. Moreover, some effort has been made to estimate the sequence of actions leading to the benefits so the tenuous nature of the specific benefits listed in Table 4 are clarified.

As a package, the components cover the weaknesses of the MOH and provide the government with the resources to identify precisely the nature of problems and to consider, undertake and evaluate alternative interventions for addressing the problems. The list is thorough and, if implemented as anticipated, would provide the government with information to assist them in designing and reforming health care delivery and finance.

The cost of the project is summarized in Table 6, again by component. The recurrent cost implications are modest, with the registry of indigents and the loss of tax and tariff revenue posing the most significant costs. The loss of tariff revenue could affect other programs, however. For instance, generic drug imports currently carry a heavy tariff that is used to finance the National Housing Trust. Eliminating that tariff would affect housing finance objectives of the government and require that alternative sources of funds be identified for that program. Thus, the revenue loss is likely to be the most serious financial cost over time. The magnitude of the impact, however, cannot be assessed with existing data.

The costs are divided among eight different tasks, and the recurrent costs are generally low. The policy reform focus of the project may well have the impact of a net financial gain.
<table>
<thead>
<tr>
<th>Project Components</th>
<th>Nature of Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Sector</strong></td>
<td></td>
</tr>
<tr>
<td>1. Cost Recovery &amp; Financing</td>
<td>(1) reduce the underfinancing of publicly provided health care, provide incentives to providers in the public system, and improve quality of care through greater affordability of nonlabor inputs; and, (2) reduced management costs and reduced oversubsidization of health care through more accurate registry and definition of indigence.</td>
</tr>
<tr>
<td>Indigent Care</td>
<td></td>
</tr>
<tr>
<td>2. Sustainability Finance</td>
<td>Expand demand for private health care services through increase in insurance coverage instead of relying on subsidized public system.</td>
</tr>
<tr>
<td>3. Primary Health Care Efficiency</td>
<td>Studies that will help reduce the cost and improve productivity of primary health care units.</td>
</tr>
<tr>
<td>4. Hospital Management Training</td>
<td>Improved efficiency and effectiveness of public facilities with systems in place to ensure sustainable changes and lower costs/higher quality services.</td>
</tr>
<tr>
<td>5. Headquarters Management Strengthening</td>
<td>Assisting the MOH computerize financial records and typing; support policy studies; and assist in gaining legislative changes.</td>
</tr>
<tr>
<td>6. Drug Management</td>
<td>Benefits encompass: (1) improved and less costly public procurement of drugs; (2) adjusting tariffs on essential drugs to reduce the cost and thereby increase access to privately provided drugs; (3) reduction in the number of over prescriptions in the public and private sectors; and, (4) reductions in the cost of medical inputs due to adjustments in tariffs.</td>
</tr>
<tr>
<td>7. Alternative Management</td>
<td>Contracting out hospital support services, integrating PHC and secondary care into same region and strengthening role of hospital boards.</td>
</tr>
<tr>
<td>Project Components</td>
<td>Nature of Benefits</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td><strong>Private Sector</strong></td>
<td></td>
</tr>
<tr>
<td>8. Promoting Private Health Sector</td>
<td>Improved business climate for private investments in health care service delivery, which will help expand private investment in the sector.</td>
</tr>
</tbody>
</table>

* Benefits are contingent on policy change with the GOJ.*
Table 5

Project Components and Timing of Benefits

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Timing of Benefits Accrual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
</tr>
<tr>
<td>Indigent Care</td>
<td></td>
</tr>
<tr>
<td>2. Sustainability Finance</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Primary Health Care Efficiency</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hospital Management Training</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Headquarters Management</td>
<td></td>
</tr>
<tr>
<td>Strengthening</td>
<td></td>
</tr>
<tr>
<td>6. Drugs Management</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Alternative Management</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Promoting Health Industry</td>
<td>Planning</td>
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<td></td>
<td></td>
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</tbody>
</table>

* Benefits are contingent on policy change with the GOJ.
### Table 6

**Health Sector Initiatives Project:**
Project Component Costs and Recurrent Cost Estimates

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Estimated Costs (US$)</th>
<th>Recurrent Cost Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cost Recovery &amp; Financing Indigent Care</td>
<td></td>
<td>Continued monitoring of user fee system and support to continue the registry of indigents and financial management of health care for the indigent.</td>
</tr>
<tr>
<td>2. Sustainability Finance</td>
<td></td>
<td>Loss of revenues otherwise earned due to reductions in taxes and elimination of other revenue-earning impediments to private sector investments.</td>
</tr>
<tr>
<td>3. Primary Health Care Efficiency</td>
<td></td>
<td>Costs assisted with possible financial due to performs and greater decentralization.</td>
</tr>
<tr>
<td>4. Hospital Management Training</td>
<td></td>
<td>Possible follow-on assistance to ensure sustainability of improvements, but not essential.</td>
</tr>
<tr>
<td>5. Headquarters Management Strengthening</td>
<td></td>
<td>Paying for electricity use -- other support for computer maintenance and use.</td>
</tr>
<tr>
<td>6. Drug Management</td>
<td></td>
<td>Loss of tariff revenue due to a reduction of import duties on essential drugs.</td>
</tr>
<tr>
<td>7. Alternative Management</td>
<td></td>
<td>Regulating contractor(s)</td>
</tr>
<tr>
<td>8. Promoting Private Health Sector</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>