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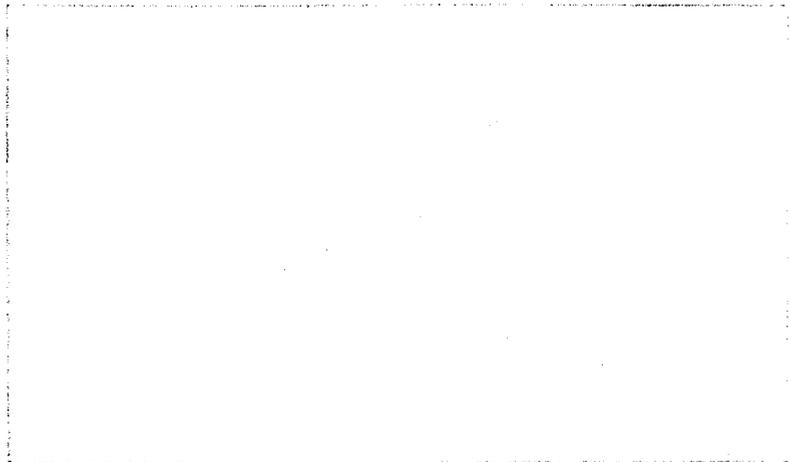
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**Cost Recovery in Jamaican
Health Facilities: Impact on
Revenues, Satisfaction and Access**

August 29, 1995

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Brandeis University

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SUMMARY AND RECOMMENDATIONS

The Jamaican public health system is underfinanced: it does not have sufficient resources to operate as designed. A calculation for FY 92-93 estimated that an increase of about 37% in recurrent costs was needed to address this gap. As an interim goal, the Ministry of Health (MOH) set a target of recovering 20% of operating costs through cost recovery through public health activities. Effective April 29, 1993, the MOH implemented modest increases in user fees. Simultaneously, a social marketing effort called "share care" used posters and other media to explain the need for greater fees to consumers.

As part of a longer term strategy, the MOH commissioned studies on unit costs and health financing designed to yield the price schedule. The studies, summarized in this paper, recommended that hospital care be paid on the basis of all-inclusive fees. These studies estimated that higher fees for private patients and exemptions for indigent patients should be able to generate revenue while maintaining access.

To encourage greater efficiency in collecting revenues and applying them to a hospital's needs, the MOH has granted hospitals the right to retain and spend the funds they receive from user fees. The budget sets a revenue target for each hospital, termed "grant in aid." Previously, all revenues were remitted to the general government account in the Ministry of Finance. This reform has substantially helped the cash flow of hospitals for purchase of miscellaneous supplies, which previously had to await approval of a requisition through the government finance system. In general, the hospitals have been quite successful at meeting their revenue targets.

Hospital administrators have been concerned, however, by the fact that these revenue targets seem to be based on past performance. This process can have perverse incentives over the long run, since available funds for hospitals are always less than needs. If a hospital is successful in collecting revenues in one year, the Ministry of Finance may set a higher revenue target in the next year. This "grant in aid" would not be used to make needed improvements in supplies and maintenance, however, but to reduce the general government subsidy.

Data on aggregate hospital revenues from patient fees, available through early 1995, show that the absolute amount of revenues has grown dramatically as a result of a policy change and project support to improve the efficiency of fee collections. Nominal revenues doubled, from J\$10 million in FY 91/92 (before new fee schedules were implemented) to J\$20 million in FY 92/93 (the year during which increases were implemented). They subsequently rose 5-fold to a projected J\$100 million for the fiscal year 1995/96. As the official fee schedule remained unchanged over the latter period, the increase is solely the result of more efficient collection. If no supplementary budgets for hospitals had been enacted in the middle of recent fiscal years, the share of hospital costs recovered would have risen as well. But because of supplementary budgets, however, the overall costs of hospitals has also risen substantially, so that the share costs recovered is projected to fall from 4.3% in FY 93/94 to 3.2% in FY 95/96. Higher fee schedules and indexation for inflation, two key recommendations that have not yet been implemented, would increase this share if put into effect.

Additional revenues and autonomy are intended to raise the quality of services, which may increase patient satisfaction. To examine the impact on patient satisfaction, a baseline survey of patient satisfaction was conducted in 5 secondary hospitals in 1994. In a hospital with a strong administrator (Sav La Mar), patient satisfaction was markedly higher than in other hospitals, indicating the potential benefits of strengthening hospital management. Through a comparison among the hospitals, the survey also examined whether the installation of Chief Executive Officers (CEOs) was associated with higher satisfaction. No significant differences were found between control hospitals and those with CEOs, but the CEOs had been in place for only 1-2 years at the time.

Next, the impact of fee changes and management initiatives on access was examined. This was assessed through the Survey of Living Conditions, an annual household survey. It has interviewed between 6,960 and 17,298 Jamaican residents per year since 1989. Utilization of and expenditures for health services in the 4 weeks prior to the interview is the subject of one of its 17 modules. The data show that the policies around higher user fees and more complete collections were, in fact, implemented. After adjusting for inflation, out-of-pocket payments for care in the public sector had fallen through 1992 but then increased fourfold from 1992 to 1993. Nevertheless, average expenditures per person treated in the public sector in the past 4 weeks (J\$80 in 1993 prices, or US \$2.86 at the then exchange rate of J\$28 per US \$1) were only about a quarter of the average expenditures per person treated in the private sector in the same period (J\$298 or US \$10.64).

The results show the importance of perceptions and communications. Despite the fall in real prices through 1992, discussions and impending price rises led to fears that the poor would be denied services and use by patients of lower economic levels would decline sharply. While the gap in use rates between upper and lower level consumers declined from 1992 to 1993, the 1993 level remained larger than in 1989 and shows the importance of public education and training of social workers to ensure that exemptions for indigents will be applied equitably and efficiently.

Finally, this survey shows that despite the increases in fees in 1992, access to public health services by the poor seems to be maintained. Between 1992 and 1993, the gap between upper and lower level consumers has been narrowing. Despite the price increase, the survey shows that access to care was maintained during the interval with the greatest price increase. The proportion of respondents sick or injured who sought medical care actually arose from 1992 to 1993, both overall and specifically for households in lower socio-economic levels. The public share among those using medical services was also maintained. Based on available data, the moderate fee increases implemented by the Ministry of Health have not adversely affected utilization. In fact, if fee increases can sufficiently improve quality, they improve utilization. Thus, higher user fees have the potential to improve quality of public services without adverse effects on access.

In conclusion, it appears that through careful planning it is possible to craft systems in which some users are asked to pay a greater share of the cost of social services without hurting access. Indeed, if the additional resources can help to strengthen the management of those facilities, then improvements in client satisfaction will result as well.

The Ministry of Health is about to begin a program of health reform. As part of this program, this analysis recommends that the Ministry develop a formula for allocating government subsidies to hospitals among its planned studies in health economics. Such a formula would allocate subsidies based on the "needs" of the facility (its size and sophistication) and on the degree of poverty of the population it serves. To quantify the poverty of the population, this author recommends that the Ministry of Health use the "Poverty Mapping" being completed by the Planning Institute of Jamaica (PIOJ). Using the 1991 census, each jurisdiction or neighborhood within a town has been scored by combining its ranking within four socio-economic indicators: crowding of dwellings, access to piped water, presence of flush toilets in dwellings, and degree of unemployment. It is suggested that each hospital receive a subsidy in proportion to the degree of poverty of the jurisdictions from which its patients come.

1 INTRODUCTION

1.1 The problem

Jamaica, like its fellow members of the international community, seeks accessible, affordable, health services for all of its citizens. With a life expectancy close to that of many industrialized countries, Jamaica's overall health conditions are better than those of most other countries of comparable income. Nevertheless, Jamaica confronts the same challenge facing its neighbors in both the developed and developing worlds: financing its public sector.

Jamaica has deliberately maintained low prices for services in the public sector. These prices are thought to maintain access and to avoid adverse political repercussions. Despite inflation averaging 40 percent per year in the late 1980s, nominal user fees remained fixed. While costs mounted with inflation, the absolute number of Jamaican dollars contributed by user fees did not grow, and their share of the financing of the health sector fell. In 1991, revenues from user fees, termed "grants in aid" in the budget, represented about 8% of the recurrent budget. Faced with numerous competing demands, the Ministry of Finance has been unable to make up for all of the needs out of general revenues and has encouraged raising the level and rate of collection of user fees. This paper reports on some of the steps considered and taken in Jamaica, and their impact on revenues, satisfaction, and access to services.

1.2 Symptoms of underfinancing¹

As a result of numerous pressures, the health sector of Jamaica is underfinanced: it lacks the financial resources to function as designed. The major symptoms of underfinancing are:

1. Inability to recruit sufficient skilled personnel
2. High attrition of personnel
3. Inadequate maintenance
4. Shortages of pharmaceuticals (approximately half of requirements)

Although underfinancing is obvious to Ministry of Health personnel, it has also been acknowledged by neutral government agencies: "[T]he health sector is still under-financed...." (Jamaica Institute of Planning, Statistical Yearbook of Jamaica 1991, p105).

1.3 Degree of underfinancing

Although quantifying underfinancing is not easy, in 1992 the author attempted an approximate calculation of the amount of money needed by the Ministry of Health of Jamaica (MOH) to correct

¹ For a fuller discussion of material in this section, see: Shepard DS. Cost recovery in Jamaican health facilities. Working paper prepared for the Latin America and the Caribbean Health and Nutrition Sustainability Project under contract no. LAC-0657-C-0051-00 with the U.S. Agency for International Development. Bethesda, MD: University Research Corporation, March 26, 1993.

underfinancing activities (Table I). The estimate required for personnel and maintenance was based on Kutzin's finding that "...an additional \$18-\$20 million [1989 Jamaican dollars] would be the financial requirement for filling currently vacant staff posts and meeting maintenance needs" (J Kutzin, Jamaica Hospital Restoration Project, Project Hope, 1989, p. xix). The midpoint of this range (J\$19 million) was extrapolated to the 1992 estimate in Table I of J\$92 million based on the devaluation of the Jamaican dollar compared to the U.S. dollar since 1989. (Note: The 1992 exchange rate, used in this calculation, was 22 Jamaican dollars (J\$) equals one United States dollar.) Kutzin's (1989) analysis of the health sector was thorough and reasonable. The study has, in effect been ratified by

Table I. Estimated increase in MOH funds needed to correct underfinancing (1992 Jamaican dollars)

1. Additional personnel and maintenance:	J\$ 92 million
2. Greater supply of pharmaceuticals: (100% increase)	J\$ 80 million
3. Raise salaries of existing registered nurses (increase salaries by 50%, i.e. $973 \times \$55000 \times 50\%$):	J\$ 27 million
4. Raise salaries of existing pharmacists (increase salaries by 50%, i.e. $64 \times \$80000 \times 50\%$):	J\$ 3 million
5. Additional personnel and maintenance in primary care (estimate):	J\$ 20 million
SUBTOTAL	J\$222 million

both the Inter-American Development Bank and the Government of Jamaica, in that both used it as the basis of a \$100 million loan to Jamaica for the Jamaica Hospital Restoration Project. Kutzin's estimates of revenue needed to correct for personnel shortages appear to count only the increases in numbers of personnel (with existing salaries). The proposed increase in nurses' and pharmacists' salaries is this author's subjective estimate to cut by half the gap between public and private sector salary levels.

Some subsequent acts of the Ministry of Finance addressed some of the underfinancing. For example, in early 1993 nursing personnel were granted a pay increase that helped address some of their needs. On the other hand, the 1992 calculation included only registered nurses, and excluded other types of nurses (e.g. public health nurses) who may also require raises. Also, the analysis is based on expenditures and excludes costs which are not captured in the government budget. For example, some hospitals have been assisted by donations of services and supplies, which may need to be purchased in the future.

Table II. Required increases for new activities

Required increases for projects underway (inflated to 1992 prices)	
1. Hospital Restoration Project (in 1995, from Kutzin, 1989):	J\$ 75 million
2. Other projects (estimate):	J\$ 25 million
SUBTOTAL	<u>J\$100 million</u>
Additional costs of fee collection and private services	
1. Fee collection clerks after hours, 100 clerks x \$30,000	J\$ 3 million
2. Added costs of private beds (nursing, catering, cleaning, decorating), 700 beds x \$150/day x 365 days	J\$ 38 million
SUBTOTAL	<u>J\$ 41 million</u>
GRAND TOTAL	<u>J\$363 million</u>

Table II shows the increases required for projects underway, quality improvements, and administrative costs of fee recovery as of 1992. Overall, an increase of 37% in recurrent costs (J\$363 million) over the MOH approved 92-93 budget (J\$976 million) have been needed to make existing and proposed activities of the Ministry of Health function properly. This increase would be in addition to the current support from the Ministry of Finance. It would be required by 1996, the originally planned completion of the major Hospital Restoration Project of the Inter-American Development Bank. An intermediate goal for 1994 was 20% cost recovery (i.e., user fees cover 20% of recurrent costs of the MOH).

2 FINANCING OF PUBLIC HEALTH CARE SERVICES²

2.1 Overall patterns

Most of the money for public health services in Jamaica comes from general government revenues. Current levels of cost recovery are low in the Jamaican Ministry of Health, and particularly in primary care. Jamaica's Ministry of Finance budget for the fiscal year ending March 31, 1994

² For a fuller discussion of material in this and the next sections, see: Shepard DS, Essayan V, and Lynch H. Cost recovery in primary health care in Jamaica. Working paper prepared for the Latin America and the Caribbean Health and Nutrition Sustainability Project under contract no. LAC-0657-C-0051-00 with the U.S. Agency for International Development. Bethesda, MD: University Research Corporation, May 19, 1994.

projected levels of cost recovery of 0.52 percent for primary care and 8.6 percent for secondary care. The modest numbers for primary care are feasible (representing J\$1.19 per curative visit), but the rates for secondary care were proving optimistic as the fiscal year ended. Nevertheless, the rate of cost recovery in secondary care during calendar year 1993 of J\$45 million represents about 8 percent of budgeted costs in that fiscal year. Higher user fees are being proposed by the Ministry, and the Health Sector Initiatives Project is assisting in improving cost recovery. As discussed in this report, substantial pharmaceutical cost recovery is also feasible in the long run.

2.2 Fee systems

Currently, the public health care system has three independent systems of fee collection: official, family planning, and informal. This section describes those systems, with particular emphasis on primary care, and provides data from case studies.

The Official System. The official system relates to funds collected in accordance with the Government's Financial Administration and Audit Act (F.A.A.), most recently amended August 17, 1992 (Jamaica, Law 13 of 1992, The Financial Administration and Audit (Amendment) Act, 1992.) Under this Act, fees must follow the official Schedule of Fees in effect at the time. This amendment added Section 8A. It allows the Minister of Health to make deductions and withdrawals from revenues collected by facilities, but provides that revenues collected under this act "shall be applied for the purposes approved by Parliament and, so far as they are not in fact so applied, shall be paid into the Consolidated Fund Principal Bank Account." Revenues which facilities are expected to collect are treated as "appropriations in aid." The budget for a parish or a hospital shows the full amount which it is authorized to spend for the fiscal year with two sources of finance: general funds from the central government, and retention of fees through appropriations in aid.

Other provisions of the FAA act specify a number of procedures that must be followed with official fees. First, the person collecting the fees must be a permanent (not a temporary) government employee. Second, a cash record must be maintained and official receipts printed by the Government of Jamaica must be issued for money collected. Third, a safe of adequate size (for example, 2 feet high, wide, and deep) must be cemented into a blank wall (free of doors or windows). Fourth, cash must be kept in a cash box until it is transferred to a safe. Finally, if a facility has several cashiers (e.g. at the casualty department and general admissions assessment office), they must transfer collections daily to the main cashier. The main cashier deposits the funds periodically (preferably daily) in a bank account approved by the Minister of Health.

Under the Hospitals (Public) Act of April 29, 1993, the following fees theoretically apply to curative services at Health Centers Types II to V:

Registration (per visit)	J\$ 2.00
Prescription (per prescription)	J\$50.00
Chronic conditions (diabetes, hypertension, asthma)	J\$ 5.00

Mothers at rural maternity centers are supposed to be charged J\$40 flat rate per delivery. Insured patients (with health and accident insurance) are supposed to be charged the maximum payable under their policies. At Port Antonio Health Center, fees are collected officially for dental extractions. Adults were charged J\$25, children over 12 years J\$5, and children 12 and under were treated free. These fees are slightly lower than the hospital fee. This service generated revenues of J\$45,664 in 1993. At hospitals, the major outpatient fees are:

Registration (per visit)	J\$20.00
Prescription (per prescription)	J\$50.00
Laboratory fees	J\$15.00
Dental extraction	J\$30.00

Community hospitals collect the following official fees for curative services. They generated the following revenues in Buff Bay Community Hospital in 1993:

<u>Item</u>	<u>Fee</u>	<u>Revenue (J\$)</u>
Registration	J\$2	8,522
Maternity delivery	J\$300	36,260
Prescription (child)	J\$10	0*
Prescription (adult)	J\$50	156,905
Hospital (per day)	J\$25	15,475
Dental visit (child)	J\$10	0*
Dental visit (adult)	J\$30	36,276
Ambulance (per 10 miles)	J\$60	1,690
Morgue (per day)	J\$50	12,900
TOTAL		268,028

* Revenue shown is for children and adults combined.

Patients with curative visits are exempted from fees if the patient belongs to one of the following categories: food stamp recipient, government retiree, mentally ill patient, child in school uniform, or services part of prenatal care. Although staff estimated that 20 percent of Buff Bay patients would be exempted, the data showed that some formal payment was received for approximately 94 percent of the 15,380 curative visits in 1993. Formal fees averaged J\$17.43 per curative patient.

Health centers appear to collect the J\$2 registration fee (when the patient is not exempted), but not the pharmacy fee. Community hospitals thus generate considerable revenues. At health centers, officially collected revenues are small because of both low charges and substantial exemptions.

The Family Planning System. This system was established in 1993 by the National Family Planning Board (NFPB). The Board has been generously supported by the United States Agency for

International Development (USAID), the United Nations Family Planning Agency and other donors. Under the Family Planning Initiatives Project, the NFPB agreed to the phase out of USAID funding over the project, and to find local sources of funding by its end, July, 1998. The NFPB's work has contributed to Jamaica's impressive 60 percent rate of contraceptive prevalence among women of reproductive age. To maintain this momentum, the NFPB has adopted the following policies:

- Clients must pay for family planning commodities except in cases of financial hardship.
- Fees are J\$50 per Depo Provera injection.
- \$5 buys a one-month cycle of low-dose contraceptive pills, and
- J\$10 per month buys standard-dose pills.
- These fees are collected by the nurse or midwife who treats the client.

As the funds collected are as valuable than the commodities themselves, they are treated with equal care. They appear to be kept in an examining room in a cabinet or desk. A simple notebook serves as the cash record. Receipts (from patients) and disbursements (transfers out) are shown chronologically. In Kingston, the nurses take the accumulated funds in cash directly to the Family Planning Board, where they exchange them for the family planning supplies. Outside of Kingston, the nurse or midwife takes them to the parish health office in the course of one of her monthly visits to that office. An official there records the amount received and the name of the health center in a register and puts the money in the safe in the parish office. The nurse receives a replenishment of supplies corresponding to the funds she collected plus "something extra." This extra, approximately 20 percent of each type of commodity, provides her with the supplies that can be delivered free in cases of need. Periodically, a parish official takes the cash with a deposit slip from the National Family Planning Board to the local branch of the bank in which the NFPB has an account. The funds are thus deposited in the NFPB's bank account.

This system is accepted, apparently legal, and by all accounts, generally functions well. Despite the simplicity of the system, there were no anecdotes of theft or disappearance of money or supplies. The small amounts of money involved and the professional commitment of the staff involved to MCH activities apparently avoided theft by staff. The facts that the system was not publicized and that it generates only small amounts of money has so far avoided theft by outsiders. While the nurses, midwives, and other staff do not especially like handling money, they accept the task on this limited scale as part of their regular job. There are anecdotes of fees above those recommended by the NFPB being collected, but the excess could be considered a component of the informal system.

In Buff Bay Community Hospital, staff estimated that patients paid roughly J\$20,000 in 1993 for family planning fees. In Port Antonio Health Center, where actual receipts were totaled, J\$49,540 was collected in formal fees (J\$2 per registered patient).

The informal system. In many facilities, patients are asked to make donations to support the operation of the health facility. The funds pay for stationery (cards), cleaning supplies (such as soap), local purchases of drugs and, in a community hospital, laboratory supplies. At Southfield Health

Center, which had a well developed health committee, annual fund raising events raised additional funds. An annual dinner provided funds which helped pay for renovations. At Sandy Bay Health Center, community contributions and labor had helped provide the funds used to construct a new building.

At Buff Bay community hospital, informal visit fees of J\$5 per visit were requested for each of the following types of visits: post-natal, child care, prenatal, curative visit, and family planning. Stationery (records) fees of J\$5 were requested for an appointment card, J\$10 for an initial immunization card (for children), and J\$10 for a replacement immunization card. Staff estimated that the visit fees grossed J\$20,000 and the records fees totaled J\$10,000 in 1993. In Port Antonio Health Center, a fee of J\$5 was requested for each visit except for food handlers, from whom J\$10 was requested. Port Antonio Health Center had 24,104 registered patients in 1993 of whom 11,674 were curative. As contributions amounted to J\$60,000, apparently virtually all curative patients gave the clinic contribution.

This experience suggests that the existing formal fees are the predominant type of fee in community hospitals. All of the various types of fees co-exist, and apparently contribute to the functioning of the health facilities. In the Type IV health center studied (Port Antonio) informal contributions were the largest source of revenue. In the Type I center visited (Sandy Bay), family planning fees were the only type of fees in effect as the basic maternal-child health center performed no deliveries and virtually no curative visits.

2.3 Donor Revenue

Donors support the primary health care system through bilateral projects directed at primary care and debt relief. These activities are almost all directed at maternal-child health or environmental health (latrine construction), although some spillover to curative services may occur. The most important funding is from debt relief. The Government of Netherlands agreed to forgive the Government of Jamaica (GOJ) from repaying debt it was owed, providing that GOJ instead put the money it would otherwise have repaid into expanded maternal child health services. The program began in November, 1992 and is administered by UNICEF and the Ministry of Health, and provides about US \$1 million per year to primary health care. The amounts budgeted in calendar years 1993 and 1994 in US \$1000 are as follows:

<u>Element</u>	<u>1993</u>	<u>1994</u>
Immunizations	173.3	86.7
Diarrhea (including latrine building and supplies)	262.0	152.6
Health education	305.0	197.7
Breast feeding	333.7	332.7
Maternal/perinatal	300.4	194.3
TOTAL	1,374.4	964.0

The amount in 1994 is 30 percent less than that in 1993 because the debt is being retired. The 1995 amount, the last year for these special funds, will be still smaller. These funds are used for a mixture of capital and operating expenses. Capital items include refurbishing the delivery suites at Jubilee hospital, building latrines, in-service training of staff in new skills, and purchasing equipment, such as cold boxes and scales. Operating expenses include paying sessional nurses for outreach and weekend work, travel, and supplies. Ministry officials estimate that to maintain the most essential ongoing MCH activities initiated through these special funds would require an increased contribution by the Ministry of Finance of US \$200,000 per year.

The 1993 amount, converted at the mid-year exchange value of J\$25 per US dollar, is equal to J\$34.3 million. This amounts to about a 50 percent increase to the regular government budget for maternal child health activities. That share was determined by taking the budget for primary health care (program 20) from the Government of Jamaica budget of April, 1993 of J\$275.3 million and assuming, based on analyses of Portland and Kingston and St. Andrew parishes, that about a quarter of the direct services could be attributed to maternal and child health services (the remainder is curative and environmental health services).

The World Bank's Human Resources Development Project was not linked specifically with primary care. Donor contributions through other sources, though not addressed systematically, appeared small. In Portland Parish, for example, the only other donor contribution was photocopier toner cartridges worth J\$16,000 supplied through the Netherlands Development Project.

3 USER FEES IN PUBLIC FACILITIES

Recognizing the need for higher fees, the Ministry raised fee schedules in 1992 and 1994. It also strengthened the procedures for collection, so that patients without official exemptions would not evade payment.

3.1 Principles for user fees

To help the Ministry of Health consider higher fees, plans have been developed according to several principles of economics and public policy. First, the proposed fees must be affordable to the population to be served by the system. Data from the Survey of Living Conditions conducted by the Jamaica Institute of Planning (1992) can help illuminate this. Even the poorest consumption quintile uses the private sector extensively for ambulatory care, and pays substantial fees for that purpose. Among persons in this consumption quintile seeking medical care, the proportion treated in private sector was 48.9%. Thus, existing private fees (which are much higher than those proposed for public patients) are affordable even to many in the poorest segment of Jamaican society. The mean total cost per person incurred in the last 4 weeks for private care, among those seeking such care, excluding drugs and insurance reimbursement (based on 1990 data) was J\$ 50. The mean costs for drugs per person seeking care in the private sector in the last four weeks was J\$38. Thus, the total (for persons seeking both medical services and drugs) was J\$ 88. Although hospital admissions are

relatively rare (required by only one person in 20), this amount would cover the cost of an average hospital admission in the public sector, and is much more than the proposed fee for an ambulatory visit.

Second, the fees should be related to the cost of the service. Economic theory states that price should be set equal to marginal cost for economic efficiency. However, there are many reasons to subsidize socially useful services by setting price below marginal cost, or, with revenue needs and little competition for other services, to set prices above marginal costs. This situation could apply for private services.

Finally, the fees should be structured insofar as possible to promote rational use of health system. That is, the fees should encourage people to obtain services in ways that minimize the cost to the health care system of providing them. To do this, we will structure services to make use of public facilities in afternoons and evenings, when facilities tend to be underutilized, by establishing evening private clinics. To encourage patients to use health centers and lower level hospitals when adequate, economic analyses have recommended the lowest charges in the lowest level facilities (Types I and II health centers), intermediate fees at the next level (Types III to V), and the highest fees in the outpatient departments of hospitals and community hospitals.

3.2 Application to inpatient care

Applying these concepts to hospital (secondary and tertiary) care suggests that Jamaican hospitals should charge for services according to three economic levels of patients:

- Indigent (defined operationally as patients with food stamp aid, plus additional indigents who receive exemptions on a case-by-case basis from an assessment officer in the health facility in which they receive care)
- Public (most of the population)
- Private (eventually, about a quarter of inpatient care)

Fees should be graduated fees by type of hospital, so that patients pay more in more sophisticated hospitals, such as the University of the West Indies Hospital and the two national referral hospitals (Kingston Public Hospital and Cornwall Regional Hospital).

Charges should be billed only for the following four types of services (based on acceptability and feasibility):

- Inpatient (includes operating theater, physiotherapy, and laboratory)
- Ambulatory (includes laboratory)
- Pharmaceuticals
- X-rays

Using analyses of the late George Cumper, in 1992 the average costs of various inpatient services were as follows:

- Average cost per day about J\$450

- Average length of stay: 6 days
- Average cost per hospitalization (6 x J\$450): J\$ 2700

Similarly costs of hospital ambulatory (casualty and outpatient) averaged:

- An average casualty or outpatient visit cost J\$ 82. While Prof. Cumper did not distinguish the costs of casualty and outpatient visits, their average costs are probably similar. Only a minority of "casualty" visits are true medical emergencies. The rest are simply problems that required ambulatory care needed in the evening, weekend, or were not previously scheduled in a specialty clinic.
- Tests and procedures which would not be charged separately have additional costs, here assumed to be J\$ 18 per visit
- This consultant's estimate of total cost per visit is J\$100.

A proposed fee schedule for inpatient care is given in Table III. The following goals underlie this proposed schedule. First, the proposed fee schedule is based on types of admissions, which would be determined on (or shortly after) admission. This type of fee schedule provides incentives for efficient care, and promotes flexibility in treatment. The hospital gains financially by promptly scheduling and conducting any needed tests, discharging the patient quickly, and if necessary, performing aftercare at home or on an ambulatory basis after discharge. These steps also foster efficient use of heavily demanded hospital beds. This payment system also avoids the tendency that hospitals might otherwise experience to prolong lengths of hospital stay to be able to get more revenue from insurance companies. Second, the proposed fee schedule seeks to be economically reasonable by maintaining free care for indigent patients, not charging public patients more than it appears that they could pay, and by encouraging use by private patients through substantially lower fees than in private hospitals, plus access to some of the equipment in Jamaica. Third, the system attempts to cross subsidize generally longer hospitalizations with generally shorter ones. That is, fees for less complicated admissions cover a greater share of costs than for more complicated admissions.

Table III. Proposed inpatient fee schedule: Graduated flat fees

1	Surgery, EXCLUDING DRUGS -- five levels, e.g. for Type A Hospitals			
	Est.	Public	Private	
	Level	Days	Fee	Fee
	A	12	\$ 540	\$ 5000
	B	9	\$ 360	\$ 4000
	C	6	\$ 270	\$ 3000
	D	3	\$ 180	\$ 2200
	Minor	1	\$ 120	\$ 1500
2	Medicine (including rehabilitation and pediatrics) 4 levels, EXCLUDING DRUGS (based on expected length of stay and use of intensive care)			
	Est.	Public	Private	
	Level	Days	Fee	Fee
	B	12	\$ 360	\$ 4000
	C	9	\$ 270	\$ 3000
	D	6	\$ 180	\$ 2200
	E	3	\$ 120	\$ 1500
3	Obstetrics (includes both complicated and routine deliveries):			
	Est.	Public	Private	
	Days	Fee	Fee	
	3	\$ 400	\$ 1600	

This policy helps assure financial access, as it reduces the chance that a patient would receive a large bill that would exceed his resources or the limits of his insurance. This policy is evidenced by raising the proposed fee by less than proportional to the hypothesized length of stay for longer admissions.

These principles led to a recommendation for a fee schedule based on the sum of: an admission charge, a per diem charge, a surgery or delivery charge, and charges for drugs. Different levels of charges are recommended for public and private patients. For example, the recommended public fee for a level B, 9-day surgical admission is: registration (J\$ 60), operating theater (\$60), per diem (9 days at \$30, or \$270), or \$390. This is close to the flat fee that was proposed for this type of hospitalization (\$360). These itemized charges do not have the simplicity, incentives for efficiency, or ability to cross subsidize contained in the proposed flat fees. On the other hand, they do not require the additional analyses (described below) to categorize types of hospitalizations. Thus, they could be implemented quickly. In addition, except for the registration fee, they are similar to the current system in structure. Thus, they are likely to be readily understood by both providers and patients.

For surgical admissions, the proposed fees are linked to the present four categories of surgical admissions. The present fees cover only the operation itself (surgeon, anesthesiologist, and use of the operating theater). The proposed system would expand the fee to be all inclusive, so that pre-operative, post-operative and nursing care are all included along with room and board. For medical admissions, rules for assigning diagnoses and levels of severity to admission categories need to be developed).

To illustrate how this charge schedule might operate for an average (6 day) medical admission (Level D in Table III), Figure 1 examines the degree of cost recovery from the existing charge schedule (in place since 1984) of J\$30 per admission with the various components of the proposed new scale. Overall, the proposed schedule would recover 32% of the existing cost (in 1992 prices) of an average inpatient. While private patients are a minority (25%) of patients, they represent a majority of revenues. Thus, creating a quality of service that will attract paying private patients is

Inpatient fees as % of costs

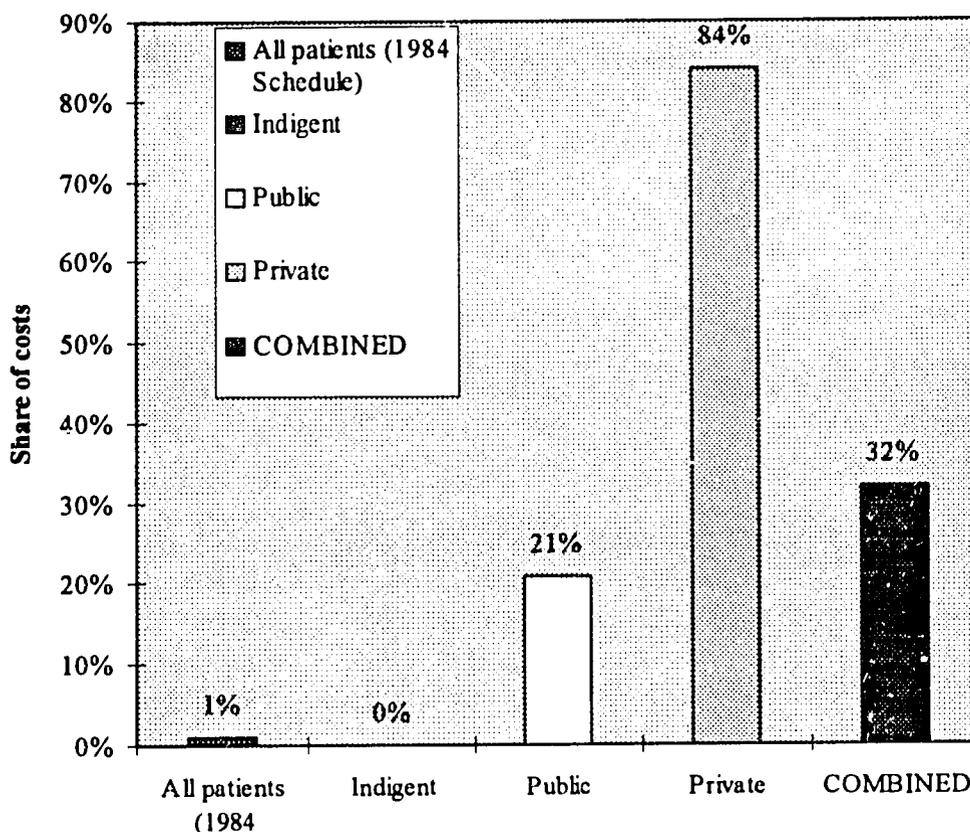


Figure 1 critical to the success of cost recovery. These results approximate how the proposed fee schedule might recover costs for all inpatient care. For more sophisticated levels of admission (e.g. A, B, and

C), the degree of cost recovery would be less; for less sophisticated levels (e.g. E) a higher proportion of costs would be recovered.

Table IV shows the proposed system of graduating fees according to the type of hospital. At the final debriefing, one ministry official expressed his concern with this type of debriefing: types A and B hospitals, in addition to being referral hospitals from smaller hospitals, are also the local secondary hospitals for their immediate catchment area. Thus, a higher fee would penalize their immediate catchment population. While this fact is true, it is counteracted by the advantage of having more sophisticated, heavily subsidized, services close by. Furthermore, this pricing schedule is needed to discourage people from outside the primary catchment area of a specialized hospital from bypassing their local hospital. Jamaican officials will need to decide between two conflicting goals. Uniform charges at all types of hospitals will likely perpetuate the current imbalance of crowded referral hospitals and under-occupied C-level hospitals. Charges graduated by type of hospital, of the type shown in Table IV, would balance two conflicting pressures. While people living near level A hospitals and B hospitals would face higher charges, they would also enjoy more sophisticated facilities. If they wished to avoid the higher charges, they could travel to the nearest lower level hospital.

Table IV. Charges by type of hospital

Hospital	Fee	Example (Delivery)
Type A	Full charge	\$ 400
Type B	15% discount	\$ 340
Type C	30% discount	\$ 280

3.3 Application to primary care

To set fees appropriately for primary care services, policy makers must know the unit costs of these services. The fees need not equal the costs. They can be priced below cost, requiring a subsidy, or above cost, generating a profit (providing the fee is collected). The unit costs do provide a point of reference, from which specific policy decisions can be made. Primary care services generally encompass three types of services: (1) maternal child health (MCH) services (generally preventive), including antenatal care, vaccinations, family planning services; (2) curative services (first line medical treatment, generally on an ambulatory basis); and (3) environmental health (both routine and problem based inspections of certain commercial establishments, livestock, and water). For purposes of this study, we add another service: (4) pharmacy items at primary health care facilities. While this service is technically part of MCH and curative services, we separated it because we recommended separate fees for pharmacy items.

With other colleagues, we developed methods for deriving budgeted costs of services from the detailed budget of the Ministry of Health, and then apply this approach to two parishes. We subsequently derived costs of pharmacy items. As the necessary data are not in the budget, these require separate empirical studies. Material in this section was derived from a report on primary care which provides further details (Shepard, Essayan, and Lynch, 1994). We estimated direct (patient-related) and indirect (administration and support) costs at each of four levels (facility, parish, region, and country), and allocated the indirect costs to the direct ones.

The primary health care system is also responsible for environmental health. While hygienic eating establishments benefit the general public to some extent, the major beneficiaries are the patrons of the specific establishment. The patrons of all food establishments benefit indirectly through the assurance that food establishments in Jamaica in general are periodically inspected. In the long run, this benefit accrues to the owners of the facilities, who can attract more customers and charge higher prices because their product is considered safe. A proprietor who opens additional establishments requiring inspection by the Environmental Health section imposes additional work on the section. On grounds of economic efficiency and equity, the author feels that commercial inspections should pay the full cost of their inspections. For the greatest administrative and political acceptability, these fees should be uniform across the country.

We derived unit costs of curative and maternal child health visits and "inspection days" for each of the two parishes above. We converted amounts in Jamaican dollars (J\$) to US dollars at the exchange rate in effect at the time of most field work (July 1993) of US \$1 equals J\$25. (As of the latest visit, Feb. 1 through 9, 1994, the exchange rate had become US \$1 equals J\$32.) All costs include indirect costs at the parish, region, and national levels, as well as the direct costs of provider time and supplies. Our estimates of unit costs apply to mid-1993, and do not include salary increases granted to government workers at the end of 1993. We estimated the following unit costs:

Type of service	Unit cost (J\$)	US\$
Maternal child health visit (excluding drugs and contraceptives)		
Portland	J\$ 70	US \$ 2.80
Kingston & St. Andrew	J\$ 94	US \$ 3.76
Average	J\$ 82	US \$ 3.28
Curative visit (including pharmacy, lab and supplies, all as currently available)		
Portland	J\$ 155	US \$6.22
Kingston & St. Andrew	J\$ 131	US \$5.22
Average	J\$ 143	US \$5.72
Prescription item (overall average)	J\$ 25	US \$1.00
Inspection day (environmental health)		
Portland	J\$1,416	US \$56.64
Kingston & St. Andrew	J\$2,696	US\$107.84
Best estimate (derived from Kingston & St. Andrew)	J\$2,700	US\$108.00

Recommended fees in primary care. If there were no reason to subsidize a service, economic theory dictates that the Ministry should set prices equal to marginal costs, which would be comparable to the average costs derived above. The Ministry should subsidize services below average costs to the extent that they serve a public health objective. Thus, we suggest that the complete subsidies for maternal/child health consultations and non-commercial environmental health services be continued because of the critical importance of vaccinations, prenatal care, other maternal/child health services, clean water, and other services in these categories. We suggest that curative consultations be partly subsidized to maintain access, but provide additional revenues to improve quality. The imposition of fees must also consider affordability, political acceptability and the costs and feasibility of official fee collection mechanisms. In smaller facilities, these could cost more than the funds collected.

We recommend formal fees for curative services in the following types of primary health care services: Type IV and Type V health centers and community hospitals. In these facilities, we suggest a registration fee of J \$20 for curative consultations and a prescription fee of J \$40 for a prescription containing up to 3 generic items on the essential drug list. Since about 90 percent of curative visits currently have a prescription, the average patient would pay J\$56 overall for a visit. The level of cost recovery depends on the extent of quality improvements required.

The greatest level of cost recovery arises if no quality improvements were needed. Then this amount would recover 40 percent of the J\$139 cost of these services as currently provided. The lowest level of cost recovery arises if the added costs of fee collections and quality improvements (particularly better drug supply), consumed all the revenues from user fees. These costs would increase the cost per visit to J\$196 per visit and lower the cost recovery from curative user fees to 29 percent of the J\$196 cost. The remaining cost of J\$140 (71 percent) would represent a public subsidy. We recommend this substantial subsidy because of the public health purpose of treating many curative primary care conditions, such as sexually transmitted diseases and respiratory infections, the importance of keeping the fee in primary care centers below that in hospitals, and maintaining the political support for primary care activities.

As mentioned, we recommend that a prescription for up to three *generic*, essential drugs at these facilities be sold at J\$40 per prescription. In general, brand name or non essential drugs should not be provided at public health facilities. In exceptional cases, however, these items should be sold at their full cost (including distribution costs). A prescription charge of this magnitude would recover about half of the cost for paying patients. The existing government allocation would cover the difference between these proposed charges and the full cost of these items for paying patients, as well as all the costs for free items (e.g., vaccines) and exempted clients. The funds could be operated either by the parish as an official government entity, or by an independent community association within each parish.

Based on work by this consultant and the Ministry's fee committee in 1992, the Ministry has been considering an increase in fees for secondary and tertiary care. The proposed fee schedule calls for a registration fee of J\$50 per visit plus a charge J\$50 per prescription. Assuming that 90 percent of ambulatory patients receive a prescription (the share for primary care), then the average ambulatory patient will pay J\$95. Assuming that both the primary and the secondary care recommended fees were enacted, then the average primary care ambulatory payment of J\$56 would be 41 percent lower for patients who need only three or fewer generic items (the majority of patients) than the average secondary care ambulatory payment of J\$95. This should be a sufficient difference to encourage patients to respect the referral hierarchy, going first to a primary care facility.

In our data, the average prescription contained two items, each costing the Ministry of Health (in ingredients) J\$25. Thus, the prescription costs J\$50 and is sold at J\$40 to paying patients, representing a cost recovery of 80 percent in paying patients. It is dramatically less expensive than comparable items would cost at a private pharmacy (J\$121 per item, or J\$242 per prescription). If these fees succeed as expected in increasing drug availability, patients will save substantially.

The reason for recommending this level of fees is three-fold. First, the level of cost recovery drugs should be sufficient to make up the gaps of substantial drug shortages, which are estimated qualitatively as at least 50 percent of current needs. Second, the J\$20 registration fee should allow modest increases in amenities for staff and patients. Third, these fees are low enough that they should not be a major barrier to receiving care. Most experts consulted thought fees of this level were

reasonable. Once it is clear that quality is, indeed, improving, further increases can be considered in subsequent years.

We calculated the degree of cost recovery that this formal system might generate in Kingston Comprehensive Clinic. Included anticipated improvements in drug supply and fee collections, the cost per consultation would average J\$169.22. The anticipated revenue from registration and prescriptions (assuming that 80 percent of patients pay) average J\$45. Thus cost recovery in a clinic with a formal system would average 27 percent.

We recommend that contraceptives should be subsidized according to their public health importance and cost-effectiveness. Both intrauterine devices (IUDs, for which current demand is very low) and Norplant (which lasts 5 years) appear to have favorably low costs per couple year of protection. They appear to be highly cost-effective. IUDs, which place little financial pressure on the public sector, deserve substantial subsidy for public clients. Condoms deserve complete subsidy for clients in sexually transmitted disease clinics for their role in preventing both pregnancy and sexually transmitted diseases, particularly AIDS. In other public sector facilities at all levels, they should continue to be sold at cost along principles similar to those now in effect. Norplant, Depo Provera and pills should receive a partial subsidy. The Ministry and the National Family Planning Board should offer free supplies of most contraceptives for the first three months to encourage new acceptors, with charges for most users thereafter. Exact recommendations will need to be derived based on the budget constraints of the National Family Planning Board, based on the phase out of donor funding from USAID, United Nations Fund for Population Activities (UNFPA), the World Bank, and other donors.

While lower level health facilities (Types I, II, and III) also need funds for improved drug supplies, maintenance, and other requirements, a formal fee system is not currently feasible. Needs for personnel to oversee the system, and the costs of complying with required procedures would be too great. Rather, we would encourage the Ministry of Health to encourage these facilities to expand the practice of requesting informal contributions from clients and to institute more consistent guidelines. In these facilities, contributions for drugs will probably be most salient. Assuming that 70 percent of patients with prescriptions make such a contribution, the overall cost recovery for prescriptions will be 56 percent (70 percent times 80 percent). The Ministry should help facilities that wish to solicit contributions to set up appropriate accounting and community oversight procedures to assure that contributors receive appropriate value from their payments. One source of support for training are debt relief funds (discussed under donor funding below).

We also recommend that parishes charge commercial establishments, food handlers, and anyone butchering livestock for required commercial environmental health inspections. We recommend that charges be set according to a fee schedule based on J\$2,700 (US \$108) per inspection day. The charge for each type of facility would be based on a standard time. For example, a hotel or factory would be charged for a full day. Other facilities and food handlers would be charged various fractions of a day. While food handlers have apparently accepted laboratory and registration fees totaling J\$35 each, they have not been charged for the time of health workers. We

recommend that they be charge J\$90 for based on the effort involved when they attend a routine clinic in a health facility. As the charge is less than the combined charge for registration and medications proposed for a hospital visit (J\$100), it should be affordable to these paid workers and commercial establishments.

Employers wishing these clinics to be conducted on site should be asked to pay a one-day fee of J\$2700 for the clinic for up to 25 food handlers, plus a charge of \$90 for each additional participant over 25. Assuming an average of 15 food handlers per clinic, the one-site clinic would cost \$180 per participant. The higher fee is justified by the added cost to the health department, and the convenience to the employer and employees. Employers will be responsible for payment to the health department. They may, however, collect all or part of the costs from employees.

Predicted budget implications. These recommendations affect the Ministry's budget in two offsetting ways. On one hand, they increase the gross costs. They allow and require that the Ministry address shortages of drugs and other quality constraints in facilities charging formal fees. They require that the administrative costs of fee collections be covered. Also, added funds must be allocated to environmental health to assure that inspectors are paid fully and promptly for travel and other costs for inspections. On the other hand, they increase expected collections. The table below shows how these changes would have affected primary health care costs if they had been in effect in 1993.

	Amount (J\$ million)
Proposed costs of primary health care (at mid-1993 prices)	
Current (mid-1993) costs of primary health care at parish and regional levels*	275.3
Major fee-related recommended increases:	
Improving conditions and alleviating shortages in facilities initiating formal fee systems	4.4
Additional travel reimbursement for environmental health inspectors inspectors	4.8
Subtotal, fee-related increases	9.2
Grand total	284.5

* Does not consider pro-rata national support (central Ministry of Health) costs of J\$17.7 million (6.43 percent of direct costs).

These budget recommendations could be updated to 1994 prices by adding the percentage increase to the budgets made via the supplementary budget around January, 1994. This was approximately a 90 percent increase, as it included retroactive salary adjustments. The table below indicates how the proposed user fees contribute to the financing of primary care.

Proposed official financing for primary health care, mid-1993 prices

Source of financing	Amount (J\$ million)	% of Proposed Costs
Recommended user fees:		
Recommended commercial inspection fees	48.0	16.9%
Recommended new visit and prescription fees, Types IV and V clinics	4.4	1.5%
Existing user fees where no increases are proposed	1.4	0.5%
Subtotal, user payments	53.8	18.9%
Net budget subsidy from Ministry of Finance	230.7	81.1%
Grand total	284.5	100.0%

Altogether, we estimate that charges of the magnitude proposed would have recovered 18.9 percent of the costs of primary health care if they had been fully implemented in fiscal year 1993-94. The rate of cost recovery would have been highest (105 percent) for environmental health and contraceptives (not analyzed in detail), moderately small for curative health services overall (3.6 percent), and virtually zero for maternal-child health (MCH) services. The overall rate of cost recovery for curative services is low because costs are incurred in all types of facilities, while fee increases are proposed only in the higher levels. When the rate is calculated for the facilities collecting fees, the expected revenue per visit (J\$45) is 31.5 percent of the average cost per visit (J\$143). For paying patients, the average payment per visit (J\$56) is 39.4 percent of costs.

By most standards of comparison, these proposed average curative fees per visit of J\$56 still make curative services a bargain. These primary care costs of J\$56 represent 62 percent the corresponding hospital outpatient fees (an average of J\$95 per client, assuming that 90 percent of curative patients receive a prescription); and they are only 11 percent of the combined cost of a curative visit with a private general practitioner (J\$250) and two prescribed items in a private pharmacy (J\$121 each) in the private sector. Over time, as quality improves, these curative fees should be increased and the degree of subsidy reduced.

The share of costs recovered by this schedule in the 1994-95 fiscal year would be smaller because it could not be implemented for several months, due to the need for government approval, capital improvements, public education, procedure development, and staff training. Furthermore, due to salary increases, costs are substantially higher than those shown here. A new fee schedule, if implemented, should be indexed to rise annually with an inflation index in the same manner as that

being proposed for hospital fees. Once fully implemented, however, both official and informal user fees should contribute substantially to improved quality in primary health care.

3.4 Application to administrative services

Cost recovery would also be appropriate for many administrative services performed by the Ministry of Health, such as the registration of health professionals, providing copies of official certificates, and analyses by the Government Chemist. We understand that the Ministry is already examining higher fees for these services. Increased fees would allow scarce government funds to be reserved for the most essential and cost-effective health services, such as prevention and control of major infectious and chronic diseases.

4 IMPACT ON REVENUE

The MOH's work on cost recovery has been supported by USAID and other donors through the Health Sector Initiatives Project (HSIP) and the Latin America and the Caribbean Health Financing and Sustainability Project (LAC HNS). Much has been accomplished through 1995, but some critical steps remain.

4.1 Major accomplishments

The major accomplishments are:

1. Substantial improvement of the efficiency of fee collections. Figure 2 and Table V show that in current Jamaican dollars, collections increased ten fold over five years from the fiscal year ending in 1991 to the projection for the year ending in 1996. While the fee schedule increased in the year ending in 1994, the doubling of revenues since then has occurred with no change in the fee schedule; it represents entirely an improvement in collections. It is the result of cashiers being trained, careful monitoring of collections, the ability of the institutions to use the funds themselves, staffing cashiers offices in evenings and weekends, and, most recently, preparing invoices for patients.
2. A willingness within the Ministry of Health (MOH) to consider new fee options. In late 1993, the MOH fees committee had developed a proposal for higher fees for secondary and tertiary care. It was based in large part on work supported through the HSIP and LAC HNS projects. The idea of indexing fees, so they would increase automatically with inflation (like tax brackets and social security benefits in the US) was also part of the initial agenda. Since 1994, when this consultant's background report on primary care was completed, a similar process has begun. The Director of Primary Care has prepared a plan which is now under discussion by the MOH fees committee
3. Hospitals have been given some financial autonomy. They are able to keep and spend the moneys they receive in fees (grants in aid). While they must report their uses of these funds, their ability to spend them directly can help them substantially with liquidity.

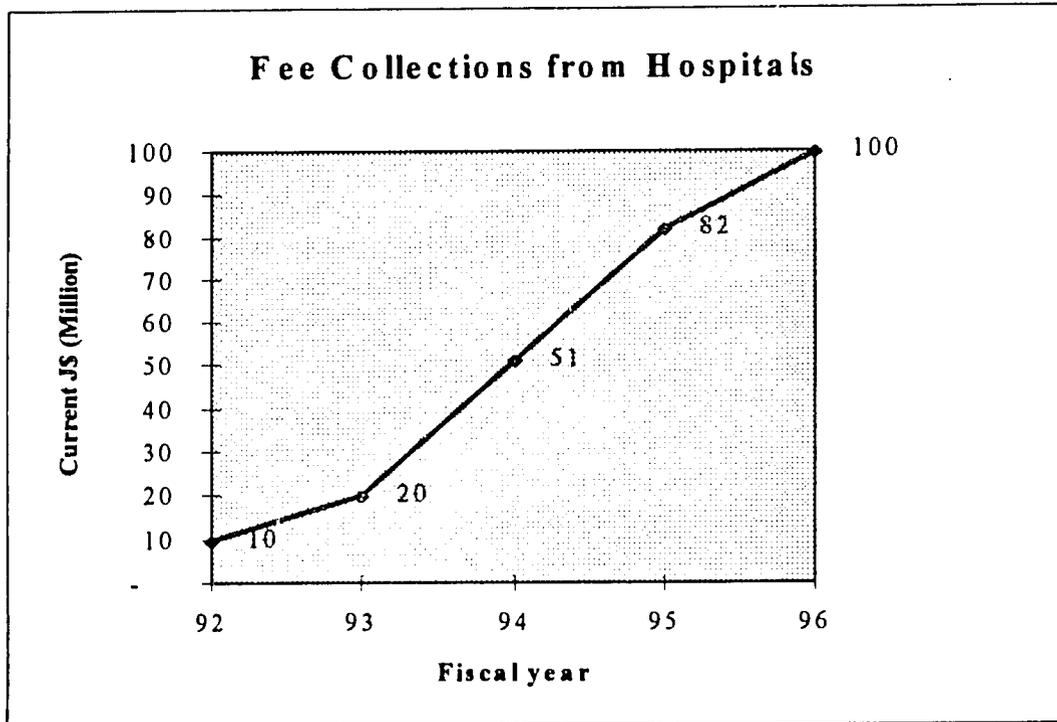


Figure 2

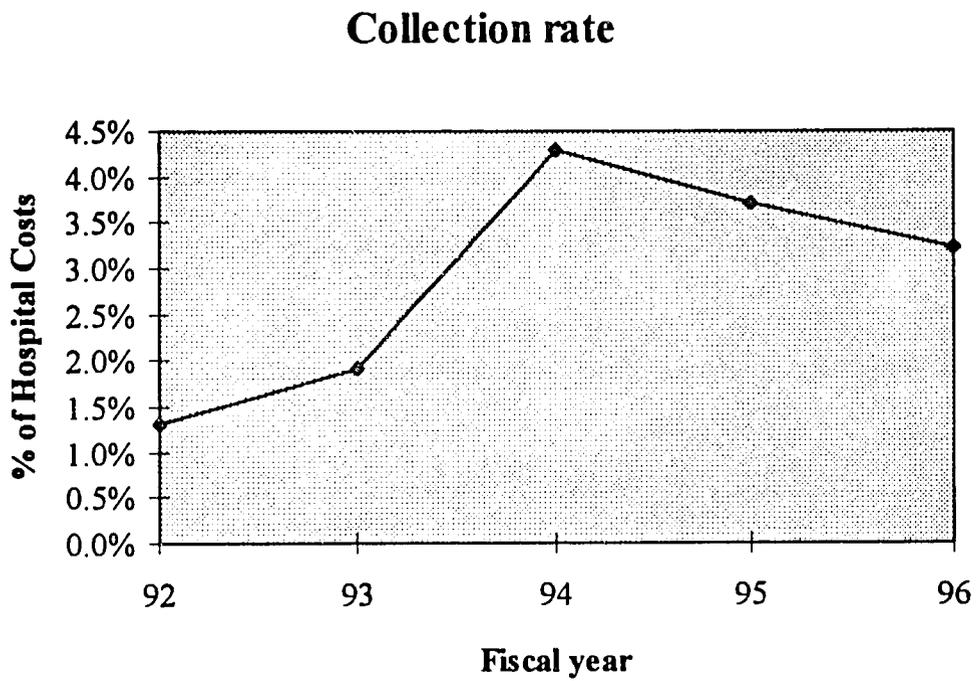


Figure 3

5 IMPACT ON PATIENT SATISFACTION³

5.1 Objectives

As the Ministry of Health has not been conducting *routine* surveys of patient satisfaction, it is not possible to estimate how changes in fee levels and associated managerial changes have affected patient satisfaction over time. It was, however, possible to do a cross sectional study. It sought to determine how satisfaction varied among hospitals with different managerial arrangements. This work was organized around the Health Sector Initiative Project (HSIP), funded by the U.S. Agency for International Development, one of several projects designed to strengthen the functioning of hospitals in Jamaica.

The Health Sector Initiatives Project (HSIP), supported by the United States Agency for International Development (USAID) is aimed at improving the delivery of health services to the Jamaican people through the rationalization of the resources of the public health-care sector. Under this project, divestment of a number of previously government funded hospital services has taken place. Cost recovery has been pushed and a series of managerial improvements, under the auspices of a new management stratum in the hospitals, the Chief Executive Officer (CEOs), has also been attempted. The HSIP is a relatively new programme. It began in 1989, but the first CEOs were not recruited until 1992. CEOs have been one of the routes to managerial improvements, including treating patients more consciously as paying clients.

The Patient Satisfaction Survey measures the impact of the changes introduced by the HSIP on patients satisfaction levels. Because of the recency of the programme, it might very well be too early to properly assess the impact. Furthermore, intervening variables such as other Ministry of Health policies which govern the adequacy of resources available to the hospitals, or factors specific to the socio-economic environment in which the hospital operates may override the influence of the CEOs.

This survey thus serves three important purposes: First, it evaluates the impact to date of one selective HSIP input, stronger administrative officers for hospitals, in the context of other factors that affect patient satisfaction. Second, it assesses qualitatively the effect of training and other inputs provided by the HSIP project. Third, it serves as a benchmark for the evaluation of the effect of the programme on future conditions in the hospitals in general, and for determining whether CEO hospitals improve differentially compared to controls.

³ For a fuller discussion of material in this section, see: Shepard DS, Brown D, Ruddock-Kelly T. Patient satisfaction in Jamaican hospitals. Working paper prepared for the Latin America and the Caribbean Health and Nutrition Sustainability Project under contract no. LAC-0657-C-0051-00 with the U.S. Agency for International Development. Bethesda, MD: University Research Corporation, February 28, 1995.

5.2 Design

The surveys use a comparative design in which three groups of hospitals were compared. The first is a "strong administrator." This is a hospital administered by a person professionally trained in a year-long course in hospital administration. Sav-la-Mar, the only Jamaican hospital with this characteristic (administered until recently by Stephanie Reid), was included in the survey. (She would have been eligible to be a CEO in 1992 if she were not about to begin further professional training.) CEO hospitals are ones with Chief Executive Officers (CEOs), whose recruitment and hiring was supported by the HSIP. Control hospitals are ones without CEOs or their equivalents.

The 1994 survey was conducted in six hospitals across the country over the period May 29 to September 14. As mentioned, Savanna-La-Mar was the one strong administrator hospital. Three hospitals (Spanish Town, May Pen, and Mandeville) were CEO hospitals, while the other two (Port Antonio and Princess Margaret) were controls. To achieve balance among the hospitals, only secondary hospitals were included. Insofar as possible, the control hospitals were matched for size and sophistication with the CEO hospitals.

Originally, a survey of patients on private wards had been planned to be able to compare their satisfaction with those of patients on public wards, but this proved infeasible. Of the selected hospitals, only Sav-la-Mar had a private ward. During most of the time of the field work, however, there were no patients on this ward so a sample could not be obtained.

5.3 Expenditures for care

Table VI shows expenditures for hospital services by inpatients. Average expenditures overall include patients without a category of expenditures. With a mean of J\$ 476 (or about US \$16 at the prevailing rate of about J\$30 per US \$1 at the time of the survey), average charges for hospitalization are reasonable compared to per capita GNP of US \$1,340. Official charges are about 4 days of per capita GNP.⁴ Given the rarity of inpatient care, the charge for care is less than the average economic output lost during the average stay of 5.5 days. Also, the official charge is only about 14% of the estimated cost of J\$ 3366 for a stay (based on the 1993 average cost for comparable hospitals of J\$ 510, inflated by 20%).

Including private payments, the average overall expenditure of J\$ 740 (U.S. \$25) is 7 days per capita GNP.

While no more than 4.5% of inpatients reported any private charges, the mean for patients with such charges was high J\$5,889 for all private expenditures combined. Physicians have mentioned the custom of charging private fees for caring for private patients in public beds. Another question showed that 23.6% of patients expected to have their fees paid privately to doctors by themselves or insurers. This survey suggests that the practice of direct payments by patients is not

⁴ World Development Report 1994. Washington, DC: Oxford University Press, 1994.

very widespread in these secondary hospitals, though payments by insurers are more common. With an average payment of J\$4,590 for the patients who did make private payments, however the amounts are relatively high.

Charges for ambulatory patients (based on QUES19) average J\$117 (US \$4) per visit, an amount consistent with the established charges of J\$50 for registration and J\$50 for prescriptions, plus incidental charges.

Table VI. Expenditures by inpatients

Service	% of patients with expenditure	Mean (J\$) Patients with Expenditure	Overall	%
Hospital services	63.8%	746	476	64%
Private services				
Doctor	4.3%	4,590	191	
Pharmacy	4.5%	691	31	
Laboratory	1.0%	1,424	14	
Other	2.4%	1,313	29	
Subtotal		5,889	265	36%
TOTAL			741	100%

5.4 Major findings

Three variables emerged as particularly salient for comparing the three groups of hospitals: the degree of caring of nurses and doctors and the overall recommendation of the hospital. To clarify those variables results are presented graphically. In addition to the separate analyses for inpatients and ambulatory patients, analyses were also presented for all patients. These were calculated as a simple average of the two separate analyses.

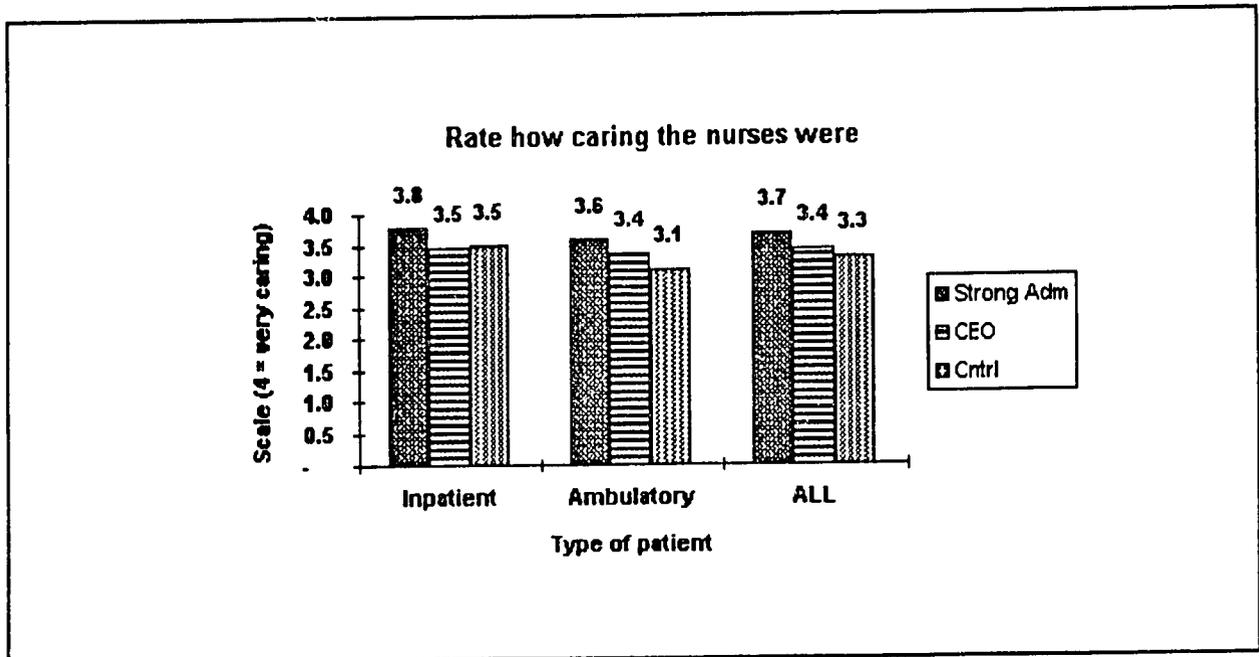


Figure 4 Rating of care from nurses

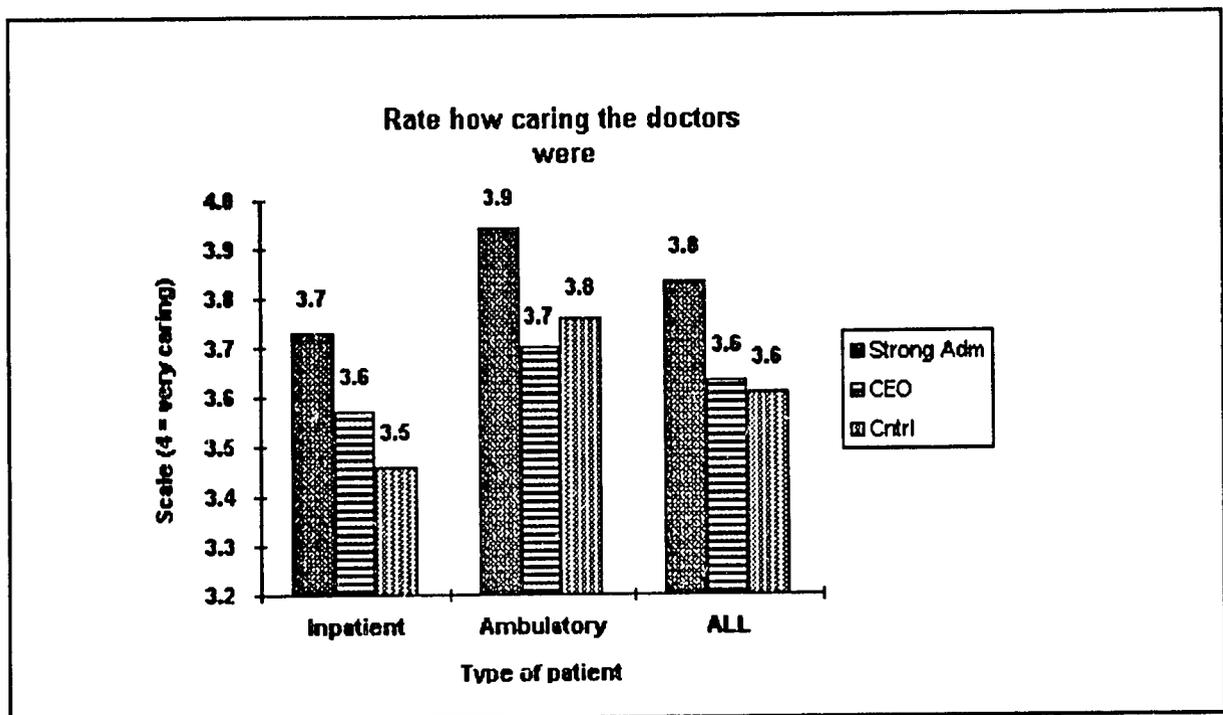


Figure 5 Rating of care from doctors

Figure 4 shows the rating of nurses. All of the means fell between 4 (very caring) and 3

(caring). For inpatients, where the nurses had more occasions to develop rapport with patients, ratings were higher than for ambulatory patients. The superiority of the strong administrator hospital applied to both groups of patients, however.

Figure 5 shows the rating of the doctors. As the question on doctors for ambulatory patients had been posed on a scale of 1 to 2, it has been transformed here to a scale of 1 to 4 to be commensurate with results for inpatients. Again, the strong administrator is better for each type of patient, and overall.

Figure 6 shows the summary measure, the overall rating of the hospitals. The pattern again favors the strong administrator hospital, with no consistent difference between the CEO and control hospitals.

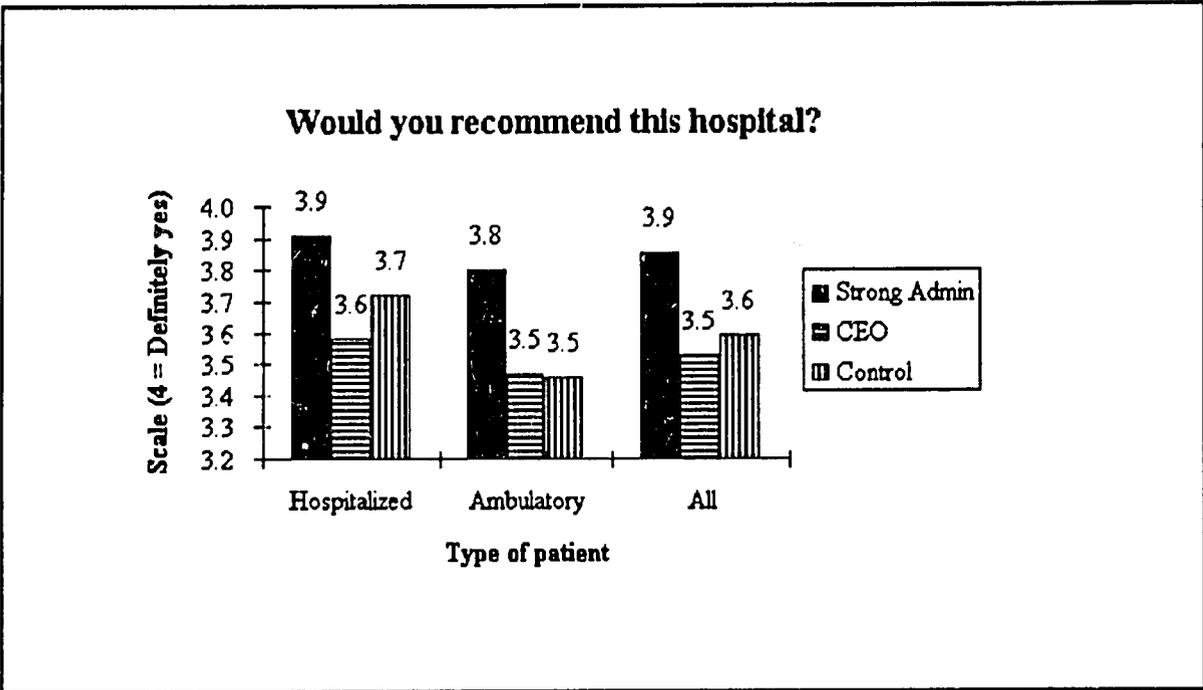


Figure 6. Overall rating of the hospital

6 IMPACT ON ACCESS⁵

6.1 Source of data

The Survey of Living Conditions (SLC) is a series of annual household surveys begun in 1989. Supported by the World Bank, the SLC is based on its Living Standards Measurement Survey. In Jamaica, the SLC has been designed and analyzed by the Planning Institute of Jamaica (PIOJ), which writes the questionnaires. The sample design, field work, and data management are performed by the Statistical Institute of Jamaica.

The 1989 SLC illustrates the procedures which have been used on all subsequent surveys. Clusters were randomly drawn from the Labor Force Survey sample pool, and households chosen from those clusters. After a pretest and a smaller survey earlier in the year, the main 1989 survey entered the field in November, 1989. After excluding 89 households which refused to respond to some or all questions, 3,861 households with usable data were analyzed. Of these, 1,074 came from the Kingston Metropolitan Area, 738 from other towns, and 2043 from the rural areas.

The 1989 survey contained 17 parts, and subsequent surveys were similar. One part enumerates each member of the sampled household. Another part determines the household's overall level of consumption, an important indicator in rating the economic level of the household. And finally, it asks several questions about health, use of health services, and expenditures for health services.

The core questions have been retained in each subsequent year, ensuring valuable continuity in the data. In subsequent years, however, some supplemental questions were added (e.g. a survey of facilities in 1989, and questions about hospital use over the past *year* in 1993). Around July of each year the survey was field tested again and implemented in the field about November. PIOJ has generally published a full report about a year and a half after each study entered the field.

Core questions on health are:

- Was any member of the household ill or injured during the last four weeks?
- If so, was care obtained?
- If care was obtained, at which level (i.e. ambulatory or hospital)
- In which sector was care obtained (public, private, or both)?
- How much was paid for care in each sector?

⁵ For a fuller discussion of material in this section, see: Shepard DS, Russell B. Access to health care in Jamaica: Impact of the Health Sector Initiatives Project. Working paper prepared for the Latin America and the Caribbean Health and Nutrition Sustainability Project under contract no. LAC-0657-C-0051-00 with the U.S. Agency for International Development. Bethesda, MD: University Research Corporation, February 28, 1995.

The full health section of the questionnaire is given in one of the source papers (Shepard et al. 1993). For questions on obtaining care and the source of care, only those respondents ill or injured in the last four weeks are eligible to answer the questions. Thus, the sample size for these items is considerably smaller than that for the overall survey. Nevertheless, the overall sample size is sufficiently large that even these items can be analyzed by important population characteristics, such as geography or economic status. Table VII gives the sample sizes for each year's survey.

Table VII. Sample sizes for SLC by year

	1989	1990	1991	1992	1993
Number of households	3,861	1,828	1,776	4,413	1,866
Average household size	4.26	3.92	3.92	3.92	3.92
Number of people	16,448	7,166	6,960	17,298	7,313
Percent of people ill/injured in					
4 weeks prior to survey	17.7%	18.3%	13.7%	10.6%	11.8%
Number of people ill or injured	2,911	1,311	954	1,825	861

In this analysis, monetary amounts were adjusted to constant 1993 prices based on the Consumer Price Index for all Jamaica, published in March 1994.⁶ This index differed slightly from one published in 1993⁷ due to some revisions. The overall CPI was considered the most appropriate adjustment for inflation so that increases in health expenditures could be compared to overall rises in the cost of living. While Jamaica does have a more focused component of the CPI, "health and personal services," it includes hair-do's, personal care items and other personal expenditures not particularly relevant to health care costs.

To compare economic policies among households in different economic levels, the SLC tabulates most items against per capita consumption. For this purpose, consumption is divided into quintiles. To improve statistical stability, we aggregated these quintiles in this report into two consumption groups. The "lower" group comprises the poorest two quintiles. The "upper" group is the other three quintiles, thus including both median and higher level respondents.

6.2 Results on access

Higher out-of-pocket payments. Figure 7 shows the amounts that Jamaicans who obtained health care over the past 4 weeks have paid for this care in both the public and private sectors from 1990 through 1993. The upper line in Figure 7 shows private sector payments per user; the lower line shows public sector payments per user. Out of pocket payments for health care changed in two offsetting ways over these three years. In the first one or two years of this period, both public and

⁶ Statistical review, March 1994. Kingston: Statistical Institute of Jamaica, 1994, p. 100.

⁷ Consumer Price Indexes, annual review, 1993. Kingston: Statistical Institute of Jamaica, 1994.

private sector payments declined. They reached their minima in 1991 in the private sector and in 1992 in the public sector. The real (inflation adjusted) public sector amounts fell by half (from \$36 in 1990 to \$17) from 1990 to 1992.⁸ This decline occurred because nominal prices barely changed, while the purchasing power of the Jamaican dollar tumbled by 60 percent over those two years. Similarly, real private sector expenditures fell by 37%, as the small nominal increases were far below the 45% decline in the Jamaican dollar's purchasing power.

In the last one or two years, real expenditures rose sharply in both the public and private sectors. In the private sector (primarily private doctors offices), real expenditures doubled over the two years from 1991 to 1993. In the public sector, the real expenditure per user increased five fold, from J\$ 17 to J\$80 from 1992 to 1993. These escalations more than offset the earlier reductions. As a result, by the end of this three year period, real out-of-pocket expenditures for health had risen by 26% in the private sector and by a striking 122% in the public sector from 1990 to 1993.

The public sector increase is due to a combination of higher public fees, more efficient collections, and a higher prevalence of practitioners receiving private fees. These private fees arise when a physician (often a surgeon) is paid a private fee for delivering private services to a patient in a public facility.⁹ Overall, expenditures on private care were about three times those on public care in 1993. With encouragement and support from international organizations (especially USAID, through the HSIP project, the World Bank, and the Inter-American Development Bank), the Government of Jamaica implemented its first fee increase in several years in 1992. It raised the fee for most ambulatory visits and prescriptions to J\$50 each at most public hospitals. To improve collection of official fees, the HSIP provided training and the hospitals received incentives. Fees collections were monitored monthly, hospitals could keep the proceeds (at least in the short run), and cashier's hours were extended, so that patients could not avoid payment by leaving the hospital after hours.

Finally, in the 1993 survey, payments by public patients to private providers for care in public facilities first became apparent in the SLC. As the site of care was a public facility, these payments were classified as occurring in public settings, even though the patient's payment to the provider was private. A 1994 hospital-based survey of inpatients in *secondary* hospitals found that 4.3% reported private payments to doctors.¹⁰ The average of these payments (J\$4,590) was six times the average public payment to the hospital itself (J\$746). Private payments to providers were probably higher at *tertiary* hospitals, which were covered in the SLC but not the hospital-based survey.

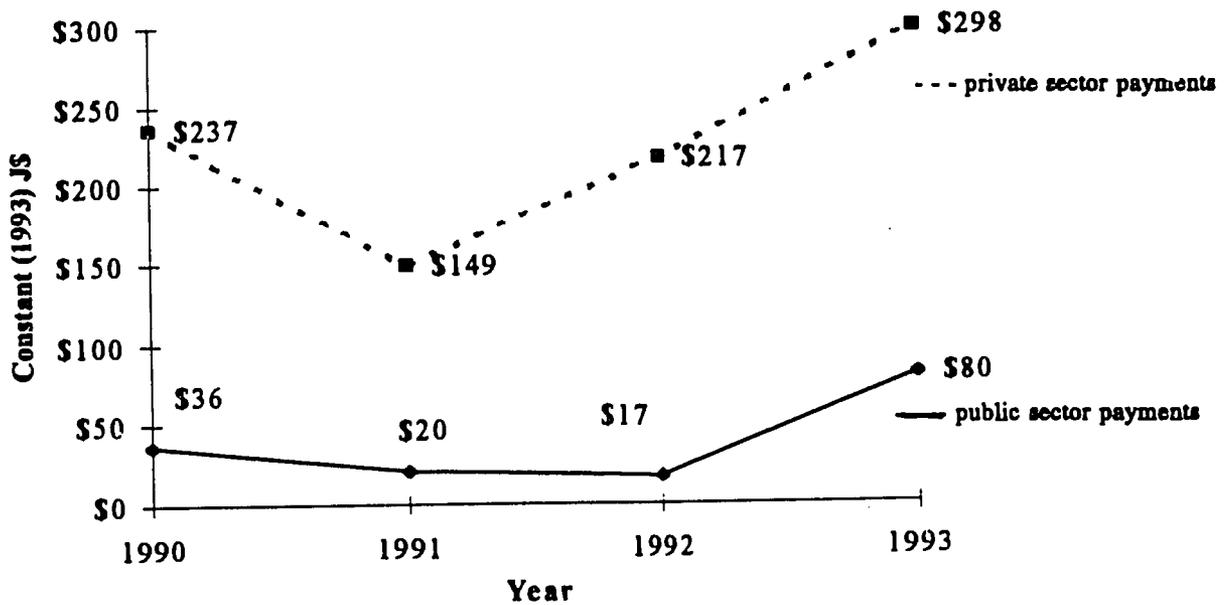
⁸ In 1992, the exchange rate was about J\$20 equals US \$1. In 1993, it was about J\$28 equals US \$1.

⁹ This practice is allowed provided the physician does not pressure the patient to pay for private services nor obtain special privileges from the hospital (such as preferential admission).

¹⁰ Shepard DS, Brown D, Ruddock-Kelly, T. Patient satisfaction in Jamaican hospitals. Prepared for the Latin America and the Caribbean Health Financing and Sustainability Project. Waltham, MA: Institute for Health Policy, Brandeis University, 1995.

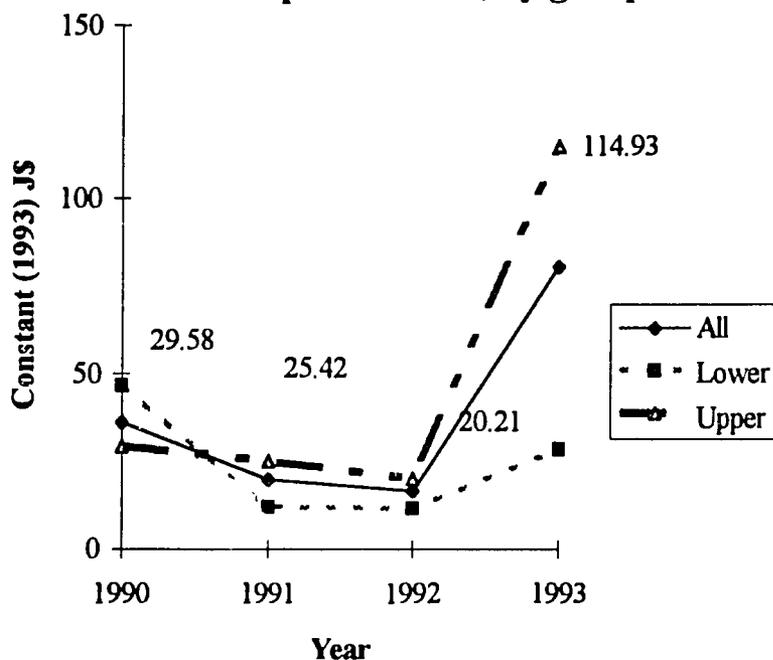
To examine public expenditures in more detail, expenditures for medical services were tabulated by the two consumption groups (see Figure 8). These results show that the lower economic group showed a modest increase in expenditures from 1992 to 1993. Nevertheless, their real expenditures remained less than their level in 1990, the earliest year for which these data are available. And, in each year except 1990, the lower economic (consumption) group spent less than the upper group. Thus, the combination of higher official fees and more private fees in public facilities seems to have been progressive: it affected upper income users more than those of lower income.

Figure 7. Mean cost for all visits in past 4 weeks



Compared to lower income patients, upper income patients were probably more likely to seek the services of private doctors in public facilities. Also, private doctors working in these facilities may have adjusted their fees according to their perceptions of their patients' ability to pay. While

Fig. 8. Mean cost for all visits in public sector in past 4 weeks, by group



reported data are too highly aggregated to confirm these speculations about the origin of the progressive rise in fees, the next variable, seeking care, will examine its effect.

Access maintained.

Critical questions for policy makers are whether the public health system has been able to maintain access to services and quality of care. While a related study showed that perceived quality was acceptable in Jamaican hospitals,¹¹ this present survey allows access to be examined. The first measure of access is the overall proportion of people who were ill or injured in the past 4 weeks and received medical care. Although responses include

services in both the public and private sectors, the public sector is considered the provider of last resort or the metaphorical "safety net." Thus a low rate of using medical services would indicate holes in the safety net. Figure 9 displays the time trend on this variable from 1989 through 1993 by three economic levels -- lower, upper, and overall (denoted by "all").

Figure 9 shows that there has been little systematic change in access to care. Access in the lower economic group has remained below that in the upper group. as expected. The difference in the rate of access between the upper and lower consumption groups has fluctuated considerably, however. It reached a low of only 3% in 1990 (40% less 37%) compared to a high of 17% (calculated as 57% minus 40%) in 1992.

These gaps in rates of seeking care are not associated with the relative expenditures in the public sector. The difference in expenditures between the upper and lower economic groups was small in 1992, but the gap in access was largest. From 1992 to 1993, the gap in expenditures grew sharply, but the gap in access declined. This erratic pattern suggests that perceived prices may be more important than actual prices in determining access. Although increases in public sector prices

¹¹ Shepard, Brown and Ruddock-Kelly, *op cit*.

were not implemented until the beginning of 1993 (as shown by the expenditure pattern in Figure 6), they were discussed in 1992. Despite policy to the contrary, patients of lower economic levels may have feared that they would be denied services in public facilities and refrained from using them.

As one study from Cameroon showed, increases in price could, in fact, increase utilization if the accompanying improvements in quality were sufficiently great.¹² Jamaica, of course, has a substantially better public health system than Cameroon. The above mentioned satisfaction survey found relatively high rates of client satisfaction, even in “control” hospitals which lacked chief executive officers. Thus, improvements in access would not have been expected. It is a credit to the overall confidence in the public health system, and perhaps to systems of exemptions for the poor, that access has been maintained.

Market share. A final indicator of impact is market share: the proportion of patients seeking care who use the public sector. This indicator can be expressed as either the proportion of “public only” clients, or the proportion of “any public” clients. The former excludes those patients (who average about 5 percent of users) who use both the public and private sectors within the past 28 days. Clients using only the public sector would seem to be the more appropriate indicator of quality. Cost-conscious patients would probably seek treatment first in the public sector. Despite the price increases, the public fees are modest compared to those in private practice. If they considered the public treatment adequate, they would not seek further care for the episode. If the public treatment were not considered adequate, then private care would be sought. Patients who lacked confidence in the public sector altogether would go directly to the private sector if they perceived if they could afford it.

To examine these patterns, Figure 10 shows the proportion of patients seeking care who used only the public sector by year. Overall, this proportion declined from 1989 to 1993 in both upper and lower economic groups. The decline may well reflect patients’ perceptions of quality, as budget constraints and managerial problems have led to drug shortages. One can calculate that the proportion of respondents using both public and private sector rose from an average of 1% in 1989 and 1990 to 7% in 1991 through 1993. Anecdotally, financially limited patients report that they first seek public care, but may seek private care if they do not obtain drugs. It is encouraging that this pattern seems to have been arrested in the last year. Despite the increase in prices in the public sector from 1992 to 1993, the public sector’s share of the market rose for the *lower* economic group (from 44% to 47%), who are most dependent on the public sector, and was virtually maintained in *upper* economic group (changing from 23% to 22%).

¹² Litvack JI, Bodart C. User fees plus quality equals improved access to health care: results of a field experiment in Cameroon. *Soc. Sci. Med.* 1993; 37:369-383.

Fig. 9. Seeking care, by consumption group

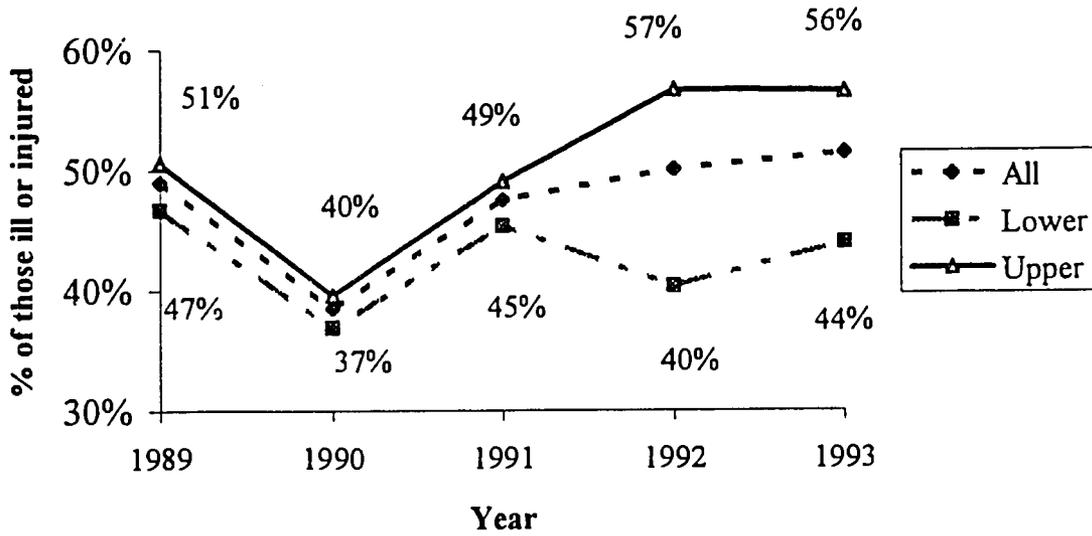


Fig. 10. Source of medical care by consumption group

