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**Government Policy and the Effectiveness  
of User Charges in Jamaican Hospitals**

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## I. INTRODUCTION

Jamaica has one of the healthiest populations in the developing world. Its infant mortality rate is 13 per 1000, life expectancy is 70 years and the total fertility has declined sharply in recent years to 3 percent. The country's health problems include the heart disease, accidents and neoplasms found in developed countries, and the high maternal mortality rate (1.1 per 100 live births) and malnutrition that are associated with developing countries (Swezy et al., 1987).

At the same time, Jamaica has been plagued by many of the economic and financial difficulties that are facing other developing countries. High debt, rising inflation, and restricted government budgets have also caused real reductions in the resources allocated to public health, including public health care services. The effects on health care have been sufficiently severe to prompt widespread concern both within the government and within the society at large due in large part to a perceived and actual decline in the quality of services (Ross Institute, 1985).

The government has devised a range of means for dealing with the crisis in public health care provision. The first of these was a revised user fee schedule and reinterpretation of the legal restrictions on remitting user fee revenue to the Consolidated Fund. Allowing facilities to keep some portion of their revenues was meant to both offer incentives to facilities to collect and improve performance, and to supplement hospital budgets, which have sustained significant real budget cuts since the early 1980s.

This paper analyzes the user fee system and its effects on public hospitals. The nature and magnitude of Jamaica's macroeconomic and financial difficulties and the effects on the public health sector are provided as

background to the analysis of the government's experience before and after the revision in user fee policy. As part of the analysis, the trends in hospital budgets, revenues, and expenditure of discretionary revenue are examined in depth, and the issue of equity is addressed.

## II. STRUCTURE OF PUBLIC HEALTH CARE

Jamaica's health care services are provided free or at nominal charge to all citizens, and no patient is denied care whether or not they can afford the assessed charges.

Jamaica's public health care system includes 24 hospitals, 372 primary health care clinics, environmental health, and centralized services in the Ministry of Health to serve these networks (National Laboratory, blood bank, Island Medical Stores, and National Maintenance Unit). Hospitals are divided into categories and regions. Categories are Type C (basic inpatient and outpatient care in medicine and maternal child health), Type B (includes specialist services in some areas), Type A (full range of secondary and tertiary care), and specialty and chronic care facilities. The full range of facilities and the level and kinds of services offered are summarized in Table 1.

Regional hospital divisions allow the largest hospital to carry the financial management responsibility for the facilities in their catchment area. Budgets, user fee revenue management, access to centralized services and other functions are accomplished through the regional hospital, which can be Type A, B or C.

Table 2 provides a list of the 23 public hospitals (excluding the quasi-public University of the West Indies Hospital) with information on the level

Table 1

Distribution, Number, Personnel, Catchment Area, and Service  
Provided at All Levels of the Public Health Care System

| Health Center/<br>Hospital<br>Level | Number          | Level of Personnel   | Location/<br>Immediate<br>Catchment<br>Area | Services Provided   |
|-------------------------------------|-----------------|--|---|---|
| Type I                              | 203             | Midwife, 2 CHW <sup>a</sup>  | 4,000-5,000<br>population                   | MCH home visits   |
| Type II                             | 89              | Public health nurse,<br>public health<br>inspector; RN, MD<br>and dentist visit    | 10,000-12,000<br>population                 | Curative, pre-<br>ventive and<br>promotive  |
| Type III                            | 78 <sup>b</sup> | MD, nurse practitioner<br>& dentist (who also<br>serve Type II centers)            | Parish center                               | Curative and pre-<br>ventive at more<br>sophisticated<br>level  |
| Type IV                             | b               | Combination of Type<br>III center and the<br>parish office                         | Parish center                               | Curative and pre-<br>ventive at more<br>sophisticated<br>level  |
| Type V                              | 2               | MD, some specialists,<br>nursing care, dentist                                     | Undefined                                   | Specialty out-<br>patient care & PHC  |
| Type C<br>Hospital                  | 11              | Basic, district<br>hospital with x-ray<br>& lab. Surgeon for<br>emergency; 2-3 MDs | Parish center                               | Inpatient and out-<br>patient care in<br>medicine & MCH   |
| Type B<br>Hospitals                 | 4               | MD specialists   | Urban centers                               | Inpatient and out-<br>patient, specialist<br>service at least<br>in surgery, inter-<br>nal medicine,<br>OB/GYN & pediatrics |
| Type A<br>Hospitals                 | 5 <sup>c</sup>  | MD specialists   | Kingston,<br>Montego Bay                    | Full range of<br>secondary and<br>tertiary care   |
| Other<br>Hospitals                  | 4 <sup>d</sup>  | MD specialists   | Kingston                                    | Chronic or<br>specialized care  |

Source: PHC Unit, MOH, 1986.

- a. CHW = community health workers.
- b. Includes Type III and IV together.
- c. Includes University of the West Indies Hospital.
- d. Maternity, Children's, Psychiatric, and Chest hospitals.

Table 2  
 Characteristics and Utilization of Public Hospitals, 1987-88<sup>a</sup>

| Type                         | Number of Beds | Number of Discharges | Casualty | Outpatient Attendance | Occ. Rate | ALOS |
|------------------------------|----------------|----------------------|----------|-----------------------|-----------|------|
| <u>Type A</u>                |                |                      |          |                       |           |      |
| Kingston Public              | 514            | 12,715               | 73,823   | 84,655                | 84        | 11.9 |
| Cornwall Regional            | 326            | 10,745               | 53,079   | 51,663                | 81        | 8.3  |
| <u>Type B</u>                |                |                      |          |                       |           |      |
| St. Ann's Bay                | 140            | 7,827                | 23,306   | 7,349                 | 95        | 4.8  |
| Sav-la-mar                   | 194            | 6,821                | 20,281   | 13,082                | 77        | 6.6  |
| Mandeville                   | 163            | 7,629                | 32,957   | 24,171                | 82        | 5.1  |
| Spanish Town                 | 252            | 12,721               | 44,216   | 23,528                | 102       | 6.6  |
| <u>Type C</u>                |                |                      |          |                       |           |      |
| Princess Margaret            | 164            | 5,862                | 22,820   | 5,106                 | 72        | 4.4  |
| Port Antonio                 | 125            | 3,724                | 11,518   | 6,357                 | 66        | 6.7  |
| Annotto Bay                  | 122            | 2,930                | 8,454    | 407                   | 57        | 7.7  |
| Port Maria                   | 94             | 2,541                | 8,343    | 5,696                 | 58        | 6.7  |
| Falmouth                     | 102            | 2,555                | 5,127    | 2,566                 | 56        | 8.2  |
| Noel Holmes                  | 55             | 2,286                | 5,508    | 189 <sup>b</sup>      | 85        | 6.7  |
| Black River                  | 115            | 4,675                | 16,689   | n.a. <sup>c</sup>     | 68        | 5.6  |
| Percy Junior                 | 122            | 5,054                | 11,793   | 6,127                 | 83        | 4.7  |
| May Pen                      | 70             | 3,177                | 15,909   | 1,529                 | 78        | 5.4  |
| Lionel Town                  | 60             | 1,937                | 23,583   | 10,195                | 66        | 7.1  |
| Linstead                     | 50             | 2,427                | 10,792   | 1,869                 | 63        | 4.8  |
| <u>Specialty</u>             |                |                      |          |                       |           |      |
| Victoria Jubilee (maternity) | 229            | 15,732               | 0        | 51,169                | 71        | 3.0  |
| National Chest               | 116            | 1,032                | 1,231    | 2,921                 | 86        | 26.0 |
| Bustamante (children's)      | 215            | 6,598                | 48,850   | 23,758                | 70        | 6.7  |
| Bellevue (psychiatric)       | 1,600          | 525                  | 0        | 4,988                 | n.a.      | n.a. |
| Hope Institute (hospice)     | 52             | 188                  | N/A      | N/A                   | 51        | 48.8 |
| Mona Rehabilitation          | 111            | n.a.                 | N/A      | N/A                   | n.a.      | n.a. |

Source: Hospital Statistics Reports, 1982-1988.

n.a. = not available  
 N/A = not applicable.

- a. Data are estimates
- b. Outpatient department but no clinic.
- c. Visits included in casualty.

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(Type), size, volume of inpatient, outpatient and casualty, and operating efficiency measures of occupancy and average length of stay (ALOS). Volume of patients varies widely with no apparent pattern among bed size, inpatients and outpatients. Occupancy rates are generally quite high, as would be expected in a largely free-care system. Spanish Town Hospital's 102 percent reflects the extremely high occupancy rate in maternity where two women to a bed is common. Average lengths of stay are high overall, and generally exceed the 6.3 ALOS in U.S. short stay hospitals (NCHS, 1988). Victoria Jubilee Hospital's 3.0 day for maternity is quite low by international standards since high risk pregnancies are more likely to deliver at that hospital than at other facilities, and these women are more likely to need additional hospital days.

### III. FINANCING PUBLIC HEALTH CARE: THE PROBLEM

The comprehensive nature of subsidized care and the expansion of primary health care in recent years, combined with severe macroeconomic difficulties, have taken a toll on the quality of health care. Negative macroeconomic growth over the past decade, average annual inflation of 16.6 percent and a rapidly climbing debt service prompted the government to curtail spending early in the decade under pressure from external institutions.

The MOH budget levels, trends, and share of the national budget are shown in Table 3. The health sector received modest increments in its nominal budget over the 1980s. Moreover, between 1982/83 and 1986/87 health's proportion of the recurrent budget increased, although its share of the capital budget almost disappeared.<sup>1</sup> These shifts are indicated in Table 3. Despite some nominal

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1. Jamaican fiscal years begin in April and end in March of the following year.

Table 3

Ministry of Health Expenditures and  
Relative Budget Allocations, 1981-87  
(J\$ millions)

| Budget Levels and<br>MOH Allocation              | 1981/<br>82 | 1982/<br>83 | 1983<br>84 | 1984/<br>85 | 1985/<br>86 | 1986/<br>87 |
|--|-------------|-------------|------------|-------------|-------------|-------------|
| <u>Government Budget</u>                         |             |             |            |             |             |             |
| Total  | 186.50      | 200.50      | 203.40     | 235.90      | 290.80      | n.a.        |
| GDP deflator                                     | 1.08        | 1.19        | 1.38       | 1.88        | 2.33        | n.a.        |
| Total (real) <sup>a</sup>                        | 172.38      | 168.71      | 147.83     | 125.79      | 124.80      | n.a.        |
| Per capita                                       | 84.53       | 89.20       | 90.70      | 102.50      | 125.80      | n.a.        |
| Per capita (real) <sup>a</sup>                   | 78.13       | 75.06       | 65.92      | 54.66       | 53.99       | n.a.        |
| <u>MOH Budget as Percent<br/>of Total Budget</u> |             |             |            |             |             |             |
| Total  |             | 7.50%       | 6.50%      | 6.30%       | 6.10%       | 6.50%       |
| Capital  |             | n.a.        | n.a.       | 1.40        | 0.70        | 2.00        |
| Recurrent  |             | n.a.        | n.a.       | 7.80        | 8.40        | 9.20        |

Source: Economic and Social Survey of Jamaica, 1986; Hospital Statistics Report, 1983.

a. 1980 is the base year (1980 GDP deflator = 100).

increments, the real value of total resources available for health was seriously eroded between 1981/82 and 1985/86 falling from J\$172 million to J\$125 million in 1980 Jamaican dollars. Moreover, the devaluation disproportionately raised the cost of imported medical supplies and pharmaceuticals since these are largely imported items, further reducing the spending power of nonlabor inputs.

While the real value of public health resources declined, the allocation of those resources also shifted. In particular, with the expansion of primary health care (PHC) between 1982/83 and 1986/87 an increasing proportion of the budget was allocated to PHC. The budget share allocated to primary health care rose from 18 percent to 24 percent, achieved at the expense of hospital and support services budgets. The former declined from 69 percent to 64 percent of the MOH budget, and support services, which include laboratory, medical stores, maintenance and health education, fell from 6 percent to 4 percent. These declines occurred on top of the eroded value of the currency and resulted in dramatic reductions in purchasing power (Lewis, 1988).

Personal emoluments claimed between 56 and 60 percent of the total Ministry of Health's budget in the 1980s, although hospital-specific ratios ranged between 62 and 80 percent. Supply allocations, which include drugs, medical supplies, nonmedical supplies and maintenance, remained virtually stagnant over the three years, 1983/84 to 1985/86, although in proportional and real terms supply allocations were reduced. Simultaneously, the percentage of discretionary budget resources devoted to pharmaceuticals rose sharply during the same period, suggesting a necessarily marked reduction in expenditure on supplies and maintenance (Lewis, 1988).

Thus, the financial position of the public health system has seriously deteriorated, primarily as a result of rapid increases in the cost of nonlabor

inputs and reduced real budgets in the sector. Exacerbating the financial strain was the expansion of the primary health care network, which coincided with the financial difficulties. The government's response has been to reduce all nonessential and fungible resources. Thus personnel costs have not declined while those for supplies and maintenance have experienced a sharp drop, with negative implications for the quality of care in public hospitals.

#### IV. COST RECOVERY POLICY

The financing of health care has emerged as a major concern of the government both because of the deterioration in the quality of health care and the inability to increase allocations to public programs due to the country's terms of agreement with the International Monetary Fund. The need to augment resources and improve the efficiency of public facilities has spawned a number of proposed reforms, some of which have already been implemented. Among the first was a revised fee schedule in 1984 and a reinterpretation of hospital revenues as contributions rather than collections. By law, collections are centrally controlled, whereas contributions are not.

User charges in Jamaican public hospitals have been in effect since the early 1960s, although fees were eliminated in 1972 and 1973. An updated fee schedule was introduced in 1984. Historically, fee collection was at best revenue neutral for facilities. All public revenues were placed in general tax receipt coffers (the Consolidated Fund) and hospital budgets were reduced by the amount collected (referred to as "appropriations in aid"). The policy reform measures in 1986 followed the revised fee schedule of 1984, and allowed facilities to claim for half of their collected revenues as an incentive for assessing and collecting charges from patients. The remaining 50 percent was

earmarked for "general hospital services" and its allocation left to the discretion of the Ministry of Health.

As part of the designation as contributions, any expenditure by facilities required Ministry of Health approval of clearly budgeted discrete projects. Revenues remained as appropriations-in-aid and, therefore, required submission of funds to the central government; however, as contributions the Ministry of Health has discretion in resource allocation. Thus, the departure from historical precedent consists of the ability of the Ministry of Health to reallocate revenues (contributions) back to hospitals for discrete expenditures with pre-approval of the Ministry of Health.

In order to retain central control over budgets, hospitals are re-allocated resources based on submitted budget proposals that allow release of funds deposited with the Ministry of Health. The central Ministry of Health reviews the budgets for compliance with legal and policy requirements and then approves expenditures. The remaining 50 percent of the revenue can be claimed through a similar procedure, since, as mentioned, this allocation falls under discretionary Ministry of Health expenditures on "general health services."

Table 4 summarizes the 1984 fee schedule for all public facilities, and indicates the allowable deviations from the standard schedule. In addition to prices for consultations, inpatient days, and ancillary and specialized services, the fee schedule stipulates that "patients covered by health/accident insurance policies shall pay the fees payable by private patients or the maximum payable under the terms of the policy, whichever is greater."

Charges in public facilities are modest in comparison with those charged by the private sector or even the University Hospital that receives grants from

Table 4  
Jamaica's Public Hospital Fee Schedule  
(Jamaican Dollars)

|   | Public Patients   | Private Patients <sup>a</sup>                                  |
|---|---|--|
| <b>Outpatient/Casualty</b>                        |   |  |
| Registration fee                                  | \$5.00/visit <sup>b</sup>                                     | \$5.00/visit   |
| <b>Inpatient</b>                                  |   |  |
| Admission - general                               | \$30.00/admission   | \$50.00/day <sup>c</sup>                                       |
| - intensive care unit                             | \$60.00/day   | \$60.00/day  |
| Maternity   | \$50.00 <sup>d</sup>  | \$150.00+<br>\$50.00/day <sup>e</sup>                          |
| Use of operating theater                          | \$20.00-\$120.00  | \$20.00-\$120.00   |
| <b>General</b>                                    |   |  |
| Laboratory tests:                                 |   |  |
| single <sup>f</sup>                               | \$10.00   | \$10.00 <sup>g</sup>   |
| series <sup>h</sup>                               | 50.00   | 50.00  |
| X-ray Services                                    |   |  |
| single <sup>f</sup>                               | 10.00   | 10.00  |
| series <sup>h</sup>                               | 20.00   | 20.00  |
| X-ray Therapy                                     | 25.00   | 25.00  |
| Physiotherapy<br>(up to 6 treatments)             | 25.00   | 25.00  |
| Blood transfusion                                 | 20.00   | 20.00  |
| ECG   | 20.00   | 20.00  |
| EEG   | 20.00   | 20.00  |
| BMR   | 20.00   | 20.00  |
| Appliances  | 25% of cost   | 50% of cost  |
| Ambulances  | \$15.00 for 10 mile<br>radius plus \$.50<br>@ additional mile | \$30.00 for 10 mile<br>radius plus \$1.00<br>@ additional mile |
| <b>Dental Services</b>                            |   |  |
| Extractions                                       | 10.00   | 10.00  |
| Prophylaxis & Filling                             | 20.00   | 20.00  |
| Dentures  | 50.00   | 50.00  |
| <b>International Vaccination<br/>Certificates</b> | 5.00  | 5.00   |

**Exemptions:**

- o All family planning-related visits
  - o All visits for immunizations
  - o Food Aid program registrants upon presentation of their green registration cards. (NB. Pregnant Food Aid Registrants will be charged delivery fees)
  - o Persons with high-risk pregnancies, as identified by the health team.
  - o Dental treatment for children already on the school dental program.
- a. Where a registered medical practitioner is attached to a rural hospital, he may be allowed to practice privately. In this case, he may also charge his private patients an additional fee—not exceeding \$600—as well as those fees specified below.
  - b. A \$5.00 registration fee is paid once per year by patients with chronic conditions (diabetics, asthmatics, etc.). A \$5.00 prescription fee is paid each visit. Patients at 6 rural maternity centers (Issac Barrant, St. Thomas, Buff Bay, Portland, Ulster Spring and Falmouth) pay \$2.00/visit.
  - c. Private non-Jamaican resident patients pay \$60.00/day as well as actual cost of drugs, appliances, and other services.
  - d. The exception is obstetrical treatment (not full term pregnancy), charge is \$30.00 per admission.
  - e. Private obstetrical patients at Victoria Jubilee Hospital pay only the \$50.00/day charge.
  - f. A single x-ray or laboratory test is \$5.00 and \$10.00 respectively at Bustamante Children's Hospital.
  - g. Individuals who are not patients at any hospital are charged \$20.00 for a single laboratory test.
  - h. A series of x-rays or laboratory tests is \$15.00 at Bustamante Children's Hospital.

the government of Jamaica but has the freedom to set charges.<sup>2</sup> Thus, fees do not come close to covering costs. What distinguishes these public charges from schedules in other countries, however, is the specific accommodation for private patients and the effort to collect from insurance companies.

Although charges are nominal, the new schedule and policy established a clear basis for allowing facilities to recover some portion of costs. The new fees and policy arrangement offer incentives to facilities to earn and collect charges, although they also provide incentives for intense use of services. The single charge for inpatients regardless of length of stay and the two tiered price for single and multiple laboratory and x-ray tests encourage patients to maximize their returns by extending the number of inpatient days or the number of tests. The differential between public and private charges are also quite modest and in some cases are identical, despite the fact that in some hospitals private patients have a single room, (more) private lavatory facilities, additional nursing services and other amenities. Moreover, from a cost recovery perspective, raising private patient costs would imply higher reimbursements from insurance companies since most private patients carry insurance.

Fees were set by the government according to perceived ability and willingness to pay, since costs of specific procedures or departments had not been measured, and no estimate of consumer demand was available. Moreover, since public facilities are used by a broad spectrum of Jamaican society, the government stipulated that patients covered by private insurance should reimburse public hospitals as they do private providers. Not collecting from

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2. University Hospital applies a sliding scale of fees based on income. See Lewis (1988) for a comparison of fees across public and private facilities.

patients effectively provides private insurance companies with a public subsidy.

Although the reform of the user fee system was aimed at raising the revenue of hospitals, the concern for equal access remained strong. The accommodation for the indigent exempted all Food Aid recipients from being assessed; however, the need to exempt those who could not pay due to variable circumstances or chronic illness was also established, with the hospital held accountable to ensure that no Jamaican was turned away due to income constraints.

Those officially exempted from paying fees currently include visits for family planning, immunizations, women with high-risk pregnancies, Food Aid recipients, children in uniform, and pensioners. Chronic illness patients pay a single annual registration fee. The effectiveness of the waiver system has not been assessed. In theory, it has appeal because it allows waivers based on individual cases; however, waivers may not be applied appropriately raising the possibility of restricting access to health care by the needy or oversubsidizing those who can pay. It is an area that deserves more attention.

#### V. DATA

Data on user fees were collected from Ministry of Health (MOH) files and those of each hospital region. Since the policy directive of late 1985 hospitals have made (quasi) monthly reports of earnings to the central Ministry and most facilities have submitted budget proposals for spending the revenues. Fee earnings prior to 1985 were obtained from hospital records. Hospitals were contacted either in person or by telephone to obtain the data. A specific, written request was sent to each regional hospital (where all hospital

financial data are collected and filed) through Ministry of Health channels; and, finally, follow up telephone calls and visits were made where necessary to ensure a complete inventory. Gaps in Ministry of Health reports after 1985 were supplemented by hospital records where possible.

Nine facilities were visited and the director and administrator interviewed regarding the accuracy of the MOH data, the operation of the user fee system, the significance of the revenue to hospital operation, and the impact of the new revenue on hospital operation. All public hospitals are included in the study with the exception of Bellevue Psychiatric Hospital.

#### VI. PUBLIC HOSPITAL REVENUES

Although fee levels and exemptions are specified, neither the method of collection nor the thoroughness of collection are dictated by the central government, and these can and do affect earnings. Each facility has the flexibility to determine the nature and extent of fee collection efforts and the manner in which charges are collected. As discussed, since 1984/85, facilities have had an incentive to collect fees in order to supplement their operating funds. The retention and allocation of revenues has given hospital managers enhanced control over resources, providing strong managerial incentives for collection.

Total revenues from user charges are shown in Table 5 for fiscal years 1983/84 through 1987/88 for all public hospitals. With the exception of 1987/88, most facilities have incomplete monthly reports. The reported figures are calculated from the reported months and from averages of the existing months that are used to estimate a twelve-month total. Where less than five months of data are available, this is indicated in the table.

Table 5

Total User Fee Revenues for Public Hospitals  
1983/84 - 1987/88<sup>a</sup>

| Hospital                   | Annual Fee Revenue |                         |                         |                         |                        |
|----------------------------|--------------------|-------------------------|-------------------------|-------------------------|------------------------|
|                            | 1983/84            | 1984/85                 | 1985/86                 | 1986/87                 | 1987/88                |
| <b>Type A</b>              |                    |                         |                         |                         |                        |
| Kingston Public            | n.a.               | n.a.                    | 1,248,620.03            | 1,193,281.60            | 1,534,426.20           |
| Cornwall Regional          | 119,980.43         | 787,468.78              | 699,525.68              | 766,008.16              | 792,522.42             |
| <b>Type B</b>              |                    |                         |                         |                         |                        |
| St. Ann's Bay              | n.a.               | 403,291.20              | 454,405.18              | 435,103.51              | 427,952.00             |
| Sav-La-Mar                 | n.a.               | 173,472.00 <sup>b</sup> | 128,102.74              | 117,030.86              | 197,083.00             |
| Mandeville                 | n.a.               | 509,271.60 <sup>b</sup> | n.a.                    | 502,062.48              | 545,212.30             |
| Spanish Town               | n.a.               | 333,790.54 <sup>b</sup> | 433,669.64              | 618,245.77              | 774,148.30             |
| <b>Type C</b>              |                    |                         |                         |                         |                        |
| Princess Margaret          | 22,666.01          | 59,794.80 <sup>b</sup>  | 132,893.14              | 142,745.33              | 161,153.14             |
| Port Antonio               | 8,806.09           | 40,978.65               | 96,888.33               | 114,178.15              | 137,412.30             |
| Port Maria                 | n.a.               | n.a.                    | 115,882.40 <sup>b</sup> | 105,292.80 <sup>b</sup> | n.a.                   |
| Falmouth                   | n.a.               | 77,929.39               | 88,886.13               | 104,467.64              | 92,747.52              |
| Noel Holmes                | n.a.               | 85,820.88               | 86,913.96               | 88,640.73               | 92,952.00              |
| Black River                | n.a.               | 124,788.00 <sup>b</sup> | 112,193.93              | 113,571.43              | 175,692.00             |
| May Pen                    | n.a.               | 114,838.90              | 150,532.91              | 133,992.54              | 131,916.00             |
| Lionel Town                | n.a.               | 94,359.84               | 99,565.33               | 92,753.33               | 87,951.00              |
| Linstead                   | n.a.               | 101,413.85              | 141,448.49              | 168,331.47              | 153,160.00             |
| Spaulding                  | n.a.               | n.a.                    | 211,150.00 <sup>b</sup> | 141,943.20              | 154,317.00             |
| Alexandria <sup>c</sup>    | n.a.               | 76,260.00               | 57,333.60               | 35,016.00               | 54,960.00 <sup>b</sup> |
| Buff Bay <sup>c</sup>      | n.a.               | 17,270.80               | 26,744.73               | 26,504.00               | 32,228.00              |
| Chapleton <sup>c</sup>     | n.a.               | n.a.                    | 171,656.00 <sup>b</sup> | n.a.                    | n.a.                   |
| Isaac Barrett <sup>c</sup> | 4,286.66           | n.a.                    | n.a.                    | n.a.                    | n.a.                   |
| Ulster Spring <sup>c</sup> | n.a.               | 11,821.33               | 17,712.00               | 11,920.80               | 10,200.00              |
| <b>Specialty</b>           |                    |                         |                         |                         |                        |
| National Chest             | n.a.               | 64,650.45 <sup>b</sup>  | 113,729.26              | 67,519.31               | 144,735.00             |
| Hope Institute             | n.a.               | 9,469.20 <sup>b</sup>   | 34,262.41               | 16,045.47               | 16,254.67              |
| <b>Total<sup>d</sup></b>   | <b>151,739.19</b>  | <b>3,086,690.21</b>     | <b>4,622,115.89</b>     | <b>4,994,654.58</b>     | <b>5,717,022.85</b>    |

Source: Data collected by The Urban Institute.

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- Data are based on hospitals' recorded monthly statements. Most hospitals have incomplete reporting and annual estimates were made by filling in missing months with an average for reported months. Those years for which four or fewer months of data are available are indicated. Reporting is most complete in 1987/88.
  - Based on less than 5 months of revenue data.
  - As of 1986/87 these facilities have been downgraded to polyclinics.
  - Total reflects only the sum for hospitals reporting revenue. Hence, the figures are an underestimate.

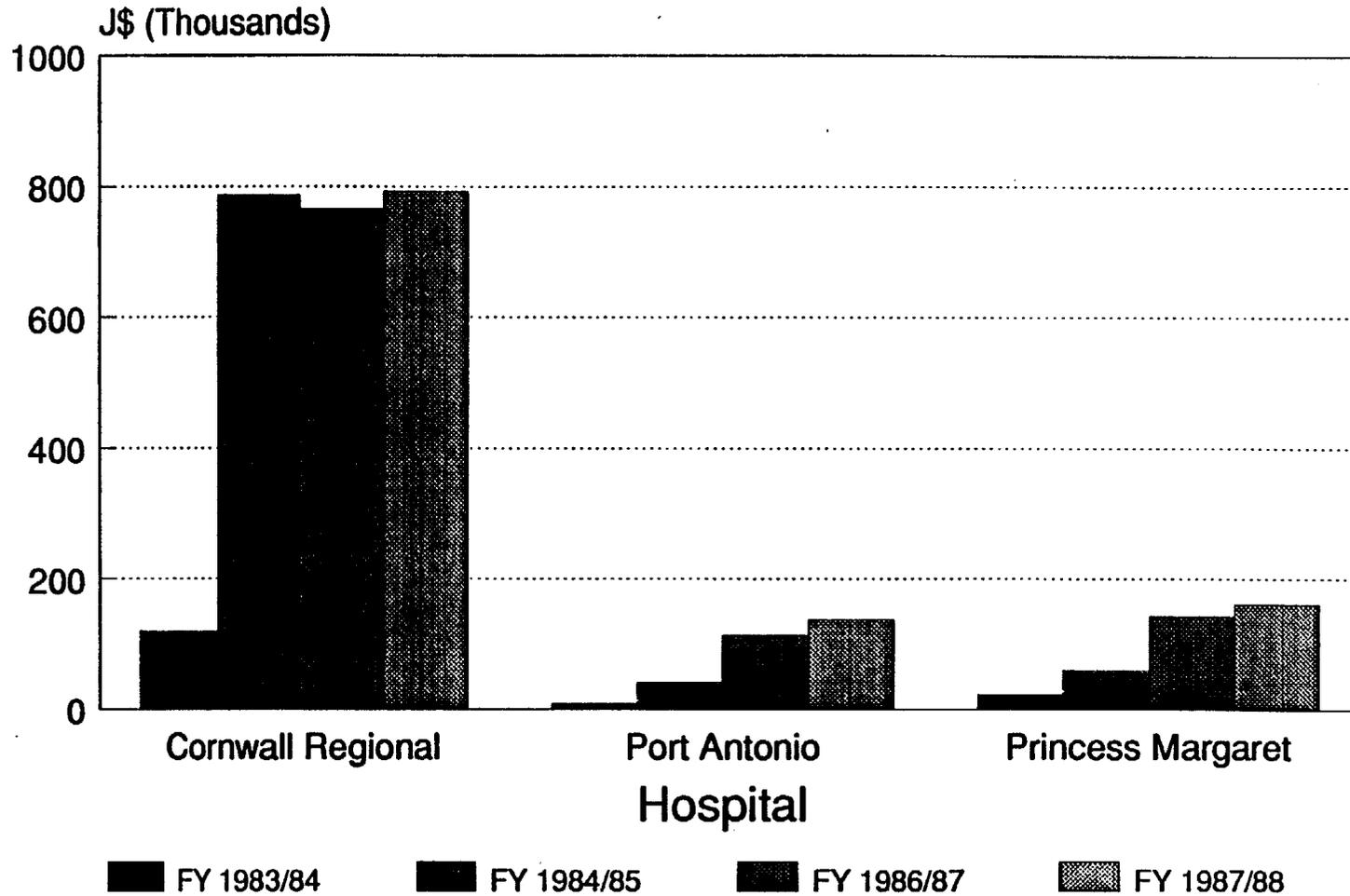
Overall revenues are rising and most facilities are gradually increasing their revenues from fees. Policy changes and proposed changes in the 1984/85 fiscal years had a strong effect on facility earnings. For the few facilities with data for 1983/84, the increase in earnings between 1983/84 and 1984/85 was dramatic. The shifts are shown in Figure 1 for the three hospitals with available data for 1983/84: Cornwall Regional, Port Antonio, and Princess Margaret. These facilities' revenues jumped by 561, 1,460 and 611 percent respectively between 1983/84 and 1987/88, with the largest increase occurring the first year.

Over the subsequent years the level of earnings at the public hospitals has fluctuated. This may be due to the timing of revenue claims. For example, claiming 1983/84 earnings after the fact would be a rational strategy for hospitals since these claims could then be retained. Although the request to modify the definitions and allocation of fee revenue was submitted in January of 1984, approval was not forthcoming until two years later. This sequence of events may explain the sharp rise in 1985/86 revenue and the subsequent decline in 1986/87 that again increased in 1987/88. If revenues from earlier years were lumped into 1985/86, then the earnings in the following year would be likely to decline.

The novelty of the policy and the necessity of putting in place a system for collecting and tracking revenues took time in some hospitals, and therefore the pace of revenue earnings differs across facilities. The uncertainty of the policy, particularly after the central government initially rescinded the agreement, added to some facilities' confusion and inaction. There is also the problem of ill-trained staff and managers who simply were unable to respond to the MOH's incentives. Together these factors suggest why the pattern of response in Table 5 is so inconsistent.

Figure 1

# Total Fee Revenues Over Time



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Chronic care facilities have particularly variable total earnings since charges are set on admittance and only ancillary services carry a charge; in addition, these hospitals have few patients. No daily charges are imposed, which places long term care facilities at a distinct disadvantage. Hence the earnings of National Chest and Hope Institute—the respiratory disease facility and the national hospice, respectively—fluctuate more than the other hospitals.

Adding to the difficulty of comparing trends are the private donations or community transfers that some facilities receive. These funds are facility specific, are not reported to the central government, do not come under user fee policies of the Ministry of Health, and are allocated by the hospital managers. Bustamante Children's Hospital, part of the Kingston Public Hospital (KPH) system, and KPH itself have fund drives sponsored by friends of the hospital. National Chest has received significant sums from grateful long term (private) patients, which further exacerbates the variability in earnings. St. Ann's Bay has received annual contributions for its private block from the local Chamber of Commerce since the hospital serves the tourist population of Ocho Rios. Thus although the most significant portion of earnings is from fees, some additional resources are obtained through private donations that augment the sums in Table 5 for some hospitals.

The trends in the proportion of the operating and total budget that fee revenue represents and in revenue earnings per patient also suggest increases overall with some variation across facilities. Nominal operating budgets for hospitals have increased somewhat between 1982/83 and 1986/87, as indicated in Table 6. In the aggregate, budgets have increased by 43.9 percent, with rises varying between 7.6 and 61 percent. This has occurred during a period when prices escalated almost 100 percent. The only modest increases in some

Table 6

Operating Budgets for Government Hospitals, by Region, 1982-83 through 1986-87  
(J\$ '000)

| Region        | 1982-83 | 1983-84 | 1984-85              | 1985-86 | 1986-87 | Percent<br>Change<br>1983/84<br>1986/87 |
|---------------|---------|---------|----------------------|---------|---------|---|
| All Regions   | 101,931 | 116,561 | 102,534 <sup>a</sup> | 139,696 | 167,733 | 43.9                                    |
| Kingston      | 29,867  | 32,949  | 32,034               | 40,819  | 53,067  | 61.1                                    |
| St. Thomas    | 2,791   | 3,885   | 4,013                | 4,092   | 4,627   | 19.1                                    |
| Port Antonio  | 3,372   | 3,894   | 3,846                | 3,997   | 4,171   | 7.1                                     |
| Port Maria    | 4,080   | 4,591   | 4,576                | 5,468   | 6,211   | 35.3                                    |
| St. Ann's Bay | 4,203   | 4,685   | 4,890                | 5,997   | 6,435   | 37.4                                    |
| Montego Bay   | 17,739  | 20,003  | 20,132               | 25,220  | 29,981  | 49.9                                    |
| Sav-la-mar    | 6,799   | 8,371   | 7,711                | 8,479   | 10,167  | 21.5                                    |
| Mandeville    | 5,858   | 7,049   | 7,081                | 8,069   | 9,940   | 41.0                                    |
| Spanish Town  | 11,162  | 13,043  | 13,709               | 16,969  | 19,067  | 46.2                                    |
| Liguanea      | 3,888   | 4,575   | 4,542                | 4,633   | 4,924   | 7.6                                     |
| Bellevue      | 12,171  | 13,546  | n.a.                 | 15,953  | 19,143  | 41.3                                    |

Source: Hospital Statistics Reports, 1983-1987.

a. Total excluded Bellevue Psychiatric Hospital's budget allocation.

facilities' budgets, the eroding value of the allocation for non-personnel expenditures, and the rise in personnel vacancies in response to declining real wages have resulted in reduced services, deterioration in the physical infrastructure, and efforts to raise funds from other sources. User fees have contributed to augmenting the budget, as have community and individual gifts.

Table 7 summarizes the proportion of the overall and operating budget that fee earnings represent, indicating the level of resources generated and the extent to which budgets have been supplemented in the first years under the new user fee policy. The figures are for regions rather than facilities because budgets are allocated on a regional basis. For those facilities with data for 1983/84, the growth has been rapid and the shift in the proportions dramatic, as shown in Figure 2 for the three regions (Montego Bay, St. Thomas, and Port Antonio).

Mandeville region earned over 27 percent of its operating budget in 1986/87, the largest proportion of any facility in that year. Liguanea, Port Maria and Sav-La-Mar lag behind the other hospitals in revenues relative to their operating budgets in all years. Liguanea represents two chronic care facilities under a fee system that relies on admittance fees and only charges once a year for chronic outpatient care. Hence, the facilities currently do and will continue to underperform when compared to other hospitals. Port Maria and Sav-La-Mar serve lower income regions; however, these hospitals also are considered to be relatively less well managed, which may contribute to either indifference or inability to generate additional operating revenues.

Table 7

Fee Revenues, by Hospital Region as Percentage of Budget<sup>a</sup>

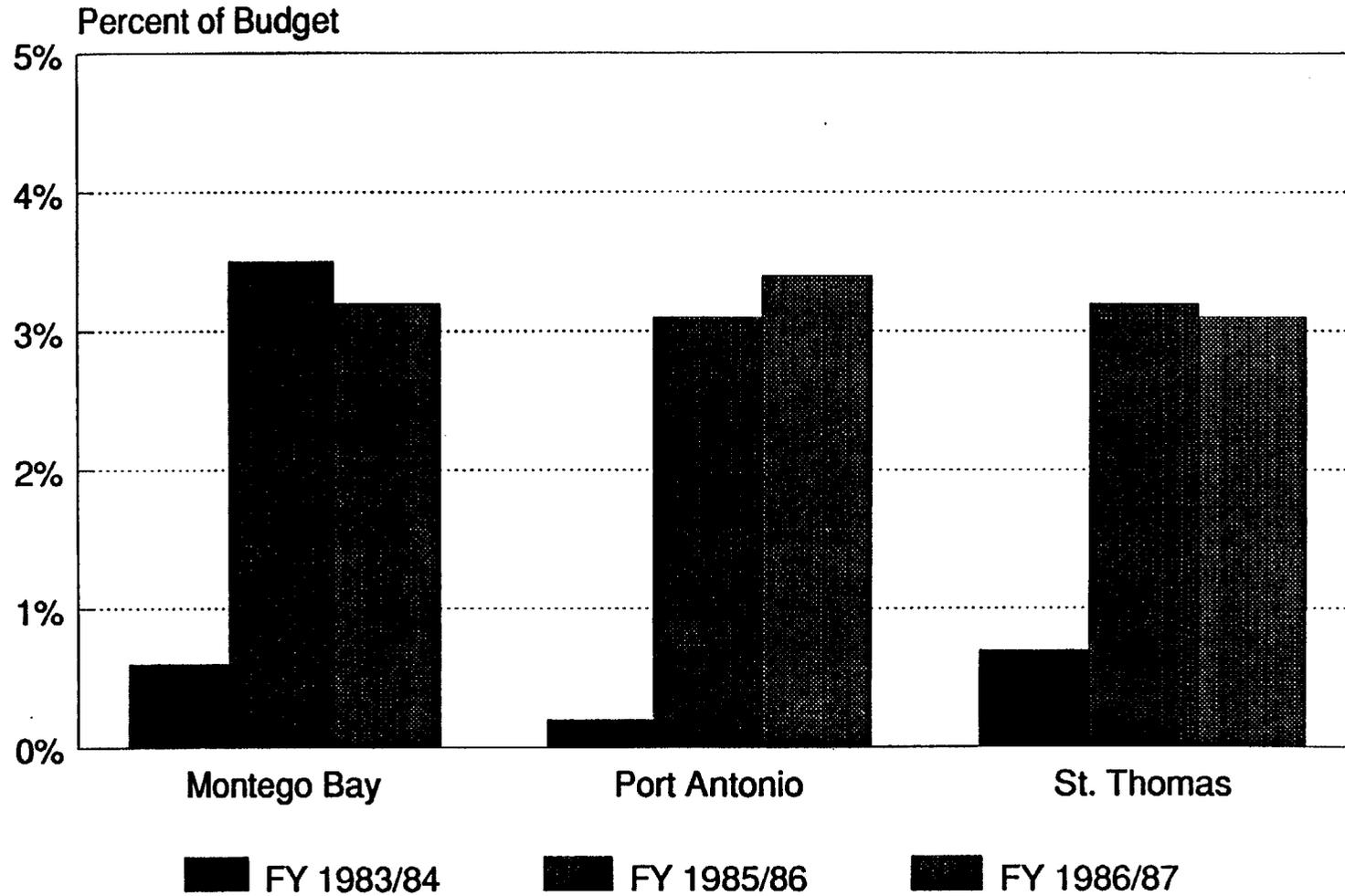
| Region        | Revenue as Percentage<br>of Total Budget |         |         | Revenue as Percentage<br>of Operating Budget |                  |         |         |
|---------------|--|---------|---------|--|------------------|---------|---------|
|               | 1983/84                                  | 1985/86 | 1986/87 | 1983/84 <sup>b</sup>                         | 1984/85          | 1985/86 | 1986/87 |
| Kingston      | n.a.                                     | 3.1     | 2.2     | 0.0  | n.a.             | 13.3    | 9.8     |
| Liguanea      | n.a.                                     | 3.2     | 1.7     | 0.0  | 1.6              | 10.8    | 5.7     |
| Mandeville    | n.a.                                     | 2.6     | 6.5     | 0.0  | 7.2 <sup>c</sup> | 11.1    | 27.4    |
| Montego Bay   | 0.6                                      | 3.5     | 3.2     | 1.9  | 4.7              | 11.2    | 10.3    |
| Port Antonio  | 0.2                                      | 3.1     | 3.4     | 1.2  | 1.5              | 16.7    | 18.2    |
| Port Maria    | n.a.                                     | 2.1     | 1.7     | 0.0  | n.a.             | 8.2     | 6.6     |
| Sav-La-Mar    | n.a.                                     | 2.8     | 2.3     | 0.0  | 5.9              | 9.0     | 7.2     |
| Spanish Town  | n.a.                                     | 5.9     | 5.3     | 0.0  | 4.7              | 20.4    | 18.5    |
| St. Ann's Bay | n.a.                                     | 8.5     | 7.3     | 0.0  | 9.8              | 28.1    | 24.1    |
| St. Thomas    | 0.7                                      | 3.2     | 3.1     | 3.6  | 1.5              | 16.9    | 16.0    |

Source: Hospital Statistics Reports 1983-1986; data collected by The Urban Institute.

- a. The proportion of the overall budget allocated to personal emoluments and operations for each hospital is based on actual proportions for 1985/86. These allocations are applied to each of the other years to estimate the relative importance of fee revenues.
- b. Revenues are only for the regional hospital in each region. Hence the revenue proportions are likely to be inflated.
- c. Estimate is based on incomplete revenue figures.

Figure 2

# Revenues as Percent of Operating Budget



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Revenues per patient allows comparisons adjusting for case load and is shown on a facility basis in Table 8.<sup>3</sup> Hospital revenue performance is more directly comparable on a per patient basis, and the figures suggest some considerable differences. In particular, the chronic care facilities generate considerable revenue on a per patient basis, and in some years are the most successful. In general there is an inverse relationship between the level and earnings of facilities, although KPH and Sav-La-Mar Hospital are exceptions. Cornwall Regional Hospital is the second highest absolute earner, but consistently the highest earner on a per patient basis of non-chronic care hospitals. KPH with the largest revenues performs relatively poorly and below all Type A and B facilities except Sav-La-Mar. Sav-La-Mar Hospital, however, performs below the other Type B facilities and near the bottom of hospitals at all levels.

Trends in per patient revenue vary in much the same manner as do the total revenues. The overall trend across all hospitals is shown in Figure 3 for 1984/85 to 1987/88. If data were available for 1983/84, the trend would show a stronger increase, based on evidence from the three facilities with earlier data. Because patient loads differ across facilities and patient numbers are generally declining, per capita earnings growth deviates somewhat from those presented in Table 5. The rate of increase will necessarily be higher in the aggregate on a per patient basis since the majority of facilities have been losing patients during the 1982-87 period while overall revenues have grown by 85 percent between 1984/85 and 1987/88.

Lack of hospital-specific budget data may mask the success of various hospitals' approaches to fee collection. For instance both Cornwall Regional

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3. Total patients are calculated using four outpatients as equivalent to one inpatient.

Table 8

User Fee Revenues per Patient<sup>a</sup> for Public Hospitals  
1983/84 - 1987/88 (Jamaican Dollars)

| Hospital                     | 1983/<br>1984 | 1984/<br>1985 | 1985/<br>1986 | 1986/<br>1987 | 1987/<br>1988 <sup>b</sup> | 1987<br>(cal yr) |
|------------------------------|---------------|---------------|---------------|---------------|----------------------------|------------------|
| <u>Type A</u>                |               |               |               |               |                            |                  |
| Kingston Public <sup>c</sup> | n.a.          | n.a.          | \$35.44       | \$32.89       | \$42.00                    | n.a.             |
| Cornwall Regional            | \$9.33        | \$55.26       | \$60.51       | \$70.84       | \$71.52                    | \$47.64          |
| <u>Type B</u>                |               |               |               |               |                            |                  |
| St. Ann's Bay                | n.a.          | \$56.19       | \$60.83       | \$57.87       | \$54.23                    | \$48.72          |
| Sav-la-Mar                   | n.a.          | \$25.50       | \$18.43       | \$17.91       | \$28.23                    | \$28.67          |
| Mandeville                   | n.a.          | \$72.13       | n.a.          | \$66.24       | \$69.64                    | \$67.06          |
| Spanish Town                 | n.a.          | \$29.70       | \$39.29       | \$50.82       | \$59.18                    | \$57.87          |
| <u>Type C</u>                |               |               |               |               |                            |                  |
| Princess Margaret            | \$4.93        | \$14.56       | \$30.34       | \$27.69       | \$28.55                    | \$27.69          |
| Port Antonio                 | \$2.45        | \$11.65       | \$27.46       | \$30.75       | \$36.37                    | \$35.79          |
| Port Maria                   | n.a.          | n.a.          | \$40.84       | \$43.15       | n.a.                       | n.a.             |
| Falmouth                     | n.a.          | \$27.13       | \$33.17       | \$39.66       | \$35.61                    | \$23.09          |
| Noel Holmes                  | n.a.          | \$28.93       | \$32.02       | \$36.65       | \$39.55                    | \$37.32          |
| Black River                  | n.a.          | \$26.75       | \$26.32       | \$25.18       | \$37.65                    | \$36.86          |
| May Pen                      | n.a.          | \$34.28       | \$53.55       | \$41.77       | \$41.30                    | \$40.52          |
| Lionel Town                  | n.a.          | \$38.34       | \$62.68       | \$177.55      | \$42.09                    | \$37.40          |
| Linstead                     | n.a.          | \$21.82       | \$36.80       | \$59.87       | \$61.43                    | \$56.64          |
| <u>Specialty<sup>c</sup></u> |               |               |               |               |                            |                  |
| National Chest               | n.a.          | \$42.79       | \$105.46      | \$66.90       | \$136.44                   | \$155.23         |
| Hope Institute               | n.a.          | \$46.99       | \$197.31      | \$75.53       | \$86.46                    | \$103.60         |

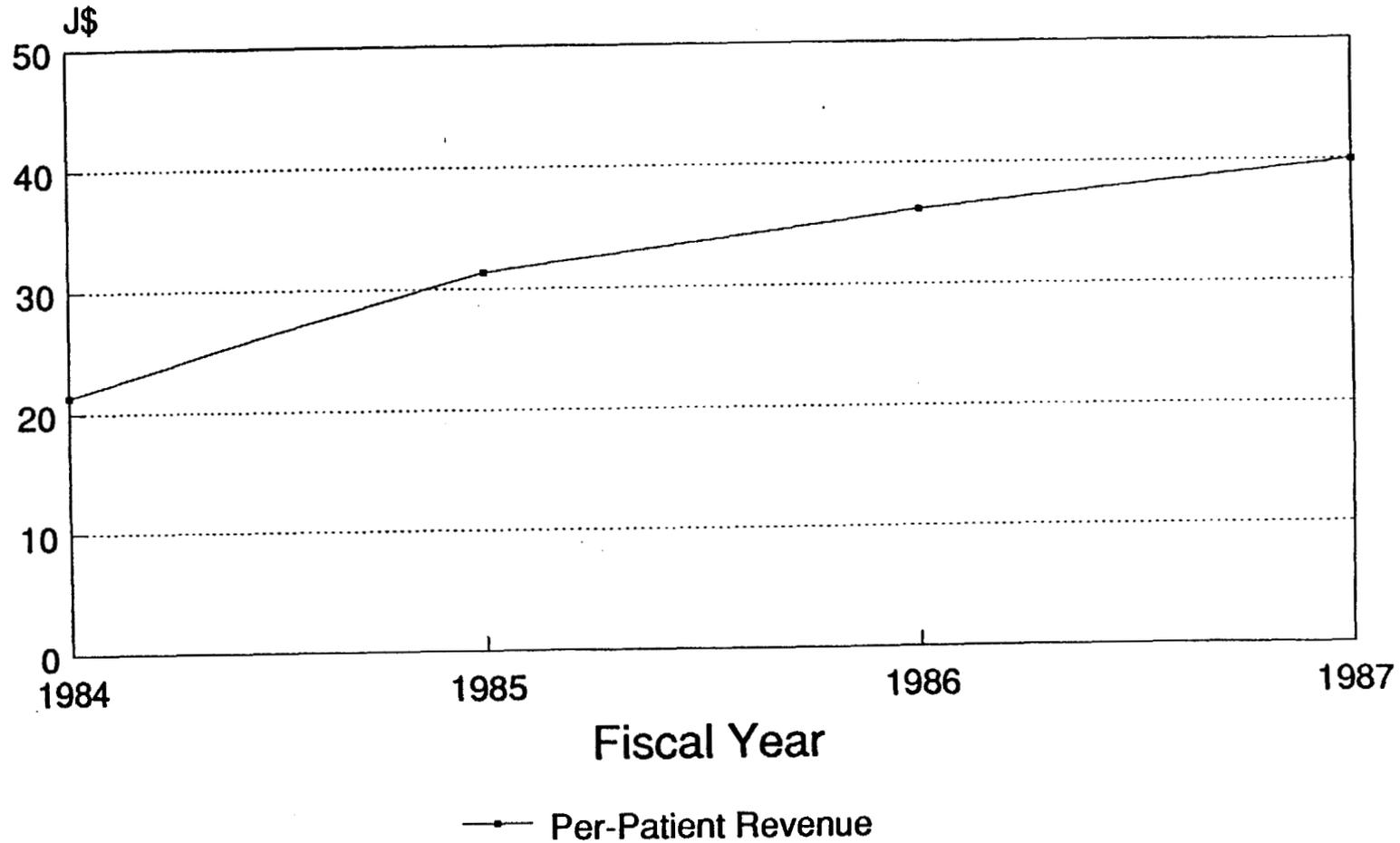
Source: Hospital Statistics Reports 1983-1986; data collected by The Urban Institute.

Note: Data on number of patients is only available on an annual basis. These figures apply an estimate of patients using 75 percent of the patients in the first year and 25 percent of the following year's patients.

- a. Total patients are calculated using four outpatients as equal to one inpatient.
- b. In 1987/88 revenues are for FY 1987/88 but patient volume is for calendar year 1987. The last column uses annual data, thereby overlapping 1986/87 figures.
- c. Bustamente Children's Hospital, Victoria Jubilee Maternity Hospital, Mona Rehabilitation and Kiwanis are included in Kingston Public figures.

Figure 3

# Average Per-Patient Revenue



Number of Hospitals with Missing Values:  
1984- 2, 1985- 1, 1986- 0, 1987- 1

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(Montego Bay Region) and Spanish Town Hospitals have made strong efforts to raise revenues through better management and fiscal control over fees, although the facilities within the region have not been as successful. Moreover, the case mix and severity of illness, which affect lengths of stay and the extent of diagnostic tests that are necessary, will also have an effect on costs. Since these are not included here, they cannot be assessed, but these factors should be kept in mind as they impinge on the ability to generate revenues.

Although the system has performed relatively well and has generated significant revenues compared to previous years, the potential for improvements is considerable. In particular, the inability of hospitals to respond sufficiently to the new incentives is largely a question of management. More specifically, it is the inability or unwillingness of hospital management to handle fee collection in a systematic fashion. Raising additional revenues can be achieved through improved design and oversight of the fee collection system as well as through adjustments in the fees themselves.

The single biggest management problem lies in the system of admissions and discharges, which in most facilities has historically been a casual process. Hospital admittances and discharges, for example, can occur anytime during a 24 hour period allowing patients to enter a ward without registering first or to leave without paying assessed charges because administrative staff are only available during normal working hours.

Jamaica's treat first, pay later policy, while important in emergency cases, hampers collection and leaves facilities vulnerable to nonpayment by some patients. Indeed, noncollection was cited as a major issue by a number of hospitals. At Kingston Public Hospital and National Chest, administrators estimate that only about half of the eligible patients pay their (full) bill; however, much of this is reportedly nonpayment of post-service billing because

patients were discharged without being requested to settle their accounts. Spanish Town and St. Ann's Bay Hospitals have hired assessment officers to tour the wards and private blocks to interview patients, determine who has insurance coverage, and check for compliance; however, these temporary hires do not handle funds, which is prohibited by law. Most facilities, however, rely on physician referral of private outpatients to registration and accounts, which is generally an ineffective arrangement.

Another area that has been neglected is that of insurance claims. Despite stipulations to the contrary (see Table 4 for the full fee schedule), insured patients are typically charged only the private patient fee as opposed to the public patient charge. Insurance claims are filed for private patients, but these are well below the maximum reimbursements companies make to private health providers. In addition, most Jamaican insurance companies have an annual ceiling on the amounts they will cover in a given year. Hence users have an incentive to husband these resources in case of serious illness. More importantly, however, because private insurance generally does not include catastrophic coverage, any long or serious illness is ultimately treated gratis in public hospitals (Lewis, 1988). In effect, public hospitals are not taking advantage of the reimbursements insurance companies already make, although they are subsidizing the care for many insured patients when the costs of an illness or health problem rise sharply.

The extent of cost recovery is seriously hampered by the fact that charges do not cover a significant fraction of the cost of care. In addition to the underclaiming from insurance companies, fees are also quite low. This is especially true for private patients. Reform issues are discussed below under Recommendations.

## VII. SOURCES OF REVENUE

Where hospitals earn revenue is important to both revising collection systems and, to some extent, prices. Data for 1985/86 for most public hospitals are presented in Table 9. Data for this year is the most complete, and in most cases the distribution of revenue sources is typical for the unreported three or four years for which there are data.

The source of facilities' revenues varies markedly due partly to the nature of each facilities' services as well as to their size. In addition, there are discrepancies in source definitions. On average, inpatient admissions earn the largest amounts; however, the four Spanish Town Region hospitals have counted maternity charges as admission fees. Hence Lionel Town, Linstead, May Pen and Spanish Town Hospitals have no maternity earnings, despite the fact that both May Pen and Spanish Town have a well over 100 percent occupancy rate in their maternity wards, and admissions are a disproportionate source of revenue.

Drugs are a consistently important source of revenue for most facilities, and their importance remains across time. The smaller, recently downgraded (rationalized) facilities, Alexandria, Buff Bay, Spauldings and Ulster Spring Hospitals, rely most heavily on drug charges for their revenue, followed by maternity fees. Type A hospitals are least reliant on maternity, and benefit most from admission fees. The "other" category most commonly includes morgue, dental, physiotherapy, and operating theater revenues. St. Ann's Bay, Alexandria, and National Chest Hospitals, however, have the largest allocations to "other," reflecting their heavy reliance on private patients, which account

Table 9

## Sources of Hospital Revenues, 1985-86

| Hospital                            | Estimated<br>Total<br>Revenue | %<br>Admission | % Out-<br>patient<br>Registr. | %<br>X-Ray  | %<br>Lab    | %<br>Maternity | %<br>Drugs   | %<br>Other   |
|-------------------------------------|-------------------------------|----------------|-------------------------------|-------------|-------------|----------------|--------------|--------------|
| <b>Type A</b>                       |                               |                |                               |             |             |                |              |              |
| Cornwall Regional                   | \$ 699,526                    | 23.2%          | 19.1%                         | 12.2%       | 8.1%        | 14.9%          | 14.9%        | 7.6%         |
| <b>Type B</b>                       |                               |                |                               |             |             |                |              |              |
| St. Ann's Bay                       | 454,405                       | 17.1           | 10.1                          | 9.2         | 6.2         | 13.2           | 16.3         | 27.9         |
| Sav-la-Mar                          | 128,103                       | 16.1           | 6.2                           | 8.2         | 1.4         | 36.2           | 12.1         | 19.7         |
| Mandeville <sup>a</sup>             | 209,193                       | 21.4           | 13.1                          | 8.7         | 11.1        | 17.5           | 14.1         | 16.3         |
| Spanish Town                        | 433,670                       | 46.8           | 10.2                          | 8.5         | 8.5         | 0.0            | 21.2         | 4.8          |
| <b>Type C</b>                       |                               |                |                               |             |             |                |              |              |
| Princess Margaret                   | 132,893                       | 13.6           | 3.8                           | 10.0        | 11.8        | 34.2           | 16.6         | 10.0         |
| Port Antonio                        | 96,888                        | 6.5            | 3.8                           | 9.0         | 10.0        | 29.1           | 27.8         | 13.8         |
| Port Maria <sup>b</sup>             | 115,880                       | 11.4           | 18.7                          | 1.3         | 5.2         | 29.7           | 25.0         | 8.7          |
| Falmouth                            | 88,813                        | 16.1           | 8.1                           | 15.0        | 8.5         | 24.5           | 11.1         | 16.5         |
| Noel Holmes                         | 86,914                        | 14.8           | 4.7                           | 13.9        | 6.0         | 35.7           | 6.6          | 18.3         |
| Black River                         | 112,194                       | 13.9           | 18.6                          | 0.0         | 2.3         | 31.8           | 19.3         | 14.1         |
| May Pen                             | 150,533                       | 33.9           | 9.0                           | 20.5        | 6.7         | 0.0            | 29.5         | 0.3          |
| Lionel Town                         | 99,565                        | 45.3           | 27.0                          | 0.0         | 1.8         | 0.0            | 24.0         | 2.0          |
| Linstead                            | 141,448                       | 48.7           | 9.1                           | 15.7        | 0.0         | 0.0            | 26.4         | 0.1          |
| Alexandria                          | 57,334                        | 1.8            | 15.9                          | 0.0         | 0.0         | 25.1           | 30.3         | 26.9         |
| Buff Bay                            | 26,745                        | 7.4            | 16.3                          | 0.8         | 0.1         | 33.6           | 30.7         | 11.1         |
| Chapleton <sup>b</sup>              | 171,736                       | 58.4           | 9.2                           | 0.0         | 0.0         | 14.4           | 11.9         | 6.1          |
| Spaulding <sup>b</sup>              | 211,150                       | 5.7            | 2.7                           | 3.8         | 7.2         | 14.6           | 57.2         | 8.8          |
| Ulster Spring                       | 17,712                        | 7.5            | 16.6                          | 0.0         | 0.0         | 32.4           | 38.3         | 5.2          |
| <b>Specialty</b>                    |                               |                |                               |             |             |                |              |              |
| National Chest                      | 113,729                       | 5.8            | 1.4                           | 8.5         | 1.1         | 0.0            | 14.5         | 68.7         |
| Hope Institute                      | 34,262                        | 100.0          | 0.0                           | 0.0         | 0.0         | 0.0            | 0.0          | 0.0          |
| <b>Maternity Centers</b>            |                               |                |                               |             |             |                |              |              |
| Newell                              | 9,998                         | 0.0            | 0.0                           | 0.0         | 0.0         | 100.0          | 0.0          | 0.0          |
| Fair Prospect <sup>c</sup>          | 2,280                         | 0.0            | 0.0                           | 0.0         | 0.0         | 100.0          | 0.0          | 0.0          |
| <b>Weighted Average<sup>d</sup></b> | <b>\$3,385,778</b>            | <b>25.6%</b>   | <b>11.4%</b>                  | <b>8.7%</b> | <b>5.9%</b> | <b>14.9%</b>   | <b>20.6%</b> | <b>12.9%</b> |

Source: Data collected by The Urban Institute from MOH files.

- a. Data are for 1986/87.  
 b. Based on three months of data.  
 c. Based on a single month of data.  
 d. This total excludes facilities that have not reported revenue by source, such as KPH, the highest earning entity.

for 12.7, 21.2, and 65.0 percent of each hospital's revenue, respectively.<sup>4</sup> All three hospitals have private wings with upgraded services. St. Ann's Bay Hospital also has an augmented fee schedule of J\$100 per day for Jamaicans and J\$200 per day for tourists.

X-ray and laboratory services generally are not important sources of income. This is partly due to the difficulty of tracking and charging patients for these services. Moreover, some facilities (National Chest and Spanish Town Hospitals) do not charge inpatients for ancillary services as a matter of course. Laboratory and x-ray charges in private hospitals are a major source of income in private hospitals in the U.S. and Jamaica (Lewis, 1988), and could become more important if appropriate charges were in place.

Cornwall Regional Hospital has the most even distribution of revenue sources. It also has a strong management team and established operating systems for assessing and collecting fees. Patients must present receipts to the ward nurse, at the pharmacy and at x-ray, and whether or not the patient has made their payment is entered into their medical record. Cornwall Regional Hospital's earnings are high and its per patient revenue is the highest among all facilities, which may be due to the systematic approach of hospital management and consistent collection.

These patterns suggest that strengthened leadership and financial management are associated with earnings levels. Moreover, private wings should be considered for other public hospitals, although additional information is needed on the elements that result in establishing and operating successful private blocks. The cost of these augmented services may result in a net loss,

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4. The proportion National Chest Hospital earned from their private wing in 1985/86 exceeds the average proportion in other years by at least a factor of two. The 65 percent probably reflects charitable donations from private patients.

despite the positive impressions suggested by the information in Table 8. Secondly, improved management and oversight of fee collection as well as an organized system for ensuring payment appear to be essential to raising overall revenue.

#### VIII. ALLOCATION OF FEE REVENUE

Expenditure of revenue lags behind earnings because of the necessity of depositing to and claiming earnings from the Ministry of Health. Some regions claim monthly (Montego Bay), while others wait until the end of the fiscal year to claim all earnings (Spanish Town); still others have adopted a random claim process. The sooner claims are submitted, the higher the annual expenditure, especially since this is a relatively new arrangement. Given the differences in levels and the fact that the timing of claims is so different across facilities, it is more useful to examine the percentage allocations across major expenditure categories. Expenditure of hospitals' fee revenues suggests the importance of charges to public hospital operation and more importantly to the quality of service.

The level and allocations of revenue for 1986/87 are shown in Table 10 for all hospitals. The bulk of these funds are allocated to maintenance, which encompasses repairing buildings, plumbing, furniture (e.g., chairs, beds, mattresses) and equipment, painting, wiring, and improved security; and supplies, which includes purchases of sheets, gloves, x-ray film, reagents, uniforms, and so forth. These purchases are viewed as emergency expenditures by the hospital managers who have been unable to undertake the most basic

Table 10

Allocation of Revenue Expenditures, FY 1986/87  
(Jamaican Dollars)

|                              | Estimated Annual<br>Expenditure<br>1986/87 <sup>a</sup> | Percent Allocation of Expenditures, 1986/87 |             |                  |             |            |            |
|------------------------------|---|---|-------------|------------------|-------------|------------|------------|
|                              |   | Drugs                                       | Supplies    | Mainte-<br>nance | Equipment   | Salary     | Misc.      |
| <b>Type A</b>                |   |   |             |                  |             |            |            |
| Kingston Public <sup>b</sup> | 159,795   | 0.0%  | 28.8%       | 68.5%            | 2.7%        | 0.0%       | 0.0%       |
| Cornwall Regional            | 382,744   | 0.0   | 7.6         | 88.9             | 2.2         | 0.0        | 1.2        |
| Subtotal <sup>c</sup>        | 542,539   | 0.0   | 13.8        | 82.9             | 2.3         | 0.0        | 0.8        |
| <b>Type B</b>                |   |   |             |                  |             |            |            |
| St. Ann's Bay                | 375,601   | 27.2  | 5.7         | 41.5             | 4.9         | 22.4       | 0.0        |
| Sav-la-Mar                   | 60,511  | 0.0   | 0.8         | 95.9             | 3.0         | 0.0        | 0.3        |
| Mandeville                   | 248,047   | 5.2   | 1.6         | 56.4             | 35.4        | 0.0        | 1.3        |
| Spanish Town <sup>d</sup>    | 484,622   | 0.0   | 14.1        | 17.8             | 68.1        | 0.0        | 0.0        |
| Subtotal <sup>c</sup>        | 1,168,781   | 9.8   | 8.1         | 37.7             | 37.5        | 7.2        | 0.3        |
| <b>Type C</b>                |   |   |             |                  |             |            |            |
| Princess Margaret            | 75,323  | 0.0   | 1.2         | 98.8             | 0.0         | 0.0        | 0.0        |
| Port Antonio                 | 57,418  | 0.0   | 0.0         | 99.6             | 0.4         | 0.0        | 0.0        |
| Port Maria <sup>d</sup>      | 57,333  | 0.0   | 0.0         | 93.0             | 7.0         | 0.0        | 0.0        |
| Falmouth                     | 51,127  | 0.0   | 0.0         | 94.9             | 5.1         | 0.0        | 0.0        |
| Noel Holmes                  | 41,801  | 0.0   | 0.0         | 100.0            | 0.0         | 0.0        | 0.0        |
| Black River                  | 110,721   | 0.0   | 5.4         | 93.3             | 0.0         | 0.0        | 1.3        |
| Spauldings                   | 59,277  | 7.4   | 18.4        | 72.8             | 0.0         | 0.0        | 1.4        |
| Subtotal <sup>c</sup>        | 453,000   | 1.0   | 3.9         | 93.1             | 1.5         | 0.0        | 0.5        |
| <b>Specialty</b>             |   |   |             |                  |             |            |            |
| Victoria Jubilee             | 111,267   | 0.0   | 41.9        | 30.0             | 28.1        | 0.0        | 0.0        |
| National Chest <sup>e</sup>  | 61,030  | 0.0   | 20.2        | 79.8             | 0.0         | 0.0        | 0.0        |
| Bustamente                   | 109,477   | 0.0   | 21.9        | 77.2             | 0.0         | 0.0        | 0.9        |
| Subtotal <sup>c</sup>        | 281,774   | 5.2   | 10.3        | 59.1             | 21.5        | 3.7        | 0.5        |
| <b>All Hospitals</b>         | <b>2,446,094</b>  | <b>4.9</b>                                  | <b>11.0</b> | <b>60.4</b>      | <b>20.0</b> | <b>3.4</b> | <b>0.5</b> |

Source: Data collected by The Urban Institute from MOH files.

- a. Some hospitals have incomplete data for FY 1986/87. An average of the included months was used to produce a 12-month expenditure estimate.
- b. Subtotals are weighted averages of the facilities within facility type.
- c. Includes expenditures at Kiwanis and Mona Rehabilitation.
- d. Regional allocation.
- e. Includes expenditures of Hope Institute.

purchases in recent years.<sup>5</sup> The affordability of fundamental maintenance and purchase of supplies are currently tied to fee revenue, and this is likely to remain the case given economic circumstances. Overall, 60 percent of fee revenue goes for basic maintenance; in the Type A hospitals it is almost 83 percent, and reaches 93 percent in Type C hospitals.

Some hospitals are allocating revenues to establish private wings to attract insured and better off patients (e.g., Port Antonio Hospital), but the opportunity cost of this strategy is high given other demands, which partly explains the slow progress in this area. Equipment, supplies, drugs, and fee collection personnel ("salary" in Table 10) account for a smaller proportion of the expenditures.

Despite the relatively modest level of expenditure, on the margin, the additional revenues are key to continued operation of public health facilities. The investments these resources allow are critical to maintaining the most basic level of services. Moreover, the expenditures are instrumental in enhancing worker productivity because the environment is more appealing and the non-labor inputs are more likely to be available.

#### IX. MEANS TESTING

Reluctance to charge at public facilities is commonly based on a concern for equity and the need to subsidize care for the indigent. In other words, the fact that some segment of the population requires financial assistance to

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5. Serious examples of the extent of neglect are facilities' inability to repair buildings and equipment following accidents (e.g., fire, flooding), breakdown of basic infrastructure (e.g., water, heat, electricity), or vandalism, which hampers production and in some cases shuts down whole wings or units in the hospital.

obtain health care has translated into the full subsidization of health care for all citizens. User fees are not incompatible with government's desire to ensure access to health care regardless of patients' ability to pay. The Jamaican Ministry of Health's design of user charges directly addressed the need to ensure equal access to health services while generating resources to contribute to public hospital operation.<sup>6</sup>

Under the revised fee system, charges are waived for Food Aid (food stamp) recipients, pensioners, and children in uniform. In addition, individuals who indicate an inability to pay can be exempted from paying. This system is operating successfully in the Jamaican public hospitals.

Of relevance to the necessity and extent of waivers in Jamaican public hospitals is a recent study, which indicates that a large proportion of individuals seek care in the private sector (McFarlane and McFarlane, 1987). In 1987, the vast majority of ambulatory health care services were purchased outside the public health system. For example, the proportion of the population in eight parishes seeking care from a public clinic for their last illness ranged from only 8.6 to 19.8, and this excluded the affluent Kingston-St. Andrews parish. Thus there is an ability and willingness to pay for outpatient care to a considerable extent.

For inpatient care the data indicate an inability or less willingness to pay for private care. Indeed, private hospitals report a large proportion of insured hospitalized patients, suggesting the importance of insurance if government cannot cover the full cost of hospitalizations (Lewis, 1988). This pattern suggests that patients can contribute to cost recovery in public

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6. Evidence from the Dominican Republic (Lewis, 1987) and Honduras (Overholt, 1987) shows a similar two-tiered pattern where those who can pay are charged and the indigent have fees waived.

facilities but cannot afford the full cost of inpatient services. Data on the number or rationales for waivers are not collected by hospitals.

Estimates by hospital directors and assessment officers of the proportion of patients who pay fees range from less than half at National Chest Hospital (NCH) to 55 percent at Port Antonio Hospital to 65 percent at KPH and Cornwall Regional to 70-75 percent at Spanish Town Hospitals (outpatients only). Implicit waivers are also offered in some facilities (e.g., NCH) as the hospital does not charge inpatients for laboratory or x-ray services.

Discussions with hospital management and assessment officers suggest that the current criteria for waivers over-subsidizes, and that there is a greater ability to pay the modest charges among Food Aid recipients than is assumed by the government. For example, anecdotal evidence indicates that Food Aid recipients may be purchasing prenatal services on the private market only to then deliver their babies free of charge in public hospitals. An in-depth evaluation of this issue is warranted to improve the fairness and effectiveness of user fees.

Thus the Jamaican government's user fee system has been set up to accommodate the indigent and appears to be operating appropriately. The lack of hard data and of information on the current use and purchase of health care among various income groups, however, seriously hampers any assessment of the fairness and scope of the current means testing procedures. Stronger evidence on this issue could assist in redefining eligibility for waivers and for setting the maximum fees affordable at different income levels.

## X. OUTSTANDING ISSUES

Concern has been expressed both within and outside the government regarding possible abuses of the user fee system that have dissuaded patients from seeking medically indicated services. Despite the safeguards established to waive charges for the indigent, certain practices that counter those safeguards have been reported. Among the most serious concerns are that birth certificates and registration are withheld from mothers who are designated by the hospital as able to pay but do not settle their accounts at discharge; and, that women are discouraged from delivering at hospitals because of the J\$50.00 fee.

These issues were explored with hospital managers at the six visited regional hospitals (KPH, Spanish Town, Mandeville, Cornwall, St. Anns Bay and Port Antonio), and only at Mandeville Hospital had such a practice occurred, and it had recently been phased out. None of the other hospital administrators were aware of the practice.

The reaction of hospital administrators to fees dissuading women from delivering at public hospitals was a dismissal of the possibility and a counter complaint that women who are exempt from paying fees have been known to purchase private pre-natal care. Moreover, evidence from national hospital statistics for obstetrics patients do not suggest that hospitals have been underutilized. Table 11 provides data on indicators of public hospital utilization for deliveries between 1982 and 1987. As would be expected in a country with declining fertility, the total number of deliveries is falling nationwide. The total number of beds (average bed complement) available for obstetrics has fluctuated between 1982 and 1987 but in both of these end years about 573 beds have been available for maternity patients. Similarly, the

Table 11

Characteristics of Obstetric Services Use in Jamaican Public Hospitals  
1982-1987

|      | Average<br>Bed<br>Complement | Number of<br>Deliveries | Average<br>Occupancy<br>Rate in<br>Obstetrics | % Live<br>Births in<br>Hospital | Death Rate<br>per 100<br>Discharges |
|------|------------------------------|-------------------------|---|---------------------------------|-------------------------------------|
| 1982 | 574                          | 42,311                  | 82  | 68.0                            | 0.1                                 |
| 1983 | 593                          | 45,110                  | 88  | 72.0                            | 0.1                                 |
| 1984 | n.a.                         | 40,001                  | n.a.  | 73.0                            | n.a.                                |
| 1985 | 694                          | 42,502                  | 75  | 70.0                            | 0.1                                 |
| 1986 | 574                          | 38,461                  | 78  | 70.0                            | 0.1                                 |
| 1987 | 572                          | 40,236                  | 82  | 76.2                            | 0.1                                 |

Source: Hospital Statistics Reports, 1983-1987.

n.a. = not available

average occupancy in obstetrics has fluctuated, but the two end points of 1982 and 1987 are the same at 82 percent.

The new user fee schedule went into effect in 1984, and although data are not available for that year, average occupancy fell between 1983 and 1985 by 13 percentage points, as indicated in Table 11. Eighty percent occupancy is considered a high occupancy rate, suggesting that, on average, obstetrics wards operate at close to full capacity. Column 4 provides the proportion of births occurring in hospitals, which has remained relatively constant between 1982 and 1986, although public hospitals experienced a significant increase in maternity patients between 1986 and 1987. These figures are particularly important since, if user fees did dissuade women from using public hospitals, this figure should fall, rather than rise as they did. Moreover, while the total number of deliveries declined, the numbers delivering in hospitals rose, suggesting that pregnant women became more rather than less likely to deliver in a hospital. Aggregate maternal mortality per 100 discharges remained constant over the period.

These statistics do not suggest that fees act as a disincentive for hospital delivery at public facilities. Although there are fluctuations in utilization indicators, the direction is toward increasing use of public facilities. Moreover, the fees themselves are not necessarily the reason for any temporary declines over the period. For instance, the only decline in percent of live births in hospitals and in the occupancy rate occurred between 1983 and 1985, during which time the number of obstetric beds increased by 100 beds or 20 percent. In addition, the distribution of occupancy across hospitals distorts the national data. For example, May Pen Hospital has had obstetric occupancy rates of 600 and above throughout the 1983-1986 period.

Thus the data in the table suggest that aggregate demand for public hospital obstetric services has remained strong despite the introduction of fees for maternity in 1984. From the crude evidence assembled, the overall proportion of hospital births was not affected by the new policy. What these measures mask are the distribution--location, income, education--of those who do not go to hospitals to deliver, and the marginal effect of these factors on the affordability of public maternity care. However, since the poorest women are exempted from paying anyway and hospitals try to ensure that those who cannot pay receive care the likelihood of fees producing a disincentive does not seem strong. That, however, must be accomplished in a separate study focused on maternal health behavior.

## XI. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Government policy toward user charges has a strong effect on revenues and fee incidence. Incentives for collecting fees can raise revenue earnings dramatically. When government policy established user charges in Jamaican public hospitals and stipulated that revenues be deposited in central coffers, earnings represented between 1 and 4 percent of budget allocations. Once hospitals were allowed to retain (some of) the revenue, earnings increased to between 6 and 28 percent of hospital operating budgets. Indeed over the three years of the new policy and fee structure, earnings grew by over 500 percent in most hospitals.

Revenues earnings have been respectable even though hospitals have only charged between half and three-fourths of all patients. Means testing is taken

seriously and appears to be enforced with regularity. Anyone on Food Aid, retired or otherwise unable to pay is exempted from the MOH fee schedule.

Revenue earnings have been allocated to compensate for real and nominal cuts in maintenance and supply budgets. The allocation of revenue has been to essential inputs, and the vast majority of funds are spent on maintenance. In a few facilities, revenues are allocated to cover salaries of collection staff. These resources have been important to keeping hospitals functional, and are a key means of enhancing and maintaining quality as real budgets continue their sharp decline.

While revenues have risen sharply, the potential for greater earnings is significant. Moreover, given the high marginal value of these revenues to hospital operation, the inadequacy of government budget allocations, and the continuing need for fungible resources, enhancing cost recovery is essential to the provision of care.

Fees have made a significant difference in hospital operation, all facilities have some established method for collecting fees and most are attempting to improve and expand efforts. The outstanding difficulties are devising foolproof methods to ensure that patients who can pay do so, maintaining quality in public and private wards to earn the fees, and improving the fee structure to more closely cover costs for patients with insurance or with sufficient resources to pay full fare.

### Recommendations

**Collection and Compliance.** Greater efforts could be made to educate nursing and medical staff about the need to ensure patient payment at every stage of treatment. This may involve establishing systems that require assessment/payment prior to reaching treatment stations (i.e., arrangements

where stamped tickets or vouchers are required). This may also entail personnel to track and enforce such procedures. Experimentation with different collection and monitoring procedures across hospitals would be useful to suggest cost effective means of cost recovery. Workshops among managers to assess successes and failures of alternative hospital systems could also be used to assist facilities to improve their collection arrangements.

**Administration of User Charges.** Currently, hospitals are required to send all proceeds from user fees to the Ministry of Health (MOH). They can be reimbursed only after submitting a fairly detailed request to the Ministry. Although required if fees are classified as contributions, this system appears to be unnecessarily cumbersome, especially since revenues from user fees are typically used for urgent maintenance work and purchasing of supplies. Allowing hospitals greater control over their revenues should result in considerable savings in administrative costs. This, however, would require changes in the laws regulating appropriations-in-aid. Since those shifts could only occur with a dramatic change in overall government policy, it is unlikely.

Standardized MOH reporting forms could clarify for hospitals what information is needed to assist the MOH in tracking funds. The same forms could also be used for monitoring purposes. The Ministry's plan to computerize the fee revenues and expenditures should be encouraged and assisted, as this too would assist monitoring.

**Reform of User Charges.** The user charges that went into effect in 1984 have not been adjusted since, although inflation has eroded their value. The current fee system offers incentives for long lengths of stay and disincentives for prudent use of laboratory and x-ray services. Moreover, the current exemption criteria appears to encompass patients able to pay the modest fees. Private patients and those with insurance are currently being unnecessarily

subsidized by the government since both can and do pay more at private facilities.

A number of adjustments could help to raise and improve the fairness of hospital fees:

- Introduce modest per inpatient day charges to discourage excessive lengths of stay.
- Institute per test charges for x-ray and laboratory services for both inpatients and outpatients.
- Reassess exemptions, perhaps establishing a sliding scale, and subject current exemptions (e.g., those for food aid and pensioners) to a means test. For instance, all pensioners are not destitute, and those who can afford fees should be charged.
- Private patients and patients who carry insurance should pay a larger portion of costs. Establishing fees similar to those of the University Hospital for private patients is simple and easily monitored by hospitals.
- Upgrade private wings and enhance their amenities and environment to attract patients. Promoting these specialized services could also help to raise utilization of private wards.
- Set fees on pharmaceuticals that are a proportion of cost with adjustments up or down depending on the demand and efficacy of the drug. Patients tend to be most willing to pay for drugs, so cost recovery efforts should target pharmaceuticals.
- Establishing fees in public clinics for curative services could assist those facilities to expand their resource base. Moreover, charging for services at clinics may enhance patients' perceptions of the relative quality of clinic services.

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