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ANALYSIS OF THE COSTS AND FINANCING  
OF THE HOLBERTON HOSPITAL,  
ANTIGUA

June 1989

**Resources for  
Child Health  
Project**

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## LIST OF ABBREVIATIONS

|       |                                                    |
|-------|----------------------------------------------------|
| ALOS  | Average length of stay                             |
| E.C.  | Eastern Caribbean                                  |
| EC\$  | Eastern Caribbean Dollar (EC\$2.70 = US\$1.00)     |
| GNP   | Gross National Product                             |
| MBS   | Medical Benefits Scheme                            |
| MOH   | Ministry of Health                                 |
| RDO/C | Regional Development Office/Caribbean (USAID)      |
| REACH | Resources for Child Health Project                 |
| USAID | United States Agency for International Development |

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## EXECUTIVE SUMMARY

### Background and Scope of Work

The Ministry of Health of Antigua requested assistance from USAID for a study to review the current situation regarding the costs and financing of the Holberton Hospital and to suggest ways to achieve cost savings through increasing the efficiency of service delivery and/or to increase revenue from non-public sources. During the fall of 1988, the REACH Project fielded two teams of consultants to collect and analyze data for the study. Data for this study for the period 1985 - 1988 were collected through interviews with government and hospital personnel, review of published government budgets, and collection of primary data from the Holberton Hospital's statistical and financial records.

### Findings

The Holberton Hospital is the principal source of in-patient care in Antigua. Over the period 1985 - 1988, the Holberton Hospital had 192 beds open, occupancy rates near 50 percent, and an average in-patient length of stay of 9 days. Over the four year period, wages and benefits increased from 56 to 73 percent of total recurrent expenditure. During the same period, expenditure for drugs, medical supplies, and other supplies declined from 39 to 22 percent of the total. Expenditure on other items remained a fairly constant proportion of total recurrent expenditure. In real terms, wages and benefits increased by at least 11 percent per annum, while expenditures on drugs and medical supplies declined by 33 percent between 1985 and 1987. Overall, total recurrent expenditure for the hospital increased by about five percent per annum, in comparison to real growth rates for the Antiguan economy of seven to eight percent.

While hospital records do not break down expenditures by cost center, data collected for the study were utilized to develop initial estimates of this breakdown of expenditure. Nursing services, medical departments, and pharmacy were the cost centers which expended over 15 percent of total expenditure each. Housekeeping/maintenance and food service cost centers each accounted for six to nine percent of total expenditure, while administration was five percent. Anesthesiology, general medicine, pathology/laboratory, and radiology are the medical specialties which each claim more than 10 percent of the direct expenditures for medical departments. Expenditures for the obstetrics/gynecology and pediatrics departments comprised no more than two percent of total direct expenses for medical departments.

The data were utilized to develop estimates of the average expenditure for select services. For example, the estimated average total expenditure per admission ranged between EC\$ 1,729 and 2,186, and the estimated average expenditure per patient-day ranged from EC\$ 215 to 269 between 1985 and 1988. Estimates of the average direct medical service expenditure per delivery ranged from EC\$ 20 to 93, roughly in the same range as current hospital charges per delivery of EC\$25 to 125. Estimates of the average expenditure for lab tests ranged from EC\$25 to 34, on average several fold higher than current hospital charges of EC\$ 2 to 20 per lab test. The estimated average

expenditure per x-ray ranged from EC\$21 to 30, within the range of current hospital charges for x-rays of EC\$10 to 30.

To date, the operations and capital expansion of the Holberton Hospital have been solely financed from the government budget. While the hospital collects fees for certain services, these are passed on to the Treasury and do not have any direct relationship to budgetary allocations for the hospital. The schedule of fees for the Holberton Hospital was first established in 1975 and has been modified five times, with the most recent schedule of fees established in 1983. Antiguans, regardless of their source of payment (private paying, MBS, or private insurance), are charged the same fees. Indigent patients are admitted to the general wards and are exempt from all charges. Foreign nationals pay different fees only for casualty services. The Collections Officer calculates the fees due and presents the patient with the bill prior to his/her discharge. Second copies of these bills are sent to patients if their bill is not paid within a reasonable period of time.

Over the period 1981 - 1985, hospital revenue increased from EC\$ 147,000 to EC\$ 237,000, or by 31 percent in real terms (about seven percent per annum). In 1985, these fees were equal to about 2.8 percent of hospital expenditure. Fees for hospital services equalled approximately 53 percent of total hospital fees collected, with lab and x-ray fees equalling 31 percent, and payments by nurses the remaining 16 percent. Data were collected from hospital registers on charges for care, billing history, source of payment, and actual payments for a sample of 364 patients admitted to the hospital during the period October 22 - November 30, 1987. The average charge per patient was EC\$ 116, or EC\$50 for room and board and EC\$66 for medical services. Only 45 percent of the patients treated during this period were billed by the hospital, and only 64 percent of these paid part or all of their bill. Total revenue from hospital fees was estimated at EC\$ 42,080 for the sample period, and if extrapolated would result in collections of EC\$ 393,826 for a 12 month period, or 4.4 percent of total hospital expenditure in 1987. The average revenue collected per discharge was EC\$ 88, and the average amount paid by paying patients was EC\$ 307. Further analysis of the data showed that the average amounts charged for care and the average amounts paid per patient varied significantly by the source of payment, i.e. patients covered by private insurance, by the MBS, or without any form of medical coverage.

### Recommendations

The study proposes several policy and management options and alternatives which the MOH could consider to either reduce costs through increasing the efficiency of service delivery or to increase revenue to the hospital from non-public sources. Given the significance of wages and benefits within overall recurrent expenditures for the hospital, it is recommended that the MOH give further study to the causes and possible alternative solutions to the rapid increase in these costs. Further, improvement in the procurement and management of pharmaceutical and other supplies is necessary. Several options are proposed to either improve the collection of existing fees or adjust the current fee schedule in order to increase the revenue generated by the hospital.

The report discusses options and urges further consideration on a number of issues:

- o the retention by the hospital of a part or all of the revenues collected
- o the influence of physicians and administrators on the allocation of hospital resources
- o the impact of financing policy on the quantity, quality, and costs of services
- o foreign evacuations/referrals and their cost implications
- o the cost of maintaining and operating new diagnostic equipment, and possible ways to recover some of these costs
- o realistic possibilities for attracting medical referrals from other islands
- o improvement of management information systems for use in planning, cost estimation, billing, etc.
- o attitudes toward Holberton Hospital

It is recommended that USAID could usefully provide further technical assistance to the Ministry of Health in these areas.

## CHAPTER I INTRODUCTION

### A. Purpose and Objectives of the Study

From September 7 to 18, and October 23 to November 3, 1988, the Resources for Child Health (REACH) Project, funded by the United States Agency for International Development (USAID), fielded two teams of consultants to collect and analyze data which would assist the Ministry of Health in Antigua in a study of the Holberton Hospital in St. John's. In a time of stagnating public financing for the hospital and increasing demand for health services of a higher technological sophistication and quality, the Ministry of Health requested assistance for a study to determine ways to increase revenue from non-public sources, and to achieve cost savings through increasing the efficiency of service delivery at the hospital. Specific issues to be covered in the analysis included:

- o Analysis of trends in aggregate public expenditure, and expenditure by input type and by cost center, for the hospital.
- o Review of budgeting procedures and financial management controls for the hospital.
- o Review of the current cost recovery experience of the hospital, including review of current policies, fee schedules, and collection procedures and practices.
- o Review of the current relationship of the Medical Benefits Scheme and private health insurance to hospital revenues, and potential for future development.
- o Identification of areas where the hospital could achieve cost savings by improving the efficiency of its operations.
- o Identification of alternative means for increasing hospital revenue, including alternative financing mechanisms, alteration of existing prices, and improved collection procedures.
- o Discussion of alternative bases for setting of hospital fees based on the analysis of hospital expenditures, income levels and distribution, and administrative considerations.

The study's principal focus is on analysis of issues related to increasing the recurrent resources available to the hospital, rather than on financing the replacement or expansion of the hospital's physical plant. The study does not consider the financing of other facilities and programs of the public health sector in Antigua. Information regarding the financing of health services in the private sector is only partially covered, with the emphasis on findings that affect consideration of options for financing of the Holberton Hospital.

## B. Data Sources and Limitations, Methods

Data for this study were collected from interviews with government and hospital personnel, review of published government budgets, and collection of primary data from the Holberton Hospital's statistical and financial records. The four year period from 1985 to 1988 was selected for intensive study in order that the analysis focus on data with the most relevance to short to medium term decision-making. In some cases the data sought were unavailable, or not available for the entire period under study. Interpolations or other adjustments of the data are noted in data tables or in the text. Recommendations regarding improvements needed in the hospital's management information systems are provided. Other methodological issues are discussed in the presentation of the data and findings of the study.

## CHAPTER II BACKGROUND INFORMATION

### A. Political Background and Health Status

Antigua obtained political independence from the United Kingdom in 1981 to become a unitary sovereign democratic state. It is a member of the Caribbean Community (CARICOM) and belongs to the Eastern Caribbean Common Market (ECCM) and the Organization of Eastern Caribbean States (OECS). The provision of adequate health services is a national goal that is part of the strategy for development of a sound economy. The per capita Gross National Product (GNP) was approximately US\$2,380 in 1986.<sup>1</sup>

The birth and death rates have remained relatively constant in recent years. There has also been a trend toward outward migration of Antiguans. Life expectancy at birth is estimated to 73 years in 1986.<sup>2</sup> The most common causes of death are those typical of industrialized countries: cancer, heart disease, hypertension, and cerebrovascular diseases. The country has a relatively low infant mortality rate of 22 per 1,000 live births. In 1987 there were approximately 6.2 physicians per 10,000 population.<sup>3</sup>

### B. Health System in Antigua

The provision of health services by the private sector is significant and reported to be growing. There are no published figures on the relative size or level of expenditures in the private, as compared to public, health sector.

One-third of all physicians are native Antiguans, while the other two-thirds are foreign nationals, predominantly Indian.<sup>4</sup> Staff physicians of the hospital are on salary, although specialists can collect additional fees for services performed for hospitalized patients (see Appendix C). Almost all physician out-patient contacts are performed in the private sector. The average charge per out-patient visit is EC\$ 50.<sup>5</sup> The physician bills the

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<sup>1</sup>The State of the World's Children 1989 (New York: UNICEF, 1989).

<sup>2</sup>World Development Report 1988 (Washington, D.C.: World Bank, 1988).

<sup>3</sup>Ministry of Health figures.

<sup>4</sup>Foreign nationals are recruited for an initial 2 year period at salaries comparable to those paid Antiguan physicians. This initial term can be renewed twice for a maximum of a 6 year appointment.

<sup>5</sup>For MBS patients, the government's reimbursement covers approximately 20 and 35 percent of the doctor's office visit fee.

patient, who then can seek reimbursement if insured by the MBS or a private insurance company.

### C. Description of the Holberton Hospital

The Holberton Hospital is the principal source of in-patient care in Antigua. While the hospital is licensed for 220 beds, only 192 of these beds were open in 1988. The hospital has 34 doctors on its staff; 50 percent of these are specialists in anesthesiology, obstetrics/gynecology, ophthalmology, pathology, pediatrics, radiology, and surgery. In the past two years new equipment has been purchased to upgrade the laboratory and radiology departments. Renovation of the casualty department is underway. The acquisition of new equipment (e.g. doppler unit) to establish a cardiology department to allow for more sophisticated diagnoses (e.g. cardiac catheterization and pacemaker implantation) is planned. Acquisition of an ultrasound machine is under review.

Table 2.1 provides statistics on utilization of hospital services for the period from 1984 to 1988. Occupancy rates for the hospital ranged from 41 to 57 percent during this period, while the average length of stay (ALOS) remained at an average of about nine days. Many services showed a larger than usual increase in the use of hospital services between 1985 and 1986, but otherwise fluctuated little from year to year. The number of deliveries has consistently declined by about five percent per year since 1986. The number of services provided at out-patient clinics is low, suggesting that most out-patient services are provided by physicians in private practice and by the hospital casualty service, which reported six times as many visits as the out-patient clinics.

Table 2.1: SELECT CHARACTERISTICS AND UTILIZATION STATISTICS OF THE HOLBERTON HOSPITAL, 1984 - 1988

| CHARACTERISTIC       | 1984   | 1985   | 1986   | 1987   | 1988 1/ |
|----------------------|--------|--------|--------|--------|---------|
| BEDS                 |        |        |        |        |         |
| Licensed Capacity    | 226    | 220    | 211    | 220    | n.a.    |
| Number Open          | 209    | 185    | 168    | 192    | 192     |
| ALOS (days) 2/       | 9      | 7      | 9      | 9      | 9       |
| OCCUPANCY RATE       | 41%    | 44%    | 57%    | 50%    | 54%     |
| TURN OVER RATE       | 17%    | 18%    | 23%    | 18%    | 11%     |
| ADMISSIONS           | 3,740  | 3,686  | 4,843  | 4,310  | 2,252   |
| % Annual Change      | -      | -1%    | 31%    | -11%   | 5%      |
| DISCHARGES           | 3,593  | 3,304  | 3,933  | 3,860  | 2,143   |
| % Annual Change      | -      | -8%    | 19%    | -1%    | 10%     |
| PATIENT DAYS 3/      | 31,442 | 33,972 | 34,397 | 35,028 | 18,940  |
| % Annual Change      | -      | 8%     | 1%     | 2%     | 8%      |
| DELIVERIES           | 1,003  | 1,075  | 1,023  | 967    | 461     |
| % Annual Change      | -      | 7%     | -5%    | -5%    | -5%     |
| SURGERIES            |        |        |        |        |         |
| Major                | 297    | 668    | 355    | 342    | 660     |
| Intermediate         | 323    | 283    | 376    | 415    | 598     |
| Minor                | 1,187  | 1,726  | 2,143  | 2,241  | 3,360   |
| LABORATORY TESTS     | 8,963  | 8,733  | 10,105 | 11,080 | n.a.    |
| % Annual Change      | -      | -3%    | 16%    | 10%    | -       |
| RADIOLOGY PROCEDURES | 8,844  | 8,934  | 10,133 | 6,403  | n.a.    |
| % Annual Change      | -      | 1%     | 13%    | -37%   | -       |
| PRESCRIPTIONS FILLED | 27,656 | 29,994 | 69,575 | 54,723 | n.a.    |
| % Annual Change      | -      | 8%     | 132%   | -21%   | -       |
| CASUALTY VISITS      | 25,283 | 23,516 | 28,488 | 28,397 | n.a.    |
| % Annual Change      | -      | -7%    | 21%    | 0%     | -       |
| OPD VISITS           | n.a.   | n.a.   | 5,293  | 4,825  | n.a.    |
| % Annual Change      | -      | -      | -      | -9%    | -       |

Notes:

- 1/ Utilization figures for 1988 are for the months January through June.
  - 2/ ALOS - Average length of stay.
  - 3/ Patient-days include newborn days.
- Source: Medical Records Department, Holberton Hospital

CHAPTER III  
FINDINGS OF THE ANALYSIS

A. Expenditures of the Holberton Hospital

1. Expenditure by Input Type

Budget and expenditure data for the Holberton hospital are provided in the Antigua Government Estimates and the Holberton Hospital Monthly Statements of Expenditure. These data are provided by line item input, but expenditures for utilities and amortization for the hospital are budgeted separately and thus are not included in this study. Data were collected from the Estimates and the Statements of Expenditure of the Holberton Hospital between 1985 and 1988.

Data showing the allocation of hospital expenditures for different categories appears in Table 3.1. Over 50 percent of hospital recurrent expenditures were for the wages and benefits of personnel in both established and non-established positions. Over the four year period, wages increased from 56 to 73 percent of total recurrent expenditure. During the same period, expenditure for drugs, medical supplies, and other supplies declined from 39 to 22 percent of the total. Expenditure on other items remained a fairly constant proportion of the total: maintenance of equipment at three percent, utilities at two percent, and transportation at one percent.

The above data suggest that wages may be increasing at the expense of purchase of drugs and other supplies. However, it is important to determine how expenditures have changed in real terms, or after adjustments for inflation. The adjusted data show that personnel wages and benefits increased in real terms by at least 11 percent per annum from 1985 to 1988. Expenditure on drugs and medical supplies declined in real terms by 33 percent between 1985 and 1987. Overall, total recurrent expenditure for the hospital increased in real terms 16 percent between 1985 and 1988, or about 5 percent per annum. This is in comparison to real growth rates for the Antiguan economy of seven to eight percent in 1985 and 1986 (see Table 3.2).

Overall these data suggest that public expenditure for the hospital is keeping pace with inflation, and perhaps with the economic growth rate for the economy. Nevertheless, annual increases in personnel wages and benefits in fact exceed real rates of economic growth at the expense of expenditure on drugs and medical supplies, or other inputs. The experience of other countries suggests that the quality of medical services declines as expenditures shift towards wages and personnel benefits and away from other inputs in the production of services. For example, anecdotal information collected at the Holberton Hospital suggests that the laboratory lacks sufficient expendable materials to perform all of the tests requested.

Table 3.1: ANNUAL EXPENDITURE BY ITEM, HOLBERTON HOSPITAL  
1985-1988

(E.C. Dollars)

| ITEM                     | 1985        | % of Sub-total | 1986        | % of Sub-total | 1987        | % of Sub-total | 1988        | % of Sub-total |
|--------------------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|
| Wages and Benefits       | \$3,948,539 | 56%            | \$4,831,950 | 58%            | \$5,793,192 | 66%            | \$6,732,356 | 73%            |
| Drugs & Medical Supplies | \$1,886,435 | 27%            | \$2,021,542 | 24%            | \$1,502,882 | 17%            | \$1,429,730 | 15%            |
| Other Supplies           | \$820,081   | 12%            | \$935,699   | 11%            | \$946,600   | 11%            | \$672,658   | 7%             |
| Maintenance - Equipment  | \$184,989   | 3%             | \$243,935   | 3%             | \$178,304   | 2%             | \$155,672   | 2%             |
| Utilities                | \$104,638   | 1%             | \$153,273   | 2%             | \$153,984   | 2%             | \$121,670   | 1%             |
| Transportation           | \$56,152    | 1%             | \$73,575    | 1%             | \$79,611    | 1%             | \$81,921    | 1%             |
| Misc Deptmt Expenses     | \$35,568    | 1%             | \$60,076    | 1%             | \$48,741    | 1%             | \$56,379    | 1%             |
| Maintenance - Bldg/Grnds | \$6,409     | 0%             | \$6,524     | 0%             | \$22,767    | 0%             | \$16,009    | 0%             |
| Services                 | \$5,826     | 0%             | \$5,779     | 0%             | \$7,619     | 0%             | \$8,297     | 0%             |
| SUB-TOTAL RECURRENT      | \$7,048,637 | 100%           | \$8,332,353 | 100%           | \$8,733,700 | 100%           | \$9,274,692 | 100%           |
| Capital Expenditure      | \$239,050   |                | \$120,193   |                | \$237,666   |                | \$46,659    |                |
| TOTAL                    | \$7,287,687 |                | \$8,452,546 |                | \$8,971,366 |                | \$9,321,351 |                |

Notes:

- 1/ Annual expenditures for 1985 to 1987 from January 1-December 31.
- 2/ Annual expenditure for 1988 includes actual expenditures through September 30, 1988. This total is not adjusted in for the remaining quarter as it appears that most of the hospital budget is expended in the first 9 months of the year.

Source: Holberton Hospital Monthly Statements of Expenditure, 1985 - 1988. For further detail see Appendix Table B.1.

Table 3.2: TRENDS IN REAL ANNUAL EXPENDITURE FOR THE HOLBERTON HOSPITAL  
1985 - 1988

| ITEM                                | 1985        | 1986        | 1987        | 1988 1/     |
|-------------------------------------|-------------|-------------|-------------|-------------|
| <b>WAGES AND BENEFITS</b>           |             |             |             |             |
| Nominal EC\$                        | \$3,948,539 | \$4,831,950 | \$5,793,192 | \$6,732,356 |
| Real 1984 EC\$ 2/                   | \$3,662,838 | \$4,310,393 | \$4,947,218 | \$5,513,805 |
| % Annual Change                     | -           | 18%         | 15%         | 11%         |
| <b>DRUGS &amp; MEDICAL SUPPLIES</b> |             |             |             |             |
| Nominal EC\$                        | \$1,886,435 | \$2,021,542 | \$1,502,882 | \$1,429,730 |
| Real 1984 EC\$                      | \$1,749,940 | \$1,803,338 | \$1,283,419 | \$1,170,950 |
| % Annual Change                     | -           | 3%          | -29%        | -9%         |
| <b>OTHER RECURRENT</b>              |             |             |             |             |
| Nominal EC\$                        | \$1,213,663 | \$1,478,861 | \$1,437,626 | \$1,112,606 |
| Real 1984 EC\$                      | \$1,125,847 | \$1,319,234 | \$1,227,691 | \$911,225   |
| % Annual Change                     |             | 17%         | -7%         | -26%        |
| <b>TOTAL RECURRENT</b>              |             |             |             |             |
| Nominal EC\$                        | \$7,048,637 | \$8,332,353 | \$8,733,700 | \$9,274,692 |
| Real 1984 EC\$                      | \$6,538,624 | \$7,432,964 | \$7,458,326 | \$7,595,980 |
| % Annual Change                     |             | 14%         | 0%          | 2%          |
| REAL GROWTH CF GDP                  | 7%          | 8%          | n.a.        | n.a.        |

Notes:

- 1/ Annual expenditures for 1988 through September 30, 1988. The total was not adjusted for the remaining quarter as it appears that most of the hospital budget is expended in the first 9 months.
- 2/ GDP deflator for 1985 and 1986 from IMF International Financial Statistics Yearbook for 1989. A 5 percent rate of inflation was assumed for 1987 and 1988.

Sources: Holberton Hospital Monthly Statements of Expenditure, 1985 - 1988. For further detail see Appendix Table B.1.

## 2. Expenditure by Cost Center

The Antigua Government Estimates and the Holberton Hospital Monthly Statements of Expenditure do not break down hospital expenditures by cost center. The study developed rough estimates of expenditures by cost center as follows: 1) expenditures for personnel in established positions were attributed to the cost center to which the position was assigned,<sup>6</sup> and 2) non-personnel expenditures were allocated by line item to what seemed to be the most appropriate cost center. Expenditures for personnel in non-established positions were not allocated to a specific cost center, rather to a category called "Personnel - non-department specific". Since most of the personnel in non-established positions provide non-skilled labor (e.g. cleaners, gardeners, etc.), this category was then treated as an indirect cost center in the estimation of average expenditures for different service (see Section 3 below). More careful estimates could be developed if program budgeting procedures were established and data were collected on a prospective basis.

Nursing services, medical departments, and the pharmacy were the three cost centers which expended over 15 percent of total expenditure each. Nursing services and medical departments increased from 18 to 28 percent, and from 16 to 21 percent, of total expenditure respectively. Pharmacy expenditure declined from 24 to 13 percent of total expenditure. Given the prominence of wages in the nursing and medical department cost centers, and drugs in the pharmacy cost center, these trends mirror the above analysis of expenditure by input type. Housekeeping and maintenance, and food service cost centers each accounted for 6 to 9 percent, while administration claimed 5 percent, of total expenditure (see Table 3.3).

Anesthesiology, general medicine, pathology/laboratory, and radiology are the medical specialties which claim each more than 10 percent of the direct expenditures for medical departments. While this is true for general medicine because it employs the highest number of medical practitioners, the high proportion of expenditure by the other services is due to the high volume of services provided that require significant amounts of expendable inputs, or the use and maintenance of expensive equipment. Expenditures for the obstetrics/gynecology and pediatrics departments comprise no more than 2 percent of total direct expenses for medical departments (see Table 3.4).

## 3. Average Expenditure for Select Services

The results presented above are from the first step of an accounting step-down analysis of costs. Further information would be required to develop guidelines to allocate non-medical department center expenditures to the medical departments to allow for estimation of the direct and indirect costs per medical case. However the data presented can be utilized to develop estimates of the average expenditure for select services. For example, if the

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<sup>6</sup>Budget estimates for each position were available; however actual figures were not. The estimated expenditures were adjusted by the ratio of actual to budgeted figures for total personal emoluments for established positions for any given year.

Table 3.3: ALLOCATION OF EXPENDITURE BY DEPARTMENT, HOLBERTON HOSPITAL  
1985 - 1988

| DEPARTMENT                       | (E.C. Dollars) |               |             |               |             |               |             |               |
|----------------------------------|----------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
|                                  | 1985           | % of<br>Total | 1986        | % of<br>Total | 1987        | % of<br>Total | 1988 1/     | % of<br>Total |
| Administration                   | \$277,822      | 4%            | \$340,161   | 4%            | \$464,967   | 5%            | \$522,755   | 5%            |
| Food Service                     | \$641,525      | 9%            | \$783,972   | 9%            | \$745,918   | 8%            | \$567,879   | 6%            |
| Housekeeping & Maintenance       | \$659,831      | 9%            | \$551,667   | 7%            | \$596,234   | 6%            | \$562,035   | 6%            |
| Laundry                          | \$119,752      | 2%            | \$95,584    | 1%            | \$115,921   | 1%            | \$72,722    | 1%            |
| Medical Departments              | \$1,171,217    | 16%           | \$1,533,299 |               | \$2,023,194 | 21%           | \$2,081,998 | 21%           |
| Nursing                          | \$1,347,542    | 18%           | \$1,721,087 | 21%           | \$2,312,812 | 25%           | \$2,711,378 | 28%           |
| Nursing School                   | \$48,035       | 1%            | \$48,269    | 1%            | \$62,217    | 1%            | \$66,878    | 1%            |
| Personnel - Not Dept Specific 2/ | \$1,270,790    | 17%           | \$1,477,068 | 18%           | \$1,678,417 | 18%           | \$1,888,647 | 19%           |
| Pharmacy                         | \$1,771,729    | 24%           | \$1,805,942 | 22%           | \$1,394,273 | 15%           | \$1,259,888 | 13%           |
| Purchasing                       | \$7,420        | 0%            | \$14,240    | 0%            | \$29,325    | 0%            | \$33,897    | 0%            |
| GRAND TOTAL                      | \$7,315,663    | 100%          | \$8,371,289 | 100%          | \$9,423,278 | 100%          | \$9,768,077 | 100%          |

Notes:

- 1/ Annual expenditures for 1988 through September 30, 1988. The total was not adjusted for the remaining quarter as it appears that most of the hospital budget is expended in the first 9 months.
- 2/ Expenditures for wages and benefits to personnel in non-established positions. See text for discussion regarding why these expenditures were not allocated to other cost centers.

Source: Appendix Table B.2.

Table 3.4 : ALLOCATION OF EXPENDITURE BETWEEN MEDICAL DEPARTMENTS  
HOLBERTON HOSPITAL, 1985 - 1988

(E.C. Dollars)

| MEDICAL DEPARTMENT       | 1985               | % of Totl   | 1986               | % of Totl   | 1987               | % of Totl   | 1988 1/            | % of Totl   |
|--------------------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|
| Anesthesiology           | \$173,194          | 15%         | \$221,942          | 14%         | \$246,015          | 12%         | \$257,910          | 12%         |
| Emergency Medicine       | \$53,930           | 5%          | \$49,042           | 3%          | \$62,700           | 3%          | \$62,329           | 3%          |
| General Medicine         | \$244,931          | 21%         | \$314,348          | 21%         | \$418,612          | 21%         | \$454,581          | 22%         |
| Obstetrics/Gyn.          | \$21,641           | 2%          | \$58,477           | 4%          | \$77,766           | 4%          | \$86,152           | 4%          |
| Orthopedics/Physio       | \$21,572           | 2%          | \$22,366           | 1%          | \$73,680           | 4%          | \$83,425           | 4%          |
| Pathol/Laboratory        | \$208,146          | 18%         | \$325,188          | 21%         | \$365,263          | 18%         | \$426,045          | 20%         |
| Pediatrics               | \$21,641           | 2%          | \$20,654           | 1%          | \$26,804           | 1%          | \$47,026           | 2%          |
| Radiology                | \$186,424          | 16%         | \$259,152          | 17%         | \$254,947          | 13%         | \$230,481          | 11%         |
| Surgery                  | \$103,913          | 9%          | \$125,639          | 8%          | \$313,404          | 15%         | \$189,838          | 9%          |
| Not Dpt Specific 2/      | \$125,825          | 12%         | \$136,491          | 9%          | \$184,003          | 9%          | \$244,212          | 12%         |
| <b>TOTAL EXPENDITURE</b> | <b>\$1,171,217</b> | <b>100%</b> | <b>\$1,533,299</b> | <b>100%</b> | <b>\$2,023,194</b> | <b>100%</b> | <b>\$2,081,999</b> | <b>100%</b> |

Notes:

- 1/ Annual expenditures for 1988 through September 30, 1988. The total was not adjusted for the remaining quarter as it appears that most of the hospital budget is expended in the first 9 months.
- 2/ Expenditures for medical personnel or departments that are not department specific.

Source: Appendix Table B.2.

total expenditures of the hospital are divided by the number of admissions, the estimated average expenditure per admission ranges between EC\$ 1,729 and 2,186 from 1985 to 1988. If total expenditure is divided by the number of in-patient days, the estimated average expenditure per day ranged from EC\$ 215 to 269 (see Table 3.5).

With the data available, it is possible to develop more detailed estimates of the average expenditures associated with different services, and to compare these with the current fee schedules of the Holberton Hospital. For example, it can be reasonably assumed that certain expenditures benefit all patients admitted to the hospital, including those for administration, food, housekeeping, laundry, maintenance, nursing services, non-established personnel, and purchasing. Dividing the total for these expenditures by the number of admissions gives an estimated expenditure of EC\$ 1,029 to 1,412 over the 1985 to 1988 period. Dividing by the number of patient-days gives an average expenditure per day of EC\$ 127 to 170. These latter estimates are at least 5 times higher than the current hospital charges for room and board of up to EC\$ 25 per day.

In addition, it is possible to generate rough estimates of the additional average expenditures for select services. For example, estimates of the average expenditure per delivery ranged from EC\$ 20 to 93, roughly in the same range as current hospital charges per delivery of EC\$ 25 to 125. Estimates of the average expenditure for lab tests ranged from EC\$ 25 to 34, on average several fold higher than current hospital charges of EC\$ 2 to 20 per lab test. The estimated average expenditure per x-ray ranged from EC\$ 21 to 30, within the range of current hospital charges for x-rays of EC\$ 10 to 30. Based on expert judgement,<sup>9</sup> it was estimated that drugs utilized per in-patient

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<sup>7</sup>While there are technical issues which complicate comparisons across countries (e.g. different wage scales for personnel), it is possible to compare the estimated average expenditures for the Holberton Hospital with available figures for the Victoria Hospital in St. Lucia. Estimates of the average expenditure per admission, and per in-patient day for the Victoria Hospital were EC\$ 1,032 and 148 respectively. (Data on the recurrent costs of the Victoria Hospital, without equipment depreciation and annuitization were combined with utilization rates to obtain the reported estimates. See Tables 15 and 16 in: Russell, S., Trisolini, M., and Gwynne, G. (April 1988) Health Care Financing in St. Lucia and Costs of Victoria Hospital, Stony Brook: SUNY).

<sup>8</sup>While the intensity of nursing services varies by the type of care provided, insufficient time was spent in Antigua to allow for development of allocation rules for nursing personnel's salaries and benefits.

<sup>9</sup>Estimates of the likely ratio of expenditures for drugs per admission as compared to a visit to an out-patient clinic or casualty department (5:1) were developed in consultation with

Table 3.5: ESTIMATES OF AVERAGE EXPENDITURE FOR SELECT SERVICES AND CURRENT CHARGES, HOLBERTON HOSPITAL, 1985 - 1988

|                             | ESTIMATES OF AVERAGE EXPENDITURE PER SERVICE |         |         |         | CURRENT CHARGES |
|-----------------------------|----------------------------------------------|---------|---------|---------|-----------------|
|                             | 1985                                         | 1986    | 1987    | 1988 1/ |                 |
| Ave. Total Expenditure      |                                              |         |         |         |                 |
| per Admission               | \$1,985                                      | \$1,729 | \$2,186 | \$2,169 |                 |
| per In-patient Day          | \$215                                        | \$243   | \$269   | \$258   |                 |
| Ave. Non-Medical Expend. 2/ |                                              |         |         |         |                 |
| per Admission               | \$1,173                                      | \$1,029 | \$1,379 | \$1,412 |                 |
| per In-patient Day          | \$127                                        | \$145   | \$170   | \$168   | \$5 to \$25     |
| Ave. Medical Expend.        |                                              |         |         |         |                 |
| per Delivery 3/             | \$20                                         | \$57    | \$80    | \$93    | \$25 to \$150   |
| per Lab Test 4/             | \$24                                         | \$32    | \$33    | n.a.    | \$2 to \$20     |
| for Drugs 5/                |                                              |         |         |         |                 |
| per Admission               | n.a.                                         | \$156   | \$127   | n.a.    | cost            |
| per OPD Visit               | n.a.                                         | \$31    | \$25    | n.a.    |                 |
| per X-ray 6/                | \$21                                         | \$30    | \$25    | n.a.    | \$10 to \$30    |
| per Surgical Procedure 7/   | \$128                                        | \$231   | \$570   | \$99    | \$125 to \$550  |

Notes:

- 1/ Utilization figures for Jan-June were doubled for 1988 estimates.
- 2/ Expenditures of the Administrative, Food Service, Housekeeping and Maintenance, Laundry, Nursing, Non-department personnel, and Purchasing cost centers is summed and divided by the number of admissions or days.
- 3/ Expenditures for Obstetrics/Gynecology service divided by the number of deliveries.
- 4/ Expenditures for the laboratory divided by the number of laboratory procedures.
- 5/ Pharmaceutical expenditures divided by number of OPD visits and admissions. Cost of drugs per admission assumed to be 5 times higher than for OPD or casualty visit. Ratio set in consultation with Drug Management Program of MSH (J. Quick and M. Huff).
- 6/ Expenditures for x-ray department divided by the number of x-rays.
- 7/ Expenditures for the surgical service divided by the number of intermediate and major procedures. Major procedures were assumed to be twice as costly than intermediate procedures.

Sources:

- 1/ Utilization data - see Table 2.1.
- 2/ Expenditure data - see Tables 3.3 and 3.4.

Table 3.6: REVENUE BY SOURCE, HOLBERTON HOSPITAL  
1981-1985

| (E.C. Dollars)       |           |            |           |            |           |            |           |            |           |            |  |
|----------------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|--|
| SOURCE OF REVENUE    | 1981      | % of Total | 1982      | % of Total | 1983      | % of Total | 1984      | % of Total | 1985      | % of Total |  |
| Hospital Fees        | \$80,995  | 55%        | \$63,972  | 48%        | \$103,877 | 59%        | \$129,313 | 54%        | \$127,868 | 54%        |  |
| X-Ray, Lab and Other | \$37,959  | 26%        | \$41,939  | 32%        | \$44,897  | 26%        | \$80,886  | 34%        | \$75,432  | 32%        |  |
| Reimbursement 1/     | \$28,274  | 19%        | \$26,090  | 20%        | \$27,083  | 15%        | \$30,137  | 13%        | \$33,805  | 14%        |  |
| TOTAL (nominal)      | \$147,228 | 100%       | \$132,001 | 100%       | \$175,857 | 100%       | \$240,336 | 100%       | \$237,105 | 100%       |  |
| % of Hospital Exp.   | n.a.      |            | n.a.      |            | n.a.      |            | n.a.      |            | 3%        |            |  |
| TOTAL (Real 1980 EC) | \$134,948 |            | \$114,485 |            | \$152,125 |            | \$193,196 |            | \$176,812 |            |  |
| % Annual Change      | -         |            | -15%      |            | 33%       |            | 27%       |            | -8%       |            |  |

Notes:

1/ Includes payment by nurses for food and lodging provided on the hospital grounds.

Source: Antigua Government Estimates, 1981 - 1985.

admission would cost approximately five times the drugs prescribed per visit to out-patient clinic or the casualty department. The estimated average cost of drugs per admission ranged from EC\$ 25 to 35, and per clinic or casualty visit from EC\$ 32 to 34. Information was not collected on the average value of the drugs dispensed per admission, or per out-patient/casualty visit. An audit of in-patient records, and prescriptions, would be required to make a comparison with the above estimates of average expenditure for drugs. Finally, it was estimated that the average expenditure per intermediate surgical procedure ranged from EC\$ 128 to 570. These estimates span a larger range than current hospital charges for Class II to IV surgeries of EC\$ 200 to EC\$ 375 (see Table 3.5).

#### B. Revenues of the Holberton Hospital

To date, the operations and capital expansion of the Holberton Hospital have been solely financed from the government budget. While the hospital collects fees for certain services, these are passed on to the Treasury and do not have any direct relationship to budgetary allocations for the hospital.

A schedule of fees for the Holberton Hospital was first established in 1975 and has been modified five times, with the most recent schedule of fees established in 1983. Separate fees are established for: patient maintenance (room and board), drugs, use of the surgical theatre, x-rays, and laboratory procedures. In addition, fees are charged for the services of medical specialists: anesthesiologists, obstetricians, surgeons, and radiologists. Within these general categories, different fees have been established based on the complexity of the service provided, the cost of the materials utilized, and the level of amenities provided. Antiguans, regardless of their source of payment (private paying, MBS, or private insurance) are charged the same fees. Indigent patients are admitted to the general wards and are exempt from all charges. Foreign nationals pay different fees only for casualty services. The 1983 fee schedule for Holberton Hospital appears in Appendix C.

The hospital Collections Officer calculates the fees due, and presents the patient with the bill prior to his/her discharge. Second copies of these bills are sent to patients when their bill is not paid within a reasonable period of time. At one time, the Collections Officer attempted to collect payments from maternity patients upon their admission; however, this effort has not been continued.

Data were obtained on the fees collected by the hospital from two sources and for two periods. The Antigua Government Estimates provide budgeted and actual revenue figures for the hospital for fees collected for hospital charges, laboratory and x-ray charges, and payments by nurses residing in dormitories on the hospital grounds. Not included in these figures are charges to MBS patients, as the MBS does not pay the hospital for services for its covered patients. Over the period 1981 - 1985, revenue from these three sources increased from EC\$ 147,000 to EC\$ 237,000, or by 31 percent in real

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Jonathan Quick and Maggie Huff of the Drug Management Program of MSH, Boston and MSH, St. Lucia.

terms (about seven percent per annum). In 1985, these fees were equal to about 2.8 percent of hospital expenditure. Fees for hospital services equalled approximately 53 percent of total fees, with lab and x-ray fees equalling 31 percent, and payments by nurses the remaining 16 percent (see Table 3.6).

Revenue data for 1984 and 1985 were combined with information on the number of in-patient days, the number of discharges, and the number of lab tests and x-ray procedures for the same years to estimate the average revenue per service. This analysis suggests that the average revenue per patient-day in 1984/5 was approximately EC\$ 4, the average revenue per discharge was EC\$ 37, and the average revenue per lab tests or x-ray was EC\$ 4.40. However, data collected for a sample described below suggests that less than half of Holberton hospital patients are billed, and that only some 60 percent of those billed pay their bills. Adjusting the data for 1984/5 to reflect this finding, it is estimated that the average amount paid per day of care by patients who paid their hospital bill was about EC\$ 14. The average amount paid per discharge by paying patients was between EC\$ 125 and 135, and the average amount paid per lab test or x-ray by paying patients was about EC\$ 16 (see Table 3.7).

In addition, detailed data were collected from hospital registers on the ward of admission, charges for care, billing history, source of payment, and actual payments for a sample of 364 patients discharged from the Holberton Hospital during the period October 22 - November 30, 1987. Almost half of the patients were placed on the general ward, 34 percent in a maternity ward, and 10 percent in the ICU, private or semi-private rooms. The average charge per patient was EC\$ 116, or EC\$ 50 for room and board, and EC\$ 66 for medical services. Only 45 percent of the patients treated during this period were billed by the hospital, and only 64 percent of these paid part or all of their bill. Total revenue from hospital fees was estimated as EC\$ 42,080 for the sample period, and if extrapolated would result in collections of EC\$ 393,826 for a 12 month period, or 4.4 percent of total hospital expenditure in 1987. The average revenue collected per discharge was EC\$ 88, and the average amount paid by paying patients was EC\$ 307. These estimates are higher than those given above for 1984 and 1985, in part due to the inclusion of charges billed to the MBS (see Table 3.8).

The data from the sample also show that the average amounts charged for care and the average amounts paid per patient varied significantly by the source of payment, i.e. patients covered by private insurance, by the MBS, or without any form of medical coverage. The average charge per insured patient was EC\$ 836, for an MBS patient was EC\$ 527, and for a private paying patient was EC\$ 68 (ratio of 12:8:1). To the extent that charges are proportional to the quantity and quality of services rendered, these data suggest that those with insurance or MBS coverage demand more and better services (over half were placed in private or semi-private rooms) than those who have to pay out of pocket. It is also likely that providers are aware of the patients' coverage and in part make their decisions regarding the provision of service based on assumptions of the financial burden such care would place on the patient. Further, the hospital administration appears to make a greater effort to determine the charges for and collect payment from patients with private

Table 3.7: ESTIMATES OF AVERAGE REVENUE FOR SELECT SERVICES  
HOLBERTON HOSPITAL, 1984-1985

| SOURCE OF REVENUE         | 1984      | 1985      |
|---------------------------|-----------|-----------|
| REVENUE - HOSPITAL FEES   | \$129,313 | \$127,868 |
| # of In-patient Days      | 31,442    | 33,972    |
| Ave. Revenue/Day 1/       | \$4.11    | \$3.76    |
| Ave. Revenue/Day 2/       | \$14.39   | \$13.17   |
| # of Discharges           | 3,593     | 3,304     |
| Ave. Revenue/Discharge 1/ | \$35.99   | \$38.70   |
| Ave. Revenue/Discharge 2/ | \$125.95  | \$135.43  |
| REVENUE - LAB AND X-RAYS  | \$80,886  | \$75,432  |
| # of Lab Tests and X-rays | 17,807    | 17,667    |
| Ave. Revenue/Procedure 1/ | \$4.54    | \$4.27    |
| Ave. Revenue/Procedure 2/ | \$15.90   | \$14.94   |

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Notes:

- 1/ Revenue divided by total utilization.
- 2/ Revenue divided by utilization assuming only 44.51% of patients are billed, and that only 64.2% pay their bills.

Table 3.8: ESTIMATES OF AVERAGE CHARGES AND REVENUE PER DISCHARGE  
BY SOURCE OF PAYMENT, HOLBERTON HOSPITAL,  
OCTOBER 22 - NOVEMBER 30, 1987

| CATEGORY OF MEASURE                        | PAYMENT SOURCE    |                         |          |                  |
|--------------------------------------------|-------------------|-------------------------|----------|------------------|
|                                            | Private Insurance | Medical Benefits Scheme | Other    | TOTAL for Sample |
| NUMBER OF PATIENTS                         | 11                | 19                      | 335      | 364              |
| ICU (%)                                    | 0%                | 0%                      | 1%       | 1%               |
| Private Room (%)                           | 18%               | 5%                      | 4%       | 5%               |
| Semi-private Room (%)                      | 36%               | 68%                     | 5%       | 9%               |
| Maternity (%)                              | 9%                | 21%                     | 35%      | 34%              |
| Ward (%)                                   | 36%               | 0%                      | 54%      | 51%              |
| CHARGES FOR CARE                           |                   |                         |          |                  |
| Room                                       | \$3,538           | \$3,140                 | \$11,425 | \$18,103         |
| Other                                      | \$5,661           | \$6,875                 | \$11,442 | \$23,977         |
| Total                                      | \$9,198           | \$10,015                | \$22,867 | \$42,080         |
| Ave. Charge per Patient                    |                   |                         |          |                  |
| Room                                       | \$322             | \$165                   | \$34     | \$50             |
| Other                                      | \$515             | \$362                   | \$34     | \$66             |
| Total                                      | \$836             | \$527                   | \$68     | \$116            |
| TOTAL REVENUE                              | \$8,932           | \$9,188                 | \$13,842 | \$31,962         |
| % of total revenue                         | 28%               | 29%                     | 43%      | 100%             |
| Ave. Revenue per Patient                   | \$812             | \$484                   | \$41     | \$88             |
| Patients Billed (%)                        | 100%              | 100%                    | 39%      | 45%              |
| Billed Patients Who Paid (%) 2/            | 75%               | 63%                     | 62%      | 64%              |
| Ave. Revenue per Billed and Paying Patient | \$1,083           | \$768                   | \$171    | \$305            |

Notes:

1/ All monetary units in E.C. dollars.

2/ A paying patient is defined as a patient that paid something for their hospitalization. In the case of patients covered by the MBS, the percentage of patients that paid refers to those that paid their room/board charges (it is assumed that the MBS paid other charges for 100% of the MBS patients).

Source: Holberton Hospital Collections Record for admissions between October 22 and November 30, 1987 (approximately 12% of total admissions for the year).

insurance. In addition, patients who have a higher expectation of being seriously ill may elect to insure, or make efforts to obtain a MBS card (i.e. adverse selection). Finally, deliveries comprised a high proportion of the private pay patients. The short length of stay associated with a delivery is likely reflected in the lower average charges for this group.

Likewise, average revenues varied with the costs of care and the source of payment for the sample. The average revenue from insured patients was EC\$ 1,083, from MBS patients was EC\$ 768, and from private paying patients was EC\$ 169 (ratio of 6:5:1). To some extent these differentials reflect the fact that a higher percentage of insured and MBS patients are billed by the hospitals, and are also more likely to pay their bills. Twenty-eight (28) percent of the revenue collected from patients admitted during the sample period were collected from patients with private insurance,<sup>10</sup> 29 percent was returned to the Treasury for care provided to MBS patients,<sup>10</sup> and 43 percent was collected from patients who paid out-of-pocket.

### C. Medical Benefits Scheme

The Medical Benefits Scheme (MBS) was established in 1974 as a source of financing for a variety of health and social services. The MBS is funded by a 5 percent tax on wage income, with half of the payment made by the employer and half by the employee. It is reported that 85 percent of those employed between the ages of 15 and 60 contribute to the MBS. Unfortunately, information was not available regarding the total revenues of the MBS, the proportion of these earmarked for health/medical care, and the proportion of the earmarked funds expended for services in the public and private sector as compared to special investments. Collections to the MBS do not seem to have any direct relationship to budget appropriations for health and social services in the country.

Under the MBS, health services are covered for children under 16, persons over 60, and those suffering from certain chronic illnesses (i.e. cancer, cardiovascular disease, diabetes, glaucoma, hypertension, leprosy, mental illness, and sickle cell disease). Health services covered include services from medical providers in the public or private sector, expenses associated with hospitalization,<sup>11</sup> drugs, laboratory tests, x-rays, ECG, and up to EC\$ 500 for services received abroad. The MBS will reimburse patients or pay providers. However, payments due the Holberton Hospital are paid into the Treasury Fund (see Appendix D for a copy of the MBS legislation).

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<sup>10</sup>The relatively high percentage of potential revenue which would have been collected for care provided to patients with MBS coverage suggests that if the MBS reimbursed the hospital instead of the Treasury, the reported revenues of the hospital would increase significantly.

<sup>11</sup>All expenses for hospitalization are covered unless the patient elects to stay in a semi-private or private room. In this case the patient must pay for their maintenance (room and board) charges.

For the period 1985 to 1987, payments by the MBS for health and medical services increased from EC\$ 867,000 to 1,510,000, an increase of 60.3 percent in real terms. From 37 to 44 percent of annual payments by the MBS were for prescription drugs, from 25 to 33 percent for surgical benefits, and 4 to 8 percent for overseas treatments. Reimbursement of physicians' fees required 11 to 28 percent of MBS payments, with approximately 80 percent of these going for care to non-government employees. Only 2 to 3 percent of MBS payments went to pay for laboratory tests or radiological services, with over 80 percent to providers in the private sector (see Table 3.9).

#### D. Private Medical Insurance

Private insurance companies active in Antigua which offer health insurance include: British American, Caledonian U.S.I., S.R.O., and State Insurance. Businesses are not required to provide private health insurance, and it is expected that there is little demand for health insurance on the part of individuals given the low charges for services at government facilities, and the potential for coverage under the MBS. Anecdotal information collected regarding commercial health insurance suggests that enrollees have difficulties obtaining reimbursement for their claims.

During a 5 week period in 1987, patients with private insurance comprised only 6.8 percent of patients billed for services at the Holberton Hospital. However payment by insured patients comprised 27.9 percent of revenue collected from patients during this period. Seventy-five (75) percent of the insured patients billed paid their bills in full, as compared to only a 64 percent collection rate for the entire sample (see Table 3.8).<sup>12</sup>

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<sup>12</sup>See also earlier discussion on use of services and charges for insured as compared to other patients at the hospital.

Table 3.9: MEDICAL SERVICES PAYMENTS FROM THE MBS TO PUBLIC AND PRIVATE PROVIDERS AND INSTITUTIONS, 1985 - 1987

(E.C. Dollars)

| TYPE OF SERVICE        | 1985      | % of Total | 1986        | % of Total | 1987        | % of Total |
|------------------------|-----------|------------|-------------|------------|-------------|------------|
| Prescription Drugs     | 322,308   | 37%        | 501,435     | 43%        | 661,738     | 44%        |
| Surgery Benefits       | 215,462   | 25%        | 321,565     | 28%        | 498,618     | 33%        |
| Doctor's Fees          | 242,717   | 28%        | 177,394     | 15%        | 158,945     | 11%        |
| % for Govt Workers     | 20%       |            | 22%         |            | 20%         |            |
| % for Non-Govt Wkrs    | 80%       |            | 77%         |            | 80%         |            |
| Laboratory Tests       | 18,232    | 2%         | 20,983      | 2%         | 19,207      | 1%         |
| % to Hospital          | 9%        |            | 5%          |            | 4%          |            |
| % to Private Labs      | 90%       |            | 94%         |            | 95%         |            |
| Radiography            | 2,168     | 0%         | 2,829       | 0%         | 5,730       | 0%         |
| % to Hospital          | 15%       |            | 21%         |            | 22%         |            |
| % to Private Labs      | 84%       |            | 79%         |            | 78%         |            |
| Overseas Treatments    | 66,879    | 8%         | 53,372      | 5%         | 55,009      | 4%         |
| Maintenance Fees       | 0         | 0%         | 88,320      | 8%         | 87,300      | 6%         |
| Ultrasound             | 0         | 0%         | 0           | 0%         | 24,325      | 2%         |
| TOTAL (Nominal EC\$)   | \$867,764 | 100%       | \$1,165,897 | 100%       | \$1,510,871 | 100%       |
| % Annual Change        | -         |            | 34%         |            | 30%         |            |
| TOTAL (Real 1984 EC\$) | \$804,976 |            | \$1,040,051 |            | \$1,290,240 |            |
| % Annual Change        | -         |            | 29%         |            | 24%         |            |

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Source: Medical Benefits Scheme.

## CHAPTER IV FUTURE OPTIONS AND ALTERNATIVES

The preceding study of the expenditures and revenues of the Holberton Hospital was conducted to assist the Antiguan Ministry of Health to determine ways to achieve cost savings through increasing the efficiency of service delivery and to increase revenue from non-public sources. Various policy options and management alternatives which the government could consider undertaking, and for which USAID's Regional Development Office/Caribbean might provide technical and/or material assistance, are discussed below.

### A. Potential for Cost Savings

#### 1. Wages and Benefits

Over the period from 1985 - 1988, wages for hospital employees (whether in established or non-established positions) increased in real terms by at least 11 percent per annum. Over the same period, expenditures for drugs and other expendable supplies declined. While this study was able to identify that rapid real growth in wages was occurring, insufficient information was collected to determine the source of this growth (e.g. increases in the number of employees, rapid inflation of wages and benefits throughout the government service, or need to increase wages to reduce rates of turnover or emigration of medical personnel). Given that expenditure for wages and benefits equalled 73 percent of total recurrent expenditure for the Holberton Hospital in 1988, further study to determine the causes of rapid wage inflation and to inform recommendations on ways to control inflation in the hospital's total wage bill is recommended.

#### 2. Pharmaceuticals

Until 1986, the procurement of pharmaceuticals and medical supplies in Antigua was carried out by individual public and private sector institutions. During that year, a fund was established with a contribution of EC\$ 900,000 from the MBS. The fund purchased approximately EC\$ 2.6 million in pharmaceuticals and supplies, funded by the initial MBS contribution, 1.2 million dollars from the Treasury, and \$600,000 in accounts payable to vendors. While the centralized purchase of drugs resulted in unit cost savings, the fund was not well managed and is currently not functioning. Antigua has been hampered from joining the Eastern Caribbean Drug Purchasing Scheme because of its present indebtedness. It is estimated that Antigua currently spends from three to five times the proportion of its health care budget for pharmaceuticals as other developing countries.

From 1985 to 1988 from 15 to 27 percent of the operating budget for the Holberton Hospital was spent for the purchase of pharmaceuticals (see Table 3.1). However, it is the judgement of the team that several aspects of the hospital's current drug policy and procurement procedures could be improved to provide cost savings for pharmaceuticals provided by the hospital dispensary. While at present the hospital does not have a hospital formulary, the medical

staff have developed a list of drugs approved for use for patients admitted to the hospital. In principal, other drugs cannot be added to this list without deletion of a similar drug. Further, systems for acquisition of pharmaceuticals and medical supplies are weak, leading to the placement of frequent and small orders, expensive expediting fees, and payment of high prices for supplies from local private retailers. Patients covered by the MBS who cannot fill their prescriptions at government dispensaries obtain drugs at private pharmacies where prices can be up to three times higher.

Given the above, it is recommended that the MOH seek technical assistance from USAID in the following areas. First, a detailed review of the current drug management system of the hospital, assessment of its current strengths and weaknesses, and development of a detailed program of technical assistance needs to be undertaken. This review might require two person-weeks of time from a specialist in the management of drug supply systems in developing countries. It is anticipated that such a review would recommend that Antigua be assisted in entry into the Eastern Caribbean Drug Purchasing Scheme, and as well as training of appropriate hospital and MOH personnel in drug and supplies procurement and management. USAID has provided other Eastern Caribbean countries with assistance in drug supply and management which has resulted in increased efficiency of the drug supply systems in these countries.

### **3. Capital Acquisition**

The Holberton Hospital, in its efforts to improve the quality of medical services provided by the hospital, has recently upgraded the equipment and facilities of the pathology/laboratory and radiology/x-ray departments. Acquisition of equipment for improvement of diagnostic capabilities in cardiology is planned.

The costs of maintaining and operating this new equipment should be carefully considered. The recently acquired CAT scanner will be very expensive to maintain, and will not be able to recoup its cost due to the low volume of examinations and the inability to collect directly and fully for its use from present payment sources.

While clearly some expenditure is required to maintain and upgrade the basic diagnostic capability of the hospital, studies in the U.S. and other developed countries have suggested that the additional benefit to the patient of access to sophisticated diagnostic equipment is small relative to the cost of acquiring and using the technology. Further, given the small population on Antigua and the unlikely probability of referrals from other islands (which have hospital facilities of equal or higher quality), it may be less expensive to treat certain cases abroad than to acquire the equipment to treat them in Antigua. Finally, since many of the physicians who practice at the Holberton Hospital are foreigners on limited term contracts, there is the danger of acquiring equipment that one specialist could use, but that his/her successor could not. Thus, it is recommended that the Ministry of Health appoint an active committee to review and approve/deny requests for the acquisition of new diagnostic and therapeutic equipment and to develop guidelines regarding the medical conditions for which such use of new technology is appropriate.

#### 4. Foreign Evacuations/Referrals

Complicated medical cases which cannot be treated in Antigua are eligible for transfer to medical facilities on other islands or to Canada or the United States. Referrals to be paid by the Treasury or out of the MBS are recommended by the responsible physician and approved by the Chief Medical Officer. Referrals to United States facilities must also be approved by the Cabinet. Political as well as medical criteria appear to have influenced selection for some referrals. Private paying patients can have their case referred outside of Antigua without government approval.

**TABLE 4.1: ANTIGUA: MEDICAL EVACUATIONS AND EXPENDITURE, 1985 - 1988**

|                                               | 1985      | 1986      | 1987      | 1988      |
|-----------------------------------------------|-----------|-----------|-----------|-----------|
| NUMBER OF EVACUATIONS                         | 69        | 77        | 67        | 54        |
| % to E.C. countries                           | 67%       | 67%       | -         | -         |
| GOVERNMENT EXPENDITURE FOR EVACUATIONS (EC\$) | \$386,540 | \$496,742 | \$749,571 | \$760,570 |
| % Expenditure - care in E.C. country          | 63%       | 39%       | -         | -         |
| % of Govt Exp. on Holberton Hospital          | 5%        | 6%        | 8%        | 8%        |
| AVE. EXPENDITURE/EVAC.                        |           |           |           |           |
| in Current EC\$                               | \$5,602   | \$6,451   | \$11,188  | \$14,085  |
| in Real 1984 EC\$                             | \$5,197   | \$5,755   | \$ 9,554  | \$11,536  |
| % Annual Increase                             | -         | 11%       | 66%       | 21%       |

Source: Dr. Jones, Chief Medical Officer, personal communication.

Table 4.1 provides information about the number and cost of medical referrals outside of Antigua between 1985 and 1988. The data clearly show that the average cost of care for referred cases has risen 122 percent in real terms over the four year period. Unfortunately the data are too incomplete to indicate whether this increase is due to either increasing numbers of, or expenditures for, medical care outside of the Eastern Caribbean. Nevertheless, the data show that government expenditure on medical cases referred to other countries has increased from 5 to 8 percent of total government expenditure for the Holberton Hospital. While this level of expenditure suggests that the general issue of medical referrals warrants

further analysis, it is not possible to determine if cost savings would result from investment in trained personnel and capital equipment to treat the conditions referred. It is possible that the development of such a capability would result in higher expenditures from the treatment of those who were previously not treated. While some additional revenue might be derived from referrals into Antigua from other Eastern Caribbean countries, it is not clear whether the acquisition of trained personnel and capital would be sufficient to attract significant numbers of patients to offset the additional costs for the investment.

## B. Potential for Increasing Revenue

### 1. Hospital Fees and Collections

A review of the collections experience of the hospital in late 1987 found that only 45 percent of the patients admitted were billed for their care, only 64 percent of those billed paid some portion of their bill, and only 76 percent of billed charges were collected. Currently patients admitted to the general ward of the hospital are not billed even for room and board, though the current fees are at least five times lower than the estimated average non-medical expenditure per day of EC\$ 170. Further, patients who receive out-patient care from the emergency department after hours are not billed as the hospital does not employ a clerk round-the-clock for this purpose.

At the request of the Ministry of Health, the possibility of collections during the evening and weekend hours was considered. It was noted that the collection practices at the hospital are not especially stringent. The consultants noted a distinct preference among the people of Antigua to obtain their care from private practitioners. The persons who are seeking care in the evening, if they are doing so to avoid payment, are likely to be unable to pay. Since there is an informal policy to give free care to those who cannot purchase it, there would not appear to be a pool of resources to be collected during evenings, nights and weekends sufficient to justify hiring the staff to collect it.

The recommendations made later in this report advise the Minister of Health and the Hospital Director to implement some cost finding and rate setting activities as a part of the implementation of sound financial practices for the hospital. As noted above, within the hospital financial structure, there has been a shift from supplies and pharmaceuticals to the personnel categories of expenditures. This has resulted from two forces. There has been a declining proportion of public money available for health, and salaries for health personnel have continued to increase. One result is the need for increased user fees at the hospital. With the implementation of the financial steps proposed, the hospital will acquire the capability to establish cost-based user fees.

The Ministry of Health has expressed a desire to reduce the burden of the hospital on the treasury. Increased user fees would accomplish this and might also augment the total resources available for the delivery of public health care. Further, user fees can discourage unnecessary utilization of services,

and perhaps improve the supply of public health services by providing additional resources.

A negative aspect is that user fees may also discourage legitimate care seekers from seeking care they cannot afford. Therefore, government policy makers must be aware of this and design specific measures to assure access to care for those indigent persons who may be excluded by higher fees.

In designing a new user fee schedule, it is important not only that the fees be set at a level high enough to make up for the absence of changes since the last fee schedule was implemented, but that they be part of a structure that can continuously and equitably adjust fees so that large increases do not become necessary in the future. This may mean pegging fees to inflation. This is a reasonable practice as long as inflation is low and relatively constant.

It is unlikely that establishing a new fee schedule for the hospital is an activity that will attract the complete support of the hospital and the Ministry of Health unless the fees collected can be kept in accounts reserved for the hospital to use. Also, these accounts must not be used to offset the present and continuing level of hospital funding by the treasury, or no net gain will be made by the hospital, and incentives will be absent. It is important for this control to be left with the hospital as it can use fees generated directly to replenish medical supplies more quickly and at lower costs than now occurs with funding from the Ministry of Finance.

Presently, fees charged at the hospital are small and bear no relation to the cost of services provided. The amount of revenue collected is extremely low in relation to total costs. The new lab, x-ray and CAT scan services will be able to cover even lower portions of their costs. Moreover, these new services will place additional demands on the utilization of hospital services.

The team recommends that the prices to charge in the health sector be set after determining the cost of providing the services and attempting to obtain some approximation of this cost. The approximation can be determined by trial and error, by a survey, or by determining what the persons pay for the service in the private sector and estimating what discount would be reasonable for these services in the public sector.

Once the cost of providing services and private market prices are known, it is possible to estimate reasonable costs. The difficulty would occur with initial resistance as the costs likely to be set will be substantially higher than the current fees. Given the magnitude of the required increase, it may be necessary to phase in the increases over a one or two year period, with additional increases to be based on inflation.

Costs for some items are more suited to one method than another. For example, radiology services and laboratories fees can be approximated from a market survey of private providers. Other costs, such as operating suite and casualty charges, can be approximated by determining overhead with cost finding techniques, and then dividing by the number of cases done. If the

result of this calculation is too high, it is necessary to consider whether all staff in the operating theater are necessary and/or fully occupied, or whether some staff cutbacks may be necessary.

The fee schedule can be subsidized, as it is at present, for frequently used high cost items, or the fee schedule can be still more progressive and subsidize heavily high cost services for which there are no other sources of payment, such as long hospital stays with extensive surgery. The small co-payment fees now in place for a hospital bed should be increased reasonably and the collections should be enforced for those who can pay. The differential for private rooms should be maintained, as this sets up an element of price discrimination. New price changes will need to be monitored for adverse effects or public resistance to avoid unnecessary difficulties.

Some specific examples of changes that the Ministry of Health and Holberton Hospital could consider in the areas of hospital fees and collections appear below:

- o The hospital could institute a charge of at least EC\$ 5 for any visit to the casualty department. Collection of such a fee in 1987 would have resulted in collection of an additional EC\$ 142,000, equal to almost 70 percent of the current level of revenue collected by the hospital for hospital services. Such charges could also serve to deter use of the emergency department for trivial purposes, but would be unlikely to deter use for medical problems given that fees for physicians' office visits in the private sector average EC\$ 50.
- o The hospital could institute a policy of not providing in-patient or out-patient services to any patient who was billed but did not pay for prior services received.
- o The hospital could enforce payment of the current daily fee of EC\$ 5 for room and board in the general ward. Enforcement of this policy in 1987 would have recovered approximately EC\$ 94,700 in revenue, or almost 47 percent of the current fees collected by the hospital. Further, enforcement of the policy would establish an attitude among Antiguans that some payment (though nominal) will be required for hospital care.
- o Given that the average length of stay is nine days, the hospital could require that all patients (with the exception of maternity cases) make a deposit of EC\$ 50 upon admission, with patients in the general ward that stay less than 10 days receiving a refund upon discharge. Charges for medical services (e.g. surgeries, lab tests, or x-rays) could be collected upon discharge.
- o Similarly, the hospital could estimate a minimum charge per normal delivery, and revive its earlier efforts to collect this prior to a woman's admission for a delivery.

It is well known that consumers demand lower quantities of a good in response to an increase in its price, and thus that total revenues may not increase by the full amount of a price increase. Since many of the above recommendations focus principally on changes in collections procedures, and to a lesser extent on changes in price, it would be expected that most of the changes suggested above would not result in a significant decline in the overall level of services demanded from the hospital.

Finally, it should be noted that raising fees is not the only option available for enhancing hospital revenue. Three additional options should be considered and are discussed elsewhere in this report:

- o lowering costs
- o increasing the number of patients (perhaps by improving the public's perception of the hospital so that paying patients who now leave the country for medical care would seek care in Antigua)
- o increasing the proportion of patients who pay

## **2. Hospital Charges for Non-Antiguans**

Data were collected on the number of non-Antiguans who receive medical care. The purpose was to determine if the use of the hospital by tourists would provide a source of significant revenue to the hospital by collecting for services provided from tourists who have health insurance.

In order for charges to be made, rates will have to be established for all services provided by the casualty department. This is a reasonable goal and should be done as the services provided by casualty are upgraded and expanded. As these services become equal to those made in the hospitals in Barbados or St. Lucia, charges comparable to these Caribbean hospitals can be levied.

However, this should not be regarded as a windfall. Analysis of patients visiting Holberton hospital with hotel addresses indicate that the number of these cases is very small. There are not enough to warrant establishing a major collection effort. However, a special procedure should be established at registration to obtain their insurance information through a standard billing form. One individual should be given the responsibility to follow up on these bills so that the hospital could obtain the benefit of their insurance.

It may be appropriate to send staff to other islands or to the U.S. to learn billing and collection procedures. This will not be necessary unless substantial bills are generated by the hospital from a revised fee schedule so that it will be profitable to bill Antiguan patients also.

### 3. Hospital Utilization by Antiguans

The Holberton Hospital is the center of the health care system for many, perhaps most, Antiguans. Many persons leave the island at their own expense to obtain hospital care. Others leave the island at the expense of the Medical Benefits Scheme. Information on these referrals is collected only in medical records and is not easily retrieved for analysis. This is important because money spent outside the country is money that could have been put back into the Holberton Hospital.

To attract the Antiguans to seek medical care at home, better diagnoses are expected to be provided by the additional of new services. People's perception of the hospital is based on what they recognize as quality, or the possession of value. It may also be what they perceive as useful, since their ability to estimate the quality of medical care is that of laymen, not physicians.

If reasonable costs are charged for the services rendered, private patients may be willing to pay for them. But the services must be regarded as equal to off-island services in order to get self-pay patients to stay on Antigua to obtain them.

### 4. Potential Hospital Referrals from Other Islands

The possibility that referrals from other islands could be a significant source of referrals was reviewed. The upgraded services and renovations on Antigua have the potential to attract referrals from other islands. However, no assessment of the potential or epidemiologic base for such referrals was possible.

Referrals from other islands may be sought in order to increase the population base across which the cost of the hospital services can be spread. Some nearby islands may have only limited ability to pay for referrals. However, if they are able to obtain a reasonable health care product, they may consider referrals to Antigua. They would save substantial travel time and expense, and the patients will not be so far removed from their families.

New prices will have to be established for the health services of Antigua. Antigua now has some competitive and technological advantage with their new diagnostic capability. Other islands whose citizens have been treated at the hospital include Barbados, St. Lucia, Anguilla, and Grenada.

The effort to review the extent of charges to persons from other islands did not discover any cases for review. The development of this business will require a survey of the health facilities of the other islands in the area.

To develop awareness of the quality of medical care in Antigua on other islands will also require an investment of time to get other islands to regard Antigua as a source for medical care. This would be time spent providing services to other islands, running clinics and providing care as a marketing effort with no payment expected. It seems unlikely that Antigua would be able to invest in this effort given the scarcity of services in Antigua and

the minimal return probable from the investment. If it were offered as a brotherly support for their poorer neighbors, no financial return would be expected, although good will would be increased.

### C. Management Information Systems

Collection of data for this study was difficult because of weaknesses in the information systems for patient records and utilization, personnel and staffing, and expenditures and revenues. Technical assistance to improve the "paper systems" now in place could provide better quality and more timely information for hospital and MOH administrators. In addition, it would be feasible to place some of the hospital's information systems on microcomputers, provided that sufficient technical assistance was provided to develop a system compatible with the needs of hospital and MOH administrators, and to provide training to hospital staff in the use of microcomputers.

The hospital now operates with a set of ledgers and logs that are used only as a short term paper information record. Data are compiled only by the medical records department for hospital statistics. None of the other data routinely collected in the hospital are used for any management purposes such as:

- o planning staffing needs
- o planning cost projections
- o planning supply or equipment needs
- o planning schedules
- o retrospective analysis of work load

In the absence of a system to record routinely the activities of each hospital department, it is impossible to conduct routine management activities or to understand the financial requirements and activities of the hospital. A management system should have methods to record the following:

- o Inputs which may be in the form of
  - demand for services
  - resource requirements
  - personnel
  - equipment
  - supplies
- o Processes which may be in the form of
  - Scheduling personnel
  - Scheduling tasks and procedures
  - Obtaining equipment, parts and supplies

- o Outputs
  - tasks performed by hospital support departments
  - tests or examinations performed by diagnostic departments
  - treatments provided by therapeutic departments

Beyond these essentials for efficient management is the process of recording the above items as quantities in a hospital cost system. The present hospital financial system has been described above. The absence of a method to group costs in categories to form a hospital budget was overcome in this paper by the method of grouping specifically known costs in departmental areas. Then average costs were assigned to the outputs such as admissions and patient days to estimate costs. The resulting rough estimates were useful to describe the overall hospital cost picture. However, they are no replacement for using real hospital data for management purposes.

The acquisition of real data for management would enable the hospital administration to begin the following activities:

- o Instruct hospital department heads in financial management and control
- o Begin to hold supervisors accountable for the costs incurred by their departments
- o Establish a hospital budget based on demands for services and then expect department heads to provide services within real cost limits
- o Conduct departmental planning by projecting departmental resource needs for services based on actual services to be provided, using real cost data
- o Establish costs per unit of service based on a ratio of departmental inputs and departmental production (output) statistics.

In order to move toward this goal, the following steps should be considered:

- o Adoption of the hospital budget categories proposed in this paper as a basic document that incorporates present Holberton Hospital management practices, and then modification of these categories by adding indirect and other costs to departmental totals.
- o Adoption of a Standardized Chart of Accounts and standardized budget categories such as the ones available from the American Hospital Association for implementation at the Holberton Hospital
- o Adoption of a method to categorize costs and implement cost ratios using a set of departmental ratios such as those provided by the Monitrends service of the American Hospital Association. This specific service may be beyond the present needs of the Holberton Hospital. However, a subscription to the service would provide a low cost management orientation to the kind of information required

to manage a hospital effectively. This service would provide a way to learn quickly the requirements of a system that would provide a departmental cost system and a method for determining the cost of units of production from the various departments.

- o Adoption of a standard hospital budgeting and accounting package that would be flexible enough to allow it to be tailored to operate within the relatively simple structure of the Holberton Hospital.
- o Obtaining minimal data processing capability to simplify and routinize the use of the hospital systems recommended above. This could be a personal computer with 640K of RAM and a 40 megabyte hard drive. The cost would be reasonable.
- o The other ingredient necessary to complete this package is an individual skilled in computers and experienced in financial management, preferably hospital financial management. A person who is skilled in financial management could obtain hospital training courses to learn the unique aspects of this environment.

These strategies would provide the Holberton Hospital with the capability to:

- o Determine the level of financial need it will have for a reasonable number of years, based on real patient need data and real historical experience
- o Achieve better control of the costs of the services now provided
- o Achieve improved productivity from the resources and staff now available
- o Train hospital department heads
- o Obtain accountability from the hospital department heads for the resources assigned to their trust
- o Establish a basis for improved future hospital budgeting and the ability to have staff trained in finance to interact with the Ministry of Finance on behalf of the hospital
- o Establish the basis for creating a realistic and equitable fee structure and a sound basis for assuring that fees can be raised realistically to reflect increasing costs
- o Establish a basis for estimating the amount of the subsidy of the hospital that will be required to maintain a predetermined level of services at the hospital.

## **D. Other Issues**

### **1. Role of Physicians and Administration in Allocating Hospital Inputs and Expenditure**

While the government budgetary authorities in Antigua determine the level of overall public expenditure for the Holberton Hospital, the hospital administration and physicians have a great deal of discretion in the allocation of resources between patients and departments and some discretion in the allocation of resources between inputs. Although it was beyond the scope of this study to examine the decision-making structures and processes of these groups regarding the distribution of resources, some detailed consideration is warranted in the process of developing new policy and/or procedures aimed at reducing costs or increasing revenues of the hospital.

### **2. Role of Financing Policy in Influencing the Quantity, Quality and Costs of Hospital Services**

The current Antiguan government policy of turning over all revenue collected by the hospital to the treasury and of not linking hospital revenues to their budgetary allocation does not provide financial incentives to the administration of the hospital to carry out collections procedures so as to maximize the revenue of the hospital. Review of the collections records of the hospital suggested that many patients who could pay were not billed, and some of those who were billed were not required to pay. It has been observed in other settings that, when a facility is allowed to keep part or all of the revenue generated from their services, revenue collections increase. While a portion of this increase would be due to more thorough billing and collection procedure, a portion could be due to an increase in the number of procedures for which patients are billed (e.g. in the number of lab tests ordered per patient). This example is provided to raise the issue that financing policy can have a direct effect on the quantity and quality of services provided, and thus on the cost of patient care.

### **3. Hospital Management**

This report required a review of hospital administrative practices in order to locate data. Therefore, some suggestions are offered to routinize record keeping to improve financial management at the hospital.

The area of materials management at the hospital should receive a review. There are few routine purchases made through low cost procurement sources in acquiring materials for the hospital. Steps to improve this process could provide increased value to the hospital for many of its expenditures. The Laboratory and Radiology Departments have recently been replaced and are capable of providing modern clinical services. However, the full scope of their services is not available because of lack of necessary supplies. The Nursing Department is well staffed, but could also benefit from a more consistent source of supplies.

In the following areas of hospital management, some basic changes in the

ways the hospital is funded would enable the hospital administration to operate the hospital at lower cost:

- o While the personnel budget of the hospital is relatively stable, and the present hospital services seem adequately staffed, there are not adequate, assured, consistent levels of financial support to provide funds for hospital supplies and equipment.
- o Planning has not been completed on the level of funding needed to operate the new radiology and laboratory or the planned cardiology service.

#### **4. Attitudes Toward Holberton Hospital**

In conversation with a number of Antiguans, the consultants noted that some of the populace of Antigua seem dissatisfied with the services provided by the hospital. A survey could be done to determine the extent of this dissatisfaction and to learn which aspects of the hospital are not appealing to the public. Then, appropriate remedies could be put in place and a public relations program undertaken to enhance the image of the hospital.

The timing of a public relations effort can be critical. It would be more effective to undertake the survey as part of the completion of the hospital renovations. The survey could be described as a step toward increasing the extent to which the hospital can meet the needs of the public. A firm schedule for improvements will be required before beginning a public relations program because if improvements promised are not soon made apparent, public confidence in the hospital will not improve.

The current improvements in the physical plant and appearance of the hospital can be supplemented with staff training in effective ways to make sick people and their families comfortable and satisfied with services of the hospital. The staff can be encouraged to take pride in the hospital and take personal satisfaction from knowing they work for a hospital which has the confidence of the community. Focusing on these items of motivation and interest can:

- o improve attitudes of staff
- o improve the quality of patient care
- o improve the outcomes of treatment
- o improve the utilization of the hospital
- o improve the community perception of the hospital

#### **5. Issues in Regard to Access to Government Funded Health Care Services**

In the past, a substantial amount of health care services and pharmaceuticals have been provided free in Antigua by the Health Department or

through the Medical Benefits Scheme. Although there is a growing private sector, as medical care is becoming more costly the demands on the government to maintain the previous level of care is straining available resources. Further, there is a desire to upgrade the health services by replacing old services and adding new ones.

Devising plans to accomplish these goals is challenging because of competition for capital in Antigua. There are many public programs competing for government resources. Capital investment in the hospital setting must also consider costs of personnel and supplies to provide the services, as all new diagnostic or therapeutic services will require additional staff, supplies, and maintenance and other overhead costs.

Historically in Antigua, ability to pay for services has not been considered a barrier to health care. Costs have been borne by the government either due to the poverty of recipients or through a generous interpretation of existing entitlement programs. Now costs are increasing and tax revenues are not adequate to meet all historic commitments.

#### 6. State Health Insurance Schemes

Various state health insurance schemes have been proposed to provide some incentive to recipients to value the care they receive. A typical co-payment scheme discussed with the Permanent Secretary would have three categories of beneficiaries:

- o Those certified eligible for charity care because of their indigent status.
- o Those persons who may be only medically indigent (those people who are either eligible for the services of the scheme because of their payment status or because of their diagnosis).
- o Those persons who will be eligible because of their self-sufficiency. This latter group are unlikely users of government medical services except in cases of emergency until the reputation and scope of state provided services are improved.

If any of these were adopted they would provide sure justification for the establishment of a collections procedure for the co-payments levied.

#### E. Future Studies

##### 1. Costing of Diagnostic Departments

A more extensive effort could be undertaken to project the actual costs of full implementation of the departments of laboratory and radiology, including maintenance of their new equipment. As an initial step, an equipment list could be taken to a radiology supplier along with an estimate of the number of each type of procedure. The supplier could then project the monthly supply levels based on projected patient utilization.

The estimation of the number of patients requiring treatment is more complex because:

- o Some patients have examinations at the hospital, but there is no definitive record of the test having occurred, and there is no permanent record of the test findings.
- o Many patients who might obtain services at the hospital if it were equipped, supplied, staffed and operating well choose to obtain these services from local radiologists, or to leave Antigua to obtain medical services.

Average numbers for a population the size of Antigua could be proposed. They could be based on an estimate of the average level of utilization of procedures based on the morbidity of the country. A study of this type could be useful for Antigua. However it would have no meaning unless:

- o The projections of funds needed and services to be staffed could be funded.
- o The availability of these services could be made known to the populace.
- o A financial structure could be devised whereby those persons who can afford to pay for care would pay for it as though they were paying for it in another country.
- o The population's confidence in its health system could be raised to the point that they would believe that the care they are obtaining is equal to that obtained abroad.
- o The government or the government and some private sector company were willing to invest sufficient funds in the health care system that the services would be acceptable to all segments of the population.

To project optimal use for the department, it will be necessary to determine:

- o A minimal level of staffing and maximum projected demand from all sources. This will be based on minimal coverage given the volume of services required. It would also consider the qualifications of the personnel and the numbers of staff needed for coverage.
- o The construction costs for the recent renovations
- o The capital equipment costs, presently available in aggregate estimates only.

**APPENDICES**

**APPENDIX A  
PERSON CONTACTED**

Mr. Henson Barnes  
Permanent Secretary  
Ministry of Health

Mr. Barthley  
State Insurance Office

Mr. Benjamin  
Medical Stores  
Holberton Hospital

Mr. David Browne  
Collections Officer  
Holberton Hospital

Ms. Leona Browne  
Assistant Hospital Registrar  
Holberton Hospital

Mr. Kennedy Edwards  
Statistical Officer  
Ministry of Health

Ms. Sonia Edwards  
Medical Benefits Scheme

Mr. Elmeade Jarvis  
Controller  
Medical Benefits Scheme

Dr. T.R. Jones  
Chief Medical Officer  
Ministry of Health

Mr. Denfield Knowles  
Senior Radiographer  
Radiology Department  
Holberton Hospital

Dr. Cuthwyn Lake  
Medical Superintendent  
Holberton Hospital

Ms. Doreen Mason  
Matron  
Holberton Hospital

Mr. George Nathan  
Hospital Registrar  
Holberton Hospital

Mr. Nathan  
Chief Medical Laboratory Technician  
Holberton Hospital

Ms. Sheila Pigott  
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Dr. Eumuel H.C. Samuel  
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Ms. Marilyn Simon  
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Holberton Hospital

Dr. L. Simon  
Pathology Consultant  
Holberton Hospital

Mr. Sowerby  
Storekeeper  
Holberton Hospital

Dr. Barnaby Thwaites  
Cardiologist Consultant  
Holberton Hospital

Mr. Warner  
Medical Benefits Scheme

Mr. Foster Williams  
Hospital Steward  
Holberton Hospital

**APPENDIX B  
ADDITIONAL TABLES**

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Table B.1: ANNUAL EXPENDITURE BY BUDGET LINE ITEM, HOLBERTON HOSPITAL,  
1985 - 1988  
(E.C. Dollars)

| ITEM                     | 1985 1/     | 1986 1/     | 1987 1/     | 1988 2/     |
|--------------------------|-------------|-------------|-------------|-------------|
| WAGES AND BENEFITS       | \$3,948,539 | \$4,831,950 | \$5,793,192 | \$6,732,356 |
| Personal Emoluments      | \$2,820,199 | \$3,545,604 | \$4,426,403 | \$5,327,704 |
| Wages - Non-estab.       | \$1,014,145 | \$1,093,105 | \$1,220,739 | \$1,239,858 |
| Benefits - Non-Estab.    | \$60,398    | \$126,874   | \$78,144    | \$113,472   |
| House Rent Allowance     | \$21,800    | \$31,776    | \$38,948    | \$23,250    |
| Vacation and Sick Leave  | \$24,247    | \$23,791    | \$17,133    | \$23,546    |
| Allowance to Lecturers   | \$7,750     | \$10,800    | \$11,825    | \$4,525     |
| UTILITIES                | \$104,638   | \$153,273   | \$153,984   | \$121,670   |
| Fuel and Lighting        | \$33,948    | \$41,255    | \$52,719    | \$29,881    |
| Sanitary Services        | \$70,690    | \$112,018   | \$101,266   | \$91,989    |
| MAINTENANCE - BLDG/GRNDS | \$6,409     | \$6,524     | \$22,767    | \$16,009    |
| Hospital Grounds         | n.a.        | \$670       | \$4,948     | \$8,912     |
| Nurses Hostel            | \$6,409     | \$5,854     | \$17,819    | \$7,097     |
| MAINTENANCE - EQUIPMENT  | \$184,969   | \$243,935   | \$178,304   | \$155,672   |
| Surgical Theatre         | \$36,261    | \$22,508    | \$12,273    | \$36,573    |
| Dialysis Machine         | \$10,000    | \$0         | \$0         | \$0         |
| X-ray Unit               | \$78,827    | \$135,537   | \$100,031   | \$91,449    |
| Tools and Materials      | \$59,900    | \$85,890    | \$66,000    | \$27,651    |
| DRUGS & MEDICAL SUPPLIES | \$1,886,435 | \$2,021,542 | \$1,502,882 | \$1,429,730 |
| Purchase of Blood        | \$50        | \$0         | \$0         | \$0         |
| Drugs                    | \$1,709,337 | \$1,741,057 | \$1,227,684 | \$1,079,760 |
| Instruments              | \$2,730     | \$1,727     | \$3,452     | \$21,202    |
| Laboratory Expenses      | \$75,568    | \$114,652   | \$120,024   | \$156,938   |
| Oxygen Supply            | \$98,750    | \$150,646   | \$151,142   | \$171,758   |
| Surgical Dressing        | \$0         | \$13,459    | \$580       | \$72        |
| OTHER SUPPLIES           | \$820,081   | \$935,699   | \$946,600   | \$672,658   |
| Food and Catering        | \$599,217   | \$727,086   | \$693,423   | \$510,751   |
| Library                  | \$191       | \$3,512     | \$601       | \$185       |
| Clothing and Bedding     | \$69,399    | \$26,651    | \$62,059    | \$350       |
| Clothing - Protective    | \$4,995     | \$4,861     | \$5,607     | \$4,911     |
| Offices and Wards        | \$62,094    | \$86,514    | \$75,353    | \$41,593    |
| Uniforms Petty Officers  | \$11,704    | \$13,782    | \$9,417     | \$12,552    |
| Uniforms - RNs/Domestic  | \$72,482    | \$73,294    | \$100,140   | \$102,317   |

| ITEM                    | 1985        | 1986        | 1987        | 1988        |
|-------------------------|-------------|-------------|-------------|-------------|
| SERVICES                | \$5,826     | \$5,779     | \$7,619     | \$8,297     |
| Funeral Expenses        | \$5,307     | \$5,551     | \$6,941     | \$8,297     |
| Barbering Poor Patients | \$519       | \$228       | \$678       | \$0         |
| TRANSPORTATION          | \$56,152    | \$73,575    | \$79,611    | \$81,921    |
| Travelling Allowance    | \$17,949    | \$28,225    | \$41,308    | \$36,389    |
| Running of Vehicles     | \$38,203    | \$45,350    | \$38,304    | \$45,532    |
| MISC DEPARTMT EXPENSES  | \$35,568    | \$60,076    | \$48,741    | \$56,379    |
| Administrative General  | \$180       | \$0         | \$105       | \$0         |
| General Office Expenses | \$9,780     | \$13,477    | \$15,179    | \$4,586     |
| Intensive Care Unit     | \$0         | \$1,399     | \$9,943     | \$20,326    |
| Laundry Expenses        | \$9,124     | \$20,784    | \$2,219     | \$8,931     |
| Ctrl Supply Sterile Dpt | \$12,684    | \$19,436    | \$15,854    | \$17,389    |
| Nursing School          | \$3,801     | \$4,981     | \$5,440     | \$5,148     |
| CAPITAL EXPENDITURE     | \$239,050   | \$120,193   | \$237,666   | \$46,659    |
| Minor Works             | \$0         | \$0         | \$0         | \$309       |
| Equipment - Medical     | \$0         | \$48,599    | \$199,051   | \$46,351    |
| Equipment - Non-medical | \$239,050   | \$71,594    | \$38,615    | \$0         |
| GRAND TOTAL             | \$7,287,686 | \$8,452,546 | \$8,971,367 | \$9,321,351 |

Notes:

- 1/ Actual expenditures, January 1 - December 31.
- 2/ Actual expenditures, January 1 - September 30.

Source: Holberton Hospital Monthly Statements of Expenditure, 1985 - 1988

Table B.2: ALLOCATION OF DEPARTMENTAL BUDGET BY LINE ITEM, HOLBERTON HOSPITAL  
1985- 1988

|                                     | 1985             | 1986             | 1987             | 1988             |
|-------------------------------------|------------------|------------------|------------------|------------------|
| <b>ADMINISTRATION</b>               |                  |                  |                  |                  |
| <b>(inc. Registrar and Finance)</b> |                  |                  |                  |                  |
| -----                               |                  |                  |                  |                  |
| 1.01 Medical Superintendent         | 9                | 30,735           | 33,405           | 41,234           |
| 1.02 Hospital Administrator         | 18,034           | 17,211           | 21,713           | 23,682           |
| 1.03 Assistant Secretary            | 15,623           | 30,103           | 34,602           | 37,692           |
| 1.04 Secretary to Medical Super     | 0                | 9,289            | 11,470           | 12,970           |
| 1.06 Library Technician             | 7,420            | 7,686            | 9,896            | 11,255           |
| 2.01 Statistical Officer II         | 9,859            | 10,109           | 12,684           | 14,329           |
| 2.02 Medical Secretary              | 8,115            | 8,508            | 11,029           | 12,511           |
| 2.03 Collections Officer I          | 0                | 0                | 11,470           | 12,970           |
| 2.04 Collections Officer II         | 7,626            | 7,686            | 9,751            | 11,255           |
| 2.05 Statistical Officer IV         | 5,256            | 5,227            | 6,698            | 8,041            |
| 3.01 Hospital Steward               | 12,737           | 12,667           | 15,423           | 17,215           |
| 3.02 Senior Executive Officer       | 0                | 0                | 13,558           | 15,229           |
| 3.03 Chief Petty Officer            | 8,862            | 8,815            | 11,029           | 12,511           |
| 3.04 Senior Clerk                   | 7,858            | 8,166            | 29,404           | 33,897           |
| 3.05 Petty Officer III              | 11,404           | 11,383           | 16,142           | 19,633           |
| 3.06 Junior Clerk                   | 41,375           | 28,813           | 54,132           | 66,556           |
| 3.07 Clerical Assistant             | 19,296           | 17,753           | 18,276           | 25,968           |
| 3.08 Cashier's Allowance            | 258              | 228              | 300              | 234              |
| 4.01 Telephone Operator             | 21,022           | 20,909           | 26,792           | 32,163           |
| 6.08 Petty Officer II               | 38,077           | 38,448           | 49,803           | 59,884           |
| 1.50 28. Administrative General     | 180              | 0                | 105              | 0                |
| 1.51 2. Travelling Allowance        | 17,949           | 28,255           | 41,308           | 36,389           |
| 1.52 5. General Office Expenses     | 9,780            | 13,477           | 15,179           | 4,586            |
| 1.53 80. Purchase of Duplicatin     | 4,285            | 0                | 0                | 0                |
| 1.54 81. Purchase of Filing Cab     | 0                | 1,785            | 0                | 0                |
| 1.55 87. Purchase of Photocopy      | 0                | 8,000            | 0                | 0                |
| 3.50 31. Uniform Petty Officers     | 11,704           | 13,782           | 9,417            | 12,552           |
| 3.51 76. Purchase of Calculator     | 1,095            | 1,125            | 1,380            | 0                |
| 5.54 33. Library                    | 191              | 3,512            | 601              | 185              |
| 8.50 17. Supplies Offices & War     | 62,094           | 86,514           | 75,353           | 41,593           |
| <b>SUB-TOTAL ADMINISTRATION</b>     | <b>\$277,822</b> | <b>\$340,161</b> | <b>\$464,967</b> | <b>\$522,755</b> |
| <b>FOOD SERVICE</b>                 |                  |                  |                  |                  |
| -----                               |                  |                  |                  |                  |
| 11.01 Dietician                     | 13,026           | 12,667           | 17,996           | 19,558           |
| 11.02 Food Service Supervisor       | 10,511           | 10,218           | 12,684           | 14,329           |
| 11.03 Cook I                        | 11,026           | 10,973           | 14,150           | 17,056           |
| 11.04 Cook II                       | 5,049            | 5,027            | 6,456            | 6,185            |
| 11.51 82. Purchase of Gas Stove     | 2,695            | 2,695            | 1,209            | 0                |
| 11.52 85. Purchase of Kitchen Eq    | 0                | 5,306            | 0                | 0                |
| 11.53 6. Food & Catering            | 599,217          | 727,086          | 693,423          | 510,751          |
| 15.57 84. Purchase of Ice Machin    | 0                | 10,000           | 0                | 0                |
| <b>SUB-TOTAL FOOD SERVICE</b>       | <b>\$641,525</b> | <b>\$783,972</b> | <b>\$745,918</b> | <b>\$567,879</b> |

|                                                          | 1985             | 1986             | 1987             | 1988             |
|----------------------------------------------------------|------------------|------------------|------------------|------------------|
| <b>HOUSEKEEPING and MAINTENANCE</b>                      |                  |                  |                  |                  |
| -----                                                    |                  |                  |                  |                  |
| 4.02 Domestic Aide                                       | 177,059          | 182,671          | 243,854          | 295,238          |
| 4.03 Housekeeper                                         | 10,511           | 0                | 0                | 0                |
| 15.01 Petty Officer I                                    | 8,007            | 7,076            | 8,990            | 10,562           |
| 15.02 Sewage Plant Operator                              | 6,183            | 6,147            | 7,842            | 9,390            |
| 15.03 Engineer III                                       | 25,351           | 25,043           | 31,056           | 35,049           |
| 15.04 On-Call Allowance to Maint                         | 0                | 2,732            | 3,062            | 2,811            |
| 8.58 88. Purchase of Water Cool                          | 0                | 1,980            | 0                | 0                |
| 15.50 7. Fuel & Lighting                                 | 33,948           | 41,255           | 52,719           | 29,681           |
| 15.51 12. Sanitary Services                              | 70,690           | 112,018          | 101,266          | 91,989           |
| 15.52 13. Running of Vehicles                            | 38,203           | 45,350           | 38,304           | 45,532           |
| 15.53 22. Protective Clothing                            | 4,995            | 4,861            | 5,607            | 4,911            |
| 15.54 27. Maintenance of Tools<br>& Purchase of Material | 59,900           | 85,890           | 66,000           | 27,651           |
| 15.55 38. Upkeep Hospital Ground                         | 0                | 670              | 4,948            | 8,912            |
| 15.56 39. Minor Works                                    | 0                | 0                | 0                | 309              |
| 15.58 41. Purchase of Equipment,<br>Furniture & Fittings | 200,000          | 11,390           | 8,000            | 0                |
| 15.59 42. Purchase - AirCon Unit                         | 24,985           | 24,585           | 24,585           | 0                |
| <b>SUB-TOTAL HOUSEKRP/MAINTENANCE</b>                    | <b>\$659,831</b> | <b>\$551,667</b> | <b>\$596,234</b> | <b>\$562,035</b> |
| <b>LAUNDRY</b>                                           |                  |                  |                  |                  |
| -----                                                    |                  |                  |                  |                  |
| 8.11 Supervisor Central Sterile                          | 7,420            | 7,686            | 9,896            | 14,412           |
| 14.01 Laundry Foreman                                    | 5,977            | 5,947            | 6,526            | 9936             |
| 14.02 Seamstress                                         | 15,148           | 15,081           | 19,367           | 21,704           |
| 8.52 30. Central Supply Sterile                          | 12,684           | 19,436           | 15,854           | 17,389           |
| 14.50 8. Clothing & Bedding                              | 69,399           | 26,651           | 62,059           | 350              |
| 14.51 15. Laundry Expenses                               | 9,124            | 20,784           | 2,219            | 8,931            |
| <b>SUB-TOTAL LAUNDRY</b>                                 | <b>\$119,752</b> | <b>\$95,584</b>  | <b>\$115,921</b> | <b>\$72,722</b>  |
| <b>MEDICAL DEPARTMENTS</b>                               |                  |                  |                  |                  |
| -----                                                    |                  |                  |                  |                  |
| <b>Anesthesiology</b>                                    |                  |                  |                  |                  |
| 5.04 Anaesthetist Consultant I                           | 21,641           | 20,654           | 26,804           | 29,717           |
| 5.10 Anaesthetist                                        | 39,778           | 37,975           | 50,962           | 56,435           |
| 8.21 Nurse Anaesthetist                                  | 13,026           | 12,667           | 17,108           | 0                |
| 5.52 19. Oxygen Supply                                   | 98,750           | 150,646          | 151,142          | 171,758          |
| <b>Sub-total</b>                                         | <b>\$173,194</b> | <b>\$221,942</b> | <b>\$246,015</b> | <b>\$257,910</b> |
| <b>Emergency Medicine</b>                                |                  |                  |                  |                  |
| 5.11 Senior Casualty Officer                             | 19,580           | 18,687           | 24,426           | 27,187           |
| 5.24 Casualty Allow - House Off                          | 34,350           | 30,355           | 38,274           | 35,143           |
| <b>Sub-total</b>                                         | <b>\$53,930</b>  | <b>\$49,042</b>  | <b>\$62,700</b>  | <b>\$62,329</b>  |

|                                  | 1985      | 1986      | 1987      | 1988      |
|----------------------------------|-----------|-----------|-----------|-----------|
| <b>General Medicine</b>          |           |           |           |           |
| 5.05 Physician Consultant I      | 43,281    | 20,654    | 26,804    | 29,717    |
| 5.09 Physician Consultant II     | 0         | 18,911    | 25,481    | 28,217    |
| 5.12 Senior House Officer        | 9,460     | 18,687    | 23,831    | 26,156    |
| 5.13 House Officer               | 190,644   | 254,730   | 322,083   | 351,748   |
| 6.05 Allowance to E.C.G. Tech    | 1,546     | 1,366     | 20,413    | 18,743    |
| Sub-total                        | \$244,931 | \$314,348 | \$418,612 | \$454,581 |
| <b>Obstetrics/Gynecology</b>     |           |           |           |           |
| 5.02 Obstetrician Gynaecologist  | 21,641    | 20,654    | 26,804    | 29,717    |
| 5.03 Obstetrician Gynaecologist  | 0         | 37,823    | 50,962    | 56,435    |
| Sub-total                        | \$21,641  | \$58,477  | \$77,766  | \$86,152  |
| <b>Orthopedics/Physiotherapy</b> |           |           |           |           |
| 5.08 Orthopaedic Surgeon         | 0         | 0         | 26,804    | 29,717    |
| 6.01 Physiotherapist             | 11,336    | 12,248    | 14,930    | 16,672    |
| 6.02 Orthopaedic Technician      | 10,236    | 10,117    | 23,869    | 27,290    |
| 6.04 Trainee Orthopaedic Tech.   | 0         | 0         | 8,077     | 9,746     |
| 8.56 83. Purchase of Wheel Chair | 0         | 4,464     | 0         | 6,011     |
| Sub-total                        | \$21,572  | \$22,366  | \$73,680  | \$83,425  |
| <b>Pathology and Laboratory</b>  |           |           |           |           |
| 6.06 Allowance to Lab/x-ray Tec  | 12,881    | 11,383    | 17,011    | 15,619    |
| 12.00 Pathologist Consultant I   | 21,641    | 20,654    | 26,804    | 29,717    |
| 12.01 Fees to Pathologist        | 0         | 53,122    | 59,537    | 54,667    |
| 12.03 Senior Medical Lab. Tech.  | 0         | 0         | 21,971    | 30,457    |
| 12.04 Medical Laboratory Tech.   | 49,052    | 49,812    | 73,507    | 82,787    |
| 12.06 Laboratory Assistant       | 17,003    | 12,147    | 10,919    | 15,182    |
| 12.07 Mortuary Attendant         | 7,913     | 7,301     | 8,990     | 10,562    |
| 12.08 Trainee Medical Lab. Tech. | 0         | 0         | 8,990     | 9,840     |
| 12.09 Trainee Laboratory Tech.   | 0         | 0         | 8,223     | 9,840     |
| 12.10 Chief Medical Lab. Tech.   | 15,623    | 13,086    | 15,917    | 17,759    |
| 5.51 11. Funeral Expenses        | 5,307     | 5,551     | 6,941     | 8,297     |
| 6.50 35. Upkeep Dialysis Machin  | 10,000    | 0         | 0         | 0         |
| 12.50 16. Laboratory Expenses    | 75,568    | 114,652   | 120,024   | 156,938   |
| 12.51 29. Purchase of Blood      | 50        | 0         | 0         | 0         |
| 12.52 77. Purchase of Refrigerat | 5,990     | 4,728     | 3,441     | 0         |
| 12.53 89. Purchase of Laboratory | 0         | 44,135    | 0         | 0         |
| Sub-total                        | \$208,146 | \$325,188 | \$365,263 | \$426,045 |
| <b>Pediatrics</b>                |           |           |           |           |
| 5.07 Pediatrics Consultant I     | 21,641    | 20,654    | 26,804    | 29,717    |
| 8.19 Pediatric Nurse Practitnr   | 0         | 0         | 0         | 17,309    |
| Sub-total                        | \$21,641  | \$20,654  | \$26,804  | \$47,026  |

|                                                                 | 1985               | 1986               | 1987               | 1988               |
|-----------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Radiology</b>                                                |                    |                    |                    |                    |
| 7.01 Radiologist                                                | 21,641             | 41,308             | 53,607             | 29,717             |
| 7.02 Consultant Radiologist                                     | 21,641             | 19,124             | 26,804             | 29,717             |
| 7.03 Senior Radiographer                                        | 14,118             | 13,724             | 16,119             | 18,012             |
| 7.04 Radiographer                                               | 22,465             | 21,838             | 32,940             | 31,601             |
| 7.05 Trainee Radiographer/X-Ray                                 | 20,404             | 13,660             | 9,369              | 10,918             |
| 7.06 Darkroom Assistant                                         | 5,874              | 5,846              | 7,463              | 8,940              |
| 7.07 Pers. Allow. to Radiologist                                | 1,455              | 1,286              | 8,614              | 10,128             |
| 7.10 On-Call Allowance to X-Ray                                 | 0                  | 6,830              | 0                  | 0                  |
| 7.50 14. Upkeep of X-Ray Unit                                   | 78,827             | 135,537            | 100,031            | 91,449             |
| Sub-total                                                       | \$186,424          | \$259,152          | \$254,947          | \$230,481          |
| <b>Surgery</b>                                                  |                    |                    |                    |                    |
| 5.01 Surgeon Specialist I                                       | 43,281             | 41,308             | 53,607             | 59,434             |
| 5.06 Ophthalmologist Consultant                                 | 21,641             | 20,654             | 26,804             | 29,717             |
| 6.07 Operating Room Attendant                                   | 0                  | 0                  | 7,694              | 8,041              |
| 5.50 10. Instruments                                            | 2,730              | 1,727              | 3,452              | 21,202             |
| 5.55 25. Upkeep Theatre Unit                                    | 36,261             | 22,508             | 12,273             | 36,573             |
| 6.50 36. Expenses I.C.U.                                        | 0                  | 1,399              | 9,943              | 20,326             |
| 6.54 79. Purchase Equipment ICU                                 | 0                  | 0                  | 0                  | 14,473             |
| 13.50 34. Surgical Dressing                                     | 0                  | 13,459             | 580                | 72                 |
| 15.60 Operating Theatre                                         | 0                  | 24,585             | 61,196             | 0                  |
| Purchase - Theatre Equip                                        | 0                  | 0                  | 137,855            | 1                  |
| Sub-total                                                       | \$103,913          | \$125,639          | \$313,404          | \$189,838          |
| <b>Personnel - Not Department Specific</b>                      |                    |                    |                    |                    |
| 5.15 Fees to Consultants, Surgeons,<br>Physicians and Anaesthet | 85,876             | 75,888             | 110,569            | 195,238            |
| 5.21 Special Duty Allowance                                     | 6,183              | 5,464              | 6,124              | 5,623              |
| 5.22 Personal Allowance to Doct                                 | 14,216             | 12,563             | 16,538             | 15,575             |
| 6.51 20. Allowance to Lecturers                                 | 7,750              | 10,800             | 11,825             | 4,525              |
| 6.53 21. House Rent Allowance                                   | 21,800             | 31,776             | 38,948             | 23,250             |
| Sub-total                                                       | \$135,825          | \$136,491          | \$184,003          | \$244,212          |
| <b>SUB-TOTAL MEDICAL DEPARTMENTS</b>                            | <b>\$1,171,217</b> | <b>\$1,533,299</b> | <b>\$2,023,194</b> | <b>\$2,081,998</b> |
| <b>NURSING</b>                                                  |                    |                    |                    |                    |
| 8.01 Matron                                                     | 17,519             | 16,720             | 21,713             | 23,682             |
| 8.02 Deputy Matron                                              | 14,757             | 14,771             | 19,213             | 21,208             |
| 8.04 Infection Control Nurse                                    | 0                  | 0                  | 0                  | 17,309             |
| 8.05 Night Supervisor                                           | 39,077             | 39,328             | 52,537             | 58,328             |
| 8.06 Staff Nurse I                                              | 0                  | 150,669            | 202,872            | 233,939            |
| 8.07 Staff Nurse II                                             | 549,227            | 542,401            | 733,418            | 842,230            |
| 8.08 Nursing Assistant                                          | 133,554            | 292,322            | 399,958            | 466,417            |
| 8.09 Ward Attendant                                             | 178,690            | 236,277            | 324,255            | 404,003            |

|                                            | 1985               | 1986               | 1987               | 1988               |
|--------------------------------------------|--------------------|--------------------|--------------------|--------------------|
| 8.10 Ward Sister                           | 143,797            | 158,169            | 186,885            | 213,388            |
| 8.13 Supervisor of Orderlies               | 7,111              | 7,076              | 8,990              | 10,562             |
| 8.14 Asst. Supervisor Orderlies            | 5,513              | 5,795              | 8,990              | 16,981             |
| 8.15 Orderlies                             | 72,256             | 71,634             | 93,130             | 111,801            |
| 8.16 Allowance to Night Nurses             | 515                | 455                | 2,041              | 1,874              |
| 8.17 Departmental Sister                   | 93,524             | 93,846             | 123,857            | 135,867            |
| 8.18 Home Sister (Warden)                  | 12,593             | 12,248             | 16,317             | 18,509             |
| 8.20 Allowance to Supv of Ord              | 0                  | 0                  | 0                  | 0                  |
| 8.51 18. Barbering Pauper Patie            | 519                | 228                | 678                | 0                  |
| 8.53 32. Upkeep Nurses Hostel              | 6,409              | 5,854              | 17,819             | 7,097              |
| 8.54 37. Uniform Nursing & Dome            | 72,482             | 73,294             | 100,140            | 102,317            |
| 8.59 89. Purchase of Stretchers            | 0                  | 0                  | 0                  | 25,867             |
| <b>SUB-TOTAL NURSING</b>                   | <b>\$1,347,542</b> | <b>\$1,721,087</b> | <b>\$2,312,812</b> | <b>\$2,711,378</b> |
| <b>NURSING SCHOOL</b>                      |                    |                    |                    |                    |
| 9.01 Principal Tutor                       | 16,055             | 15,326             | 20,539             | 22,445             |
| 9.02 Sister Tutor                          | 28,179             | 27,962             | 36,238             | 39,285             |
| 9.50 26. Expenses Nursng School            | 3,801              | 4,981              | 5,440              | 5,148              |
| <b>SUB-TOTAL NURSING SCHOOL</b>            | <b>\$48,035</b>    | <b>\$48,269</b>    | <b>\$62,217</b>    | <b>\$66,878</b>    |
| <b>PERSONNEL - NOT DEPARTMENT SPECIFIC</b> |                    |                    |                    |                    |
| 16.01 Social Security Contributi           | 94,000             | 155,532            | 241,601            | 341,180            |
| 16.02 Medical Benefits Contribut           | 78,000             | 77,766             | 120,800            | 170,590            |
| 16.50 Salaries - Non-Established           | 1,014,145          | 1,093,105          | 1,220,739          | 1,239,858          |
| 16.51 Benefits - Non-Established           | 60,398             | 126,874            | 78,144             | 113,472            |
| 16.52 23. Vacation & Sick Leave            | 24,247             | 23,791             | 17,133             | 23,546             |
| <b>SUB-TOTAL NOT DEPT SPECIFIC</b>         | <b>\$1,270,790</b> | <b>\$1,477,068</b> | <b>\$1,678,417</b> | <b>\$1,888,647</b> |
| <b>PHARMACY</b>                            |                    |                    |                    |                    |
| 10.00 Pharmacist                           | 19,374             | 19,716             | 0                  | 0                  |
| 10.01 Drug Procurement Officer             | 13,278             | 15,736             | 19,238             | 20,589             |
| 10.02 Principal Pharmacist                 | 0                  | 0                  | 15,423             | 17,215             |
| 10.03 Senior Pharmacist                    | 25,618             | 25,335             | 0                  | 0                  |
| 10.04 Pharmacist I                         | 0                  | 0                  | 41,986             | 40,906             |
| 10.05 Pharmacist II                        | 0                  | 0                  | 40,675             | 46,145             |
| 10.06 Pharmacist III                       | 0                  | 0                  | 44,000             | 48,938             |
| 10.07 Pharmaceutical Assistant             | 4,122              | 4,098              | 5,266              | 6,335              |
| 10.50 9. Drugs                             | 1,709,337          | 1,741,057          | 1,227,684          | 1,079,760          |
| <b>SUB-TOTAL PHARMACY</b>                  | <b>\$1,771,729</b> | <b>\$1,805,942</b> | <b>\$1,394,273</b> | <b>\$1,259,888</b> |

|                               | 1985        | 1986        | 1987        | 1988        |
|-------------------------------|-------------|-------------|-------------|-------------|
| <b>PURCHASING</b>             |             |             |             |             |
| -----                         |             |             |             |             |
| 13.01 Supervisor of Stores    | 0           | 0           | 10,587      | 12,061      |
| 13.02 Stores Assistant        | 0           | 7,684       | 9,369       | 10,918      |
| 8.12 Medical Stores Assistant | 7,420       | 6,557       | 9,369       | 10,918      |
| SUB-TOTAL PURCHASING          | \$7,420     | \$14,240    | \$29,325    | \$33,897    |
| GRAND TOTAL                   | \$7,315,663 | \$8,371,289 | \$9,423,276 | \$9,763,078 |

Notes:

- 1/ Salary figures adjusted from estimates in Appendix Table B.3. Adjustment factor was the ratio of actual personal emoluments to their budgeted estimates. Ratios applied were: 1985 - 0.8588, 1986 - 0.7589, 1987 - 0.8505, 1988 - 0.7810.
- 2/ Non-personnel expenditures from Appendix Table B.1.

Table B.3  
HOLBERTON HOSPITAL  
Personal Emoluments

|                                         | (a)       | Revised    | Revised   | Revised   |    |
|-----------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|----|
|                                         | Estimates  | Estimates | Estimates |    |
|                                         | 1988      | 1987      | 1986      | 1986      | 1985      | 1985      | 1984 (b)  | 1984      | 1983 (c)  | 1983      | 1982       | 1982      | 1982      |    |
| Medical Superintendent                  | 52,800    | 1         | 39,275    | 1         | 40,500    | 1         | 10        | 1         | 10        | 1         | 10         | 1         | 10        | 1  |
| Hospital Administrator                  | 30,324    | 1         | 25,529    | 1         | 22,680    | 1         | 21,000    | 1         | 21,000    | 1         | 21,000     | 1         | 21,000    | 1  |
| Assistant Secretary                     | 48,264    | 2         | 40,683    | 2         | 39,667    | 2         | 18,192    | 2         | 18,192    | 1         | 17,100     | 1         | 16,596    | 1  |
| Surgeon Specialist I                    | 76,104    | 2         | 63,028    | 2         | 54,432    | 2         | 50,400    | 2         | 49,680    | 2         | 49,680     | 2         | 49,680    | 2  |
| Obstetrician Gynaecologist Consultant I | 38,052    | 1         | 31,514    | 1         | 27,216    | 1         | 25,200    | 1         | 24,840    | 1         | 24,840     | 1         | 24,840    | 1  |
| Anaesthetist Consultant I               | 38,052    | 1         | 31,514    | 1         | 27,216    | 1         | 25,200    | 1         | 24,840    | 1         | 24,840     | 1         | 24,840    | 1  |
| Physician Consultant I                  | 38,052    | 1         | 31,514    | 1         | 27,216    | 1         | 50,400    | 1         | 49,680    | 2         | 24,840     | 1         | 24,840    | 1  |
| Radiologist                             | 38,052    | 2         | 63,028    | 2         | 54,432    | 2         | 25,200    | 2         | 24,840    | 1         | 24,840     | 1         | 24,840    | 1  |
| Ophthalmologist Consultant I            | 38,052    | 1         | 31,514    | 1         | 27,216    | 1         | 25,200    | 1         | 24,840    | 1         | 24,840     | 1         | 24,840    | 1  |
| Paediatrician Consultant I              | 38,052    | 1         | 31,514    | 1         | 27,216    | 1         | 25,200    | 1         | 24,840    | 1         | 24,840     | 1         | 24,840    | 1  |
| Pathologist Consultant I                | 38,052    | 1         | 31,514    | 1         | 27,216    | 1         | 25,200    | 1         | 24,840    | 1         | 24,840     | 1         |           | 0  |
| Orthopaedic Surgeon                     | 38,052    | 1         | 31,514    | 1         |           | 0         |           | 0         |           | 0         |            | 0         |           | 0  |
| Consultant Radiologist                  | 38,052    | 1         | 31,514    | 1         | 25,200    | 1         | 25,200    | 0         |           | 0         |            | 0         |           | 0  |
| Obstetrician Gynaecologist Consult. II  | 72,264    | 2         | 59,918    | 2         | 49,840    | 2         |           | 0         |           | 0         |            | 0         |           | 0  |
| Physician Consultant II                 | 36,132    | 1         | 29,959    | 1         | 24,920    | 1         |           | 0         |           | 0         |            | 0         |           | 0  |
| Anaesthetist                            | 72,264    | 2         | 59,918    | 2         | 50,840    | 2         | 46,320    | 2         | 44,880    | 2         | 44,880     | 2         | 44,880    | 2  |
| Senior Casualty Officer                 | 34,812    | 1         | 28,719    | 1         | 24,624    | 1         | 22,800    | 1         | 22,800    | 1         | 22,200     | 1         | 22,200    | 1  |
| Senior House Officer                    | 33,492    | 1         | 28,019    | 1         | 24,624    | 1         | 11,016    | 0         |           | 0         |            | 0         |           | 0  |
| House Officer                           | 450,408   | 14        | 378,686   | 14        | 335,664   | 14        | 222,000   | 10        | 177,600   | 8         | 177,600    | 8         | 177,600   | 8  |
| Matron                                  | 30,324    | 1         | 25,529    | 1         | 22,032    | 1         | 20,400    | 1         | 20,400    | 1         | 20,400     | 1         | 18,192    | 1  |
| Principal Tutor                         | 28,740    | 1         | 24,149    | 1         | 20,196    | 1         | 18,696    | 1         | 18,696    | 1         | 17,688     | 1         | 15,672    | 1  |
| Deputy Matron                           | 27,156    | 1         | 22,589    | 1         | 19,464    | 1         | 17,184    | 1         | 17,184    | 1         | 17,688     | 1         | 15,672    | 1  |
| Nurse Anaesthetist                      |           | 0         | 20,114    | 1         | 16,692    | 1         | 15,168    | 1         | 15,168    | 1         | 15,168     | 1         | 15,168    | 1  |
| Paediatric Nurse Practitioner           | 22,164    | 1         |           | 0         |           | 0         |           | 0         |           | 0         |            | 0         |           | 0  |
| Infection Control Nurse                 | 22,164    | 1         |           | 0         |           | 0         |           | 0         |           | 0         |            | 0         |           | 0  |
| Sister Tutor                            | 50,304    | 2         | 42,606    | 2         | 36,846    | 2         | 32,814    | 2         | 33,696    | 2         | 32,520     | 2         | 28,840    | 2  |
| Departmental Sister                     | 173,976   | 7         | 145,624   | 7         | 123,663   | 7         | 108,906   | 7         | 108,654   | 7         | 64,452     | 4         | 54,720    | 4  |
| Night Supervisor                        | 74,688    | 3         | 61,770    | 3         | 51,824    | 3         | 45,504    | 3         | 45,504    | 3         | (3 vacant) | 0         |           | 0  |
| Physiotherapist                         | 21,348    | 1         | 17,554    | 1         | 16,140    | 1         | 13,200    | 1         | 13,200    | 1         | 13,840     | 1         | 13,200    | 1  |
| Housekeeper                             |           |           |           |           | 12,240    | 1         | 12,240    | 1         | 12,240    | 1         | 10,320     | 1         | 10,320    | 1  |
| Food Service Supervisor                 | 18,348    | 1         | 14,913    | 1         | 13,464    | 1         | 12,240    | 1         | 11,000    | 1         | 9,840      | 1         | 9,840     | 1  |
| Ward Sister                             | 273,240   | 12        | 219,728   | 12        | 208,423   | 12        | 167,448   | 12        | 166,904   | 12        | 161,280    | 12        | 139,560   | 12 |
| Home Sister (Warden)                    | 23,700    | 1         | 19,184    | 1         | 16,140    | 1         | 14,664    | 1         | 14,664    | 1         | 14,160     | 1         | 11,760    | 1  |
| Staff Nurse I                           | 299,556   | 15        | 238,524   | 15        | 198,540   | 15        |           | 0         |           | 0         |            | 0         |           | 0  |
| Staff Nurse II                          | 1,078,464 | 60        | 862,308   | 60        | 714,735   | 60        | 639,560   | 60        | 647,760   | 60        | 641,320    | 60        | 569,840   | 60 |
| Nursing Assistant                       | 597,240   | 38        | 470,246   | 38        | 385,200   | 38        | 155,520   | 15        | 129,600   | 15        |            | 0         |           | 0  |
| Ward Attendant                          | 517,320   | 47        | 381,239   | 47        | 311,348   | 47        | 208,080   | 31        | 207,150   | 31        | 204,270    | 31        | 159,720   | 31 |
| Hospital Steward                        | 22,044    | 1         | 18,134    | 1         | 16,692    | 1         | 14,832    | 1         | 14,328    | 1         | 11,760     | 1         | 11,520    | 1  |
| Senior Executive Officer                | 19,500    | 1         | 15,941    | 1         |           | 1         |           | 0         |           | 0         |            | 0         |           | 0  |
| Secretary to Medical Superintendent     | 16,608    | 1         | 13,486    | 1         | 12,240    | 1         |           | 0         |           | 0         |            | 0         |           | 0  |
| Statistical Officer II                  | 18,348    | 1         | 14,913    | 1         | 13,321    | 1         | 11,480    | 1         | 10,800    | 1         | 9,840      | 1         | 10,800    | 1  |
| Senior Clerk                            | 43,404    | 3         | 34,572    | 3         | 10,761    | 1         | 9,150     | 1         | 10,320    | 1         | 9,000      | 1         | 9,000     | 1  |
| Collections Officer I                   | 16,608    | 1         | 13,486    | 1         |           | 0         |           | 0         |           | 0         |            | 0         |           | 0  |
| Collections Officer II                  | 14,412    | 1         | 11,465    | 1         | 10,128    | 1         | 8,880     | 1         | 8,490     | 1         | 8,280      | 1         | 8,280     | 1  |
| Statistical Officer IV                  | 10,296    | 1         | 7,875     | 1         | 6,888     | 1         | 6,120     | 1         | 7,560     | 1         | 6,300      | 1         | 6,120     | 1  |
| Junior Clerk                            | 85,224    | 7         | 63,645    | 7         | 37,968    | 7         | 48,180    | 7         | 32,700    | 5         | 19,230     | 3         | 18,570    | 3  |
| Clerical Assistant                      | 33,252    | 4         | 21,488    | 4         | 23,394    | 4         | 22,470    | 4         | 20,820    | 4         | 20,900     | 4         | 20,160    | 4  |
| Drug Procurement Officer                | 26,364    | 1         | 22,619    | 1         | 20,736    | 1         | 15,462    | 1         | 15,168    | 1         | 13,680     | 1         | 13,680    | 1  |

Table B.3  
 HOLBERTON HOSPITAL  
 Personal Emoluments

|                                                               | (a)       |        | Revised   |        |         |      |
|---------------------------------------------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------|------|
|                                                               | Estimates | Estab. |         |      |
|                                                               | 1988      | 1988   | 1987      | 1987   | 1986      | 1986   | 1985      | 1985   | 1984 (b)  | 1984   | 1983 (c)  | 1983   | 1982    | 1982 |
| Senior Pharmacist                                             |           | 0      |           | 2      | 33,384    | 2      | 29,832    | 2      | 27,120    | 2      | 25,720    | 2      | 20,640  | 2    |
| Principal Pharmacist                                          | 22,044    | 1      | 18,134    | 1      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Pharmacist                                                    |           | 0      |           | 2      | 25,980    | 2      | 22,560    | 2      | 24,400    | 2      | 21,248    | 2      | 17,280  | 2    |
| Pharmacist I                                                  | 52,380    | 3      | 49,265    | 3      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Pharmacist II                                                 | 59,088    | 3      | 47,823    | 3      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Pharmacist III                                                | 62,664    | 4      | 51,733    | 4      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Senior Radiographer                                           | 23,064    | 1      | 18,952    | 1      | 18,084    | 1      | 16,440    | 1      | 16,440    | 1      |           | 0      |         | 0    |
| Radiographer                                                  | 40,464    | 2      | 38,729    | 2      | 28,776    | 2      | 26,160    | 2      | 26,160    | 2      | 27,120    | 2      | 27,120  | 2    |
| Trainee Radiographer/X-Ray Assistant                          | 13,980    | 1      | 11,015    | 1      | 18,000    | 1      | 23,760    | 2      | 15,960    | 2      | 12,450    | 2      | 11,010  | 2    |
| Barkroom Assistant                                            | 11,448    | 1      | 8,775     | 1      | 7,704     | 1      | 6,840     | 1      | 6,840     | 1      | 6,840     | 1      | 6,840   | 1    |
| Chief Medical Laboratory Technician                           | 22,740    | 1      | 18,714    | 1      | 17,244    | 1      | 18,192    | 1      | 18,192    | 1      | 17,688    | 1      | 17,688  | 1    |
| Senior Medical Laboratory Technician                          | 55,000    | 2      | 25,832    | 2      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Medical Laboratory Technician                                 | 165,008   | 6      | 86,425    | 6      | 65,639    | 5      | 57,120    | 5      | 55,000    | 5      | 46,040    | 5      | 48,240  | 5    |
| Laboratory Assistant                                          | 19,440    | 2      | 12,838    | 2      | 16,096    | 2      | 19,800    | 2      | 12,680    | 2      | 22,680    | 3      | 21,360  | 3    |
| Orthopaedic Technician                                        | 34,944    | 2      | 28,064    | 2      | 13,332    | 1      | 11,920    | 1      | 10,480    | 1      | 8,130     | 1      | 7,770   | 1    |
| Trainee Orthopaedic Technician                                | 12,480    | 1      | 9,497     | 1      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Dietician                                                     | 25,044    | 1      | 21,159    | 1      | 16,692    | 1      | 15,168    | 1      | 13,680    | 1      | 13,680    | 1      | 13,680  | 1    |
| Pharmaceutical Assistant                                      | 8,112     | 1      | 6,191     | 1      | 5,400     | 1      | 4,800     | 1      | 4,800     | 1      | 4,800     | 1      | 4,800   | 1    |
| Supervisor of Stores                                          | 15,444    | 1      | 12,448    | 1      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Stores Assistant                                              | 13,980    | 1      | 11,015    | 1      | 10,125    | 1      |           | 0      |           | 0      |           | 0      |         | 0    |
| Seamstress                                                    | 27,792    | 3      | 22,770    | 3      | 19,872    | 3      | 17,640    | 3      | 17,640    | 3      | 17,640    | 3      | 17,380  | 3    |
| Telephone Operator                                            | 41,184    | 4      | 31,500    | 4      | 27,552    | 4      | 24,480    | 4      | 24,480    | 4      | 23,040    | 4      | 22,880  | 4    |
| Domestic Aide                                                 | 378,048   | 48     | 286,709   | 48     | 240,710   | 48     | 206,180   | 48     | 204,180   | 48     | 169,340   | 48     | 168,030 | 48   |
| Engineer III                                                  | 44,880    | 2      | 36,514    | 2      | 33,000    | 2      | 29,520    | 2      | 29,040    | 2      | 15,000    | 1      | 15,000  | 1    |
| Medical Secretary                                             | 16,020    | 1      | 12,967    | 1      | 11,211    | 1      | 9,450     | 1      | 9,120     | 1      | 7,920     | 1      | 7,920   | 1    |
| Chief Petty Officer                                           | 16,020    | 1      | 12,967    | 1      | 11,616    | 1      | 10,320    | 1      | 10,320    | 1      | 10,320    | 1      | 10,320  | 1    |
| Sewage Plant Operator                                         | 12,024    | 1      | 9,220     | 1      | 8,100     | 1      | 7,200     | 1      | 7,200     | 1      | 7,200     | 1      | 7,200   | 1    |
| Mortuary Attendant                                            | 13,524    | 1      | 10,570    | 1      | 9,621     | 1      | 9,214     | 1      | 7,830     | 1      | 7,470     | 1      | 7,200   | 1    |
| Petty Officer I                                               | 13,524    | 1      | 10,570    | 1      | 9,324     | 1      | 9,324     | 1      | 8,280     | 1      | 8,040     | 1      | 7,860   | 1    |
| Petty Officer II                                              | 76,680    | 7      | 58,555    | 7      | 50,664    | 7      | 44,340    | 7      | 44,640    | 7      | 44,640    | 7      | 30,240  | 5    |
| Petty Officer III                                             | 25,140    | 3      | 18,979    | 3      | 15,000    | 3      | 13,280    | 3      | 13,420    | 3      | 12,700    | 3      | 12,200  | 3    |
| Cook I                                                        | 21,840    | 2      | 16,637    | 2      | 14,460    | 2      | 12,840    | 2      | 12,840    | 2      | 12,840    | 2      | 12,840  | 2    |
| Cook II                                                       | 7,920     | 1      | 7,590     | 1      | 6,624     | 1      | 5,880     | 1      | 5,400     | 1      | 5,840     | 1      | 5,400   | 1    |
| Laundry Foreman                                               | 9,936     | 1      | 7,673     | 1      | 7,836     | 1      | 6,960     | 1      | 6,960     | 1      | 6,720     | 1      | 6,460   | 1    |
| Supervisor of Orderlies                                       | 13,524    | 1      | 10,570    | 1      | 9,324     | 1      | 8,280     | 1      | 7,920     | 1      | 8,280     | 1      | 7,560   | 1    |
| Assistant Supervisor of Orderlies                             | 21,744    | 2      | 10,570    | 2      | 7,636     | 1      | 6,420     | 1      | 5,760     | 1      | 6,840     | 1      | 6,480   | 1    |
| Orderlies                                                     | 143,160   | 17     | 109,496   | 17     | 94,394    | 17     | 84,140    | 17     | 90,320    | 17     | 85,760    | 16     | 86,240  | 16   |
| Supervisor Central Sterile Unit                               | 14,412    | 1      | 11,635    | 1      | 10,128    | 1      | 8,640     | 0      |           | 0      |           | 0      |         | 0    |
| Medical Stores Assistant                                      | 13,980    | 1      | 11,015    | 1      | 8,640     | 1      | 8,640     | 0      |           | 0      |           | 0      |         | 0    |
| Library Technician                                            | 14,412    | 1      | 11,635    | 1      | 10,128    | 1      | 8,640     | 0      |           | 0      |           | 0      |         | 0    |
| Operating Room Attendant                                      | 10,296    | 1      | 9,046     | 1      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Trainee Medical Laboratory Technician                         | 12,600    | 1      | 10,570    | 1      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Trainee Laboratory Technician                                 | 12,600    | 1      | 9,668     | 1      |           | 0      |           | 0      |           | 0      |           | 0      |         | 0    |
| Allowance to E.C.G. Technician                                | 24,000    |        | 24,000    |        | 1,800     |        | 1,800     |        | 1,800     |        | 1,800     |        | 1,800   |      |
| Allowance to Night Staff Nurse(s)                             | 2,400     |        | 2,400     |        | 600       |        | 600       |        | 600       |        | 600       |        | 600     |      |
| Allowance to Lab and X-Ray Technician                         | 20,000    |        | 20,000    |        | 15,000    |        | 15,000    |        | 12,600    |        | 12,600    |        | 12,600  |      |
| Fees to Consultants, Surgeons,<br>Physicians and Anaesthetist | 250,000   |        | 130,000   |        | 100,000   |        | 100,000   |        | 65,000    |        | 65,000    |        | 40,000  |      |

Table B.3  
HOLBERTON HOSPITAL  
Personal Emoluments

|                                        | (a) Revised      |             | Revised          |             | Revised          |             | Revised          |             | Revised            |             | Revised            |             | Revised          |             |
|----------------------------------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|--------------------|-------------|--------------------|-------------|------------------|-------------|
|                                        | Estimates 1988   | Estab. 1988 | Estimates 1987   | Estab. 1987 | Estimates 1986   | Estab. 1986 | Estimates 1985   | Estab. 1985 | Estimates 1984 (b) | Estab. 1984 | Estimates 1983 (c) | Estab. 1983 | Estimates 1982   | Estab. 1982 |
| Fees to Pathologist                    | 70,000           |             | 70,000           |             | 70,000           |             |                  |             |                    |             |                    |             |                  |             |
| Cashier's Allowance                    | 300              |             | 300              |             | 300              |             | 300              |             | 300                |             | 300                |             | 300              |             |
| Special Duty Allowance                 | 7,200            |             | 7,200            |             | 7,200            |             | 7,200            |             | 7,200              |             | 7,200              |             | 7,200            |             |
| Personal Allowance to Doctors          | 19,944           |             | 19,444           |             | 16,554           |             | 16,554           |             | 11,940             |             | 11,940             |             | 11,940           |             |
| Personal Allowance to Radiographers    | 10,128           |             | 10,128           |             |                  |             |                  |             |                    |             |                    |             |                  |             |
| Casualty Allowance to House Officers   | 45,000           |             | 45,000           |             | 40,000           |             | 40,000           |             | 82,000             |             | 82,000             |             | 80,000           |             |
| On-Call Allowance to Maintenance Staff | 3,600            |             | 3,600            |             | 3,600            |             |                  |             |                    |             |                    |             |                  |             |
| On-Call Allowance to X-Ray Technician  |                  |             |                  |             | 9,000            |             |                  |             |                    |             |                    |             |                  |             |
| Pers. Allow. to Consultant Radiologist |                  |             |                  |             | 1,695            |             | 1,694            |             |                    |             |                    |             |                  |             |
| Allowance to Doctor Babu               |                  |             |                  |             |                  |             |                  |             |                    |             | 20,120             |             |                  |             |
| Allowance to Supervisor of Orderlies   |                  |             |                  |             |                  |             |                  |             |                    |             |                    |             | 180              |             |
| Social Security Contributions          | 341,180          |             | 241,601          |             | 404,948          |             | 94,000           |             | 130,000            |             | 120,000            |             | 120,000          |             |
| Medical Benefits Contribution          | 170,590          |             | 120,800          |             | 102,474          |             | 78,000           |             | 65,000             |             | 60,000             |             | 60,000           |             |
| Less Allowance for Underestablishment  | (500,000)        |             |                  |             |                  |             |                  |             | (400,000)          |             | (200,000)          |             | (200,000)        |             |
| <b>Total Personal Emoluments</b>       | <b>6,822,050</b> | <b>387</b>  | <b>5,781,183</b> | <b>390</b>  | <b>4,672,131</b> | <b>365</b>  | <b>3,375,864</b> | <b>298</b>  | <b>2,833,430</b>   | <b>293</b>  | <b>2,665,832</b>   | <b>267</b>  | <b>2,403,898</b> | <b>264</b>  |

Notes:

- (a) Number of officially established positions (refers to number approved at beginning of year; some positions may have been added during the year)
- (b) Due to missing data, items before 'Matron' reflect draft estimates rather than revised estimates.
- (c) Due to missing data, items before 'Staff Nurse II' reflect approved estimates rather than revised estimates.

**APPENDIX C  
HOLBERTON HOSPITAL FEE SCHEDULE**

52'

ANTIGUA AND BARBUDA

STATUTORY INSTRUMENTS

1983, No. 34

The Holberton Hospital (Fees) (Amendment) Rules, 1983 made by the Governor-General under section 8 of the Medical and Holberton Institution Ordinance (Cap. 232).

1. These Rules may be cited as the Holberton Hospital Fees (Amendment) Rules, 1983. Short title.
2. Rule 2 of the Holberton Hospital (Fees) Rules, 1975, in these Rules referred to as the principal Rules, is amended by deleting the definition of "Hospital Administrator." Amendment of rule 2 of S.R.&O. No. 18 of 1975.
3. Rule 6 of the principal Rules is amended by deleting the words "twenty cents" and substituting the words "one dollar." Amendment of rule 6 of the principal Rules.
4. Rule 7 of the principal Rules is repealed and the following rule is substituted— Repeal and replacement of rule 7 of the principal Rules.

"7. Subject to rule 7A, if a patient is a person who immediately preceding the date that services are rendered to him at the hospital—

  - (a) is not a citizen of Antigua and Barbuda; or
  - (b) is not ordinarily resident in Antigua and Barbuda for at least five years,

the fees payable under these rules shall be increased one hundred per cent."
5. After rule 7 of the principal Rules, the following rule is inserted— Inserting of rule 7A in the principal Rules.

"Casualty or out-patient fees.      7A. The following fees are payable by or on behalf of every patient who is not a citizen of Antigua and Barbuda and who attends the hospital as a casualty, emergency or out-patient—

  - (a) Where the patient is a belonger to or a citizen of a country that is a member of the Caribbean Community or Anguilla.—
    - (i) For attendance by a Casualty Officer      \$10.00
    - (ii) For attendance by a Consultant      \$20.00

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(b) where the patient is a citizen of any other country—

(i) For attendance by a Casualty Officer \$30.00

(ii) For attendance by a Consultant \$60.00

Amendment of rule 12 of the principal Rules.

6. Rule 12 of the principal Rules is amended  
(a) in subrules (1) and (2) by deleting the words "90 days" wherever they occur and substituting the words "30 days"; and

(b) in subrule (2) by deleting the words "6 per cent" and substituting the words "10 per cent."

Amendment of the principal Rules.

7. The principal Rules are amended by deleting the words "Hospital Administrator" wherever they occur and substituting the words "Medical Superintendent."

Repeal and replacement of the First, Second, Third and Fourth Schedules to the principal Rules.

8. The First, Second, Third and Fourth Schedules to the principal Rules are repealed and the following Schedules are substituted—

#### "FIRST SCHEDULE

r. 3 (a)

#### PART I

#### Maintenance Fees

- |                                                                                                                                                                                                                                                                                                     |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. For a private patient                                                                                                                                                                                                                                                                            | \$25.00 per day          |
| 2. For semi-private patient                                                                                                                                                                                                                                                                         | \$15.00 per day          |
| 3. For a patient in a separate cubicle in a general ward                                                                                                                                                                                                                                            | \$5.00 per day           |
| 4. For a patient who is a medical officer, dispenser, district nurse, public health nurse, member of the Royal Police Force of Antigua and Barbuda, the Antigua Fire Brigade, the Antigua and Barbuda Defence Force or a Prison Warden occupying the rooms or cubicle specified in items 1, 2 and 3 | one half the fee payable |
| 5. (a) For a patient in a general ward other than Maternity ward.                                                                                                                                                                                                                                   | No charge                |
| (b) For a patient in Maternity ward                                                                                                                                                                                                                                                                 | \$5.00 per day           |
| 6. For a patient who is a nurse on the staff of the Hospital in the Nurses Side Ward                                                                                                                                                                                                                | No charge                |

**PART II****Fees For Medicine Prescribed**

|                                                                      |                           |
|----------------------------------------------------------------------|---------------------------|
| 1. For a private patient                                             | Cost of Medicine          |
| 2. For a semi-private patient                                        | Cost of Medicine          |
| 3. For a patient in a separate cubicle in a general ward             | Cost of Medicine          |
| 4. For a patient in a general ward                                   | Free                      |
| 5. For an out-patient for each visit at which medicine is prescribed | Cost of Medicine          |
| 6. For a casualty or emergency patient — a 24 hour supply of drugs   | Free                      |
| 7. A Non-citizen in any area of Hospital                             | Cost of Medicine plus 10% |

**SECOND SCHEDULE****PART I****Fees For Operating Theatre**

|                                |         |
|--------------------------------|---------|
| 1. For major operations        | \$25.00 |
| 2. For intermediate operations | \$15.00 |
| 3. For minor operations        | \$10.00 |

**PART II**

r. 4(2) (b)

**Surgeon's Operating Fees**

|           |          |
|-----------|----------|
| Class I   | \$125.00 |
| Class II  | \$200.00 |
| Class III | \$300.00 |
| Class IV  | \$375.00 |
| Class V   | \$450.00 |
| Class VI  | \$550.00 |

**PART III**

(r. 4(3))

**ANAESTHETIST**

For each case involving surgery the fee shall be 25 per centum of those charged in respect of Surgeon's operating fees under Part II.

**PART IV**

(r. 4(4))

- A. Consultant obstetrician and gynaecologist.**
- (i) For cases normal and abnormal, including attendances during labour \$25-\$150 depending on the length of time involved and the complexity thereof.
  - (ii) Cases involving surgery shall be the same as listed in Surgeon's operating fees under Part II.
  - (iii) Ante-natal and post-natal attendances each day \$15.00
- B. Physician and other Specialist not specified elsewhere:**  
Attendances each day \$15.00.
- C. Surgeon and Surgeon Specialist**  
In cases not involving operation the fees shall be the same as those specified in paragraph B of Part IV of this Schedule
- D. Radiologist**  
For each examination between \$10-\$15.00 depending on the length of time involved and the complexity thereof.

**THIRD SCHEDULE****PART I****X-Ray****Fees for Medical Examination****Group I.**

Simple casualty examination of the limbs

Shoulder

Humerus

Elbow

Forearm

Hand

Femur

Knee

Leg

Ankle

Foot

\$10.00 per limb

examined

**Group 2**

**More extensive examination of skeletal system**

Thoracic cage

Cervical Spine

Dorsal Spine

Skull

\$20.00 per area

Mandible

examined

Sinuses

Pelvis

Sacrum

Sacro-iliac joint

Lumbo-sacral joint

**Group 3**

**Simple examination of the internal organs**

Chest

Abdomen

Gall Bladder region

\$20.00 per area

Renal tract

examined

Footography

Thoracic Inlet

**Group 4**

**More extensive internal examinations**

Retrograge Pyelogram

Opaque meal

Opaque enema

Intravenous Pyelogram

Hystem-Salpingogram

Barium Swallow

\$30.00 per

T-tube Cholangiogram

examination

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Intravenous Cholangiogram

Cystogram

Cystourethrogram

Urethrogram

Sialogram

Bronchogram

Pyclogram

**THIRD SCHEDULE**

r. 5(b)

**PART II**

**Laboratory Fees**

**HEMATOLOGY**

|                    |         |
|--------------------|---------|
| Leucocyte Count    | \$ 3.00 |
| Erythrocyte Count  | 3.00    |
| Differential Count | 3.00    |
| Hematocrit-Micro   | 1.00    |
| Sedimentation rate | 3.00    |
| Haemoglobin        | 3.00    |
| Prothrombin Time   | 6.00    |
| Sickling           | 3.00    |
| Bleeding time      | 3.00    |
| Clotting time      | 3.00    |
| Red Cell Fragility | 5.00    |
| Platelet Count     | 4.00    |
| L.E. Cells         | 5.00    |
| Malaria Smears     | 5.00    |
| Filaria Smears     | 5.00    |
| Reticulocyte Count | 4.00    |
| Pregnancy test     | 10.00   |
| Pack Cell Volume   | 2.00    |

**BLOOD BANKING**

|                     |       |
|---------------------|-------|
| Group and Rh Typing | 5.00  |
| Coombs Test         | 8.00  |
| Cross-match         | 10.00 |
| RH Anti-bodies      | 10.00 |
| Coombs indirect     | 10.00 |

**BIOCHEMISTRY**

|                        |       |
|------------------------|-------|
| Serum Bilirubin Total  | 6.50  |
| Glucose Tolerance      | 20.00 |
| Glucose (Blood)        | 5.00  |
| Blood Urea             | 5.00  |
| Blood Chloride         | 6.00  |
| Blood Cholesterol      | 6.00  |
| Serum Bilirubin Direct | 6.00  |
| Serum Calcium          | 6.00  |

|                              |       |
|------------------------------|-------|
| Serum Proteins Total         | 6.50  |
| Serum Acid Phosphatase       | 6.00  |
| Serum Alkaline Phosphatase   | 6.00  |
| Serum Phosphorous            | 6.00  |
| Thymol Turbidity & Flocc     | 6.00  |
| Plasma Sodium                | 5.00  |
| Plasma Potassium             | 5.00  |
| Blood Uric Acid              | 6.00  |
| Serum Amylase                | 6.00  |
| Gastric Analysis             | 10.00 |
| Cerebrospinal Fluid Sugar    | 5.00  |
| Cerebrospinal Fluid Chloride | 5.00  |
| Cerebrospinal Fluid Protein  | 3.00  |
| Cerebrospinal Fluid Cells    | 4.00  |
| Cerebrospinal Fluid Lange    | 5.00  |
| S.G.O.T                      | 6.50  |
| S.G.P.T.                     | 6.50  |
| Urine Sugar                  | 2.50  |
| Urine Albumin                | 2.50  |
| Urine Sp. Gr.                | 2.00  |
| Serum Albumin                | 6.50  |
| Urine Bile                   | 2.00  |
| Urine Urobilinogen           | 3.00  |
| Urine Blood                  | 2.00  |
| Urine Acetone                | 2.00  |
| Urine Bence Jones Protein    | 3.50  |
| Stool Occult Blood           | 2.00  |
| Co Combining Power           | 8.00  |

2

**MICROBIOLOGY**

|                     |       |
|---------------------|-------|
| Culture Stools      | 10.00 |
| Culture Urines      | 10.00 |
| Culture Pus         | 10.00 |
| Culture Throat      | 10.00 |
| Culture Sputum      | 10.00 |
| Culture C.S.F.      | 10.00 |
| Culture Exudates    | 10.00 |
| Culture Scrapings   | 2.50  |
| Sensitivity Studies | 5.00  |
| Culture Water       | 10.00 |
| Blood Culture       | 10.00 |

**MICROSCOPIC EXAMINATIONS**

|                       |       |
|-----------------------|-------|
| Smears for Gonorrhea  | 5.00  |
| Smears for Leprosy    | 5.00  |
| Sputum for A.F.B      | 1.50  |
| Urine for A.F.B.      | 1.50  |
| Semen total Count     | 4.00  |
| Semen: Complete       | 12.00 |
| Urine: Microscopic    | 3.00  |
| Stool: Ova & Parasite | 5.00  |
| Sputum for T.B.       | 5.00  |

**SEROLOGY**

|                          |       |
|--------------------------|-------|
| VDRL Test                | 5.00  |
| Widal Test               | 7.50  |
| A So Titre               | 10.00 |
| Latex Fixation           | 5.00  |
| Steterophile Anti-bodies | 5.00  |
| ASTO                     | 10.00 |

**PART III**

r. 5(c)

**Fees for use of Hospital Equipment**

For use of Electrocardiograph or other equipment  
not specified

\$10.00 per use.

**FOURTH SCHEDULE  
SURGICAL OPERATIONS FEES**

| CLASS I \$125                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CLASS II \$200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | CLASS III \$300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Abscess Drainage — small<br/>           Bartholin's Cyst Removal<br/>           Burse — Ganglion Excision<br/>           Circumcision — Child<br/>           Cystoscopy<br/>           Cystotomy — suprapubic<br/>           Dislocation — simple— upper limb<br/>           Lipoma Excision<br/>           Lumbar Puncture<br/>           Keloid Excision—small<br/>           Nail Extraction<br/>           Paracentesis<br/>           P. O. P. application<br/>           Rectal Dilatation<br/>           Removal of Eyelashes—two lids<br/>           Retrobulbar Injections<br/>           Sebaceous Cyst Removal<br/>           Sigmoidoscopy<br/>           Subconjunctival Injections<br/>           Urethral Dilatation<br/>           Vasectomy</p> | <p>Abscess Drainage—Large<br/>           Amputation—digit<br/>           Breast Biopsy<br/>           Circumcision—Adult<br/>           Cystoscopy &amp; Retrograde<br/>           Catheterisation<br/>           Dilatation &amp; curettage<br/>           Dislocation — compound<br/>                                             —upper limb<br/>                                             —simple — lower limb<br/>           Fistula — in-Ano Excision<br/>           Gastroscopy<br/>           Keloid Excision—large<br/>           Orchidectomy — unilateral<br/>           Skin Graft — small<br/>           Tendon Repair — primary—three<br/>                                             or less<br/>           Tonsillectomy/Adenoidectomy-Child<br/>           Tubal Ligation<br/>           Uterine Suspension<br/>           Varicocele</p> | <p>Amputation — below shoulder<br/>                                             — lower limb<br/>           Appendicectomy<br/>           Cautery of Cornea — Phenol<br/>           Colostomy<br/>           Conjunctiva Repair<br/>           Conjunctiva Excision<br/>           Drainage of Chalazion<br/>           Electro-Convulsive Therapy (course of six)<br/>           Excision of Pterygium<br/>           Fractures—compound—uncomplicated—suture<br/>           Haemorrhoidectomy<br/>           Hernia Repair—femoral<br/>                                             —inguinal<br/>                                             —unbilical<br/>           Hydrocoelectomy<br/>           Oophorectomy<br/>           Orchidectomy—bilateral<br/>           Orchidopexy<br/>           Ramstedt<br/>           Salpingectomy<br/>           Shirodkar Suture<br/>           Skin Graft—large<br/>           Tendon Repair—primary—more than three<br/>                                             —secondary<br/>           Testicular Torison Fixation<br/>           Tonsillectomy-Adult<br/>           Tracheotomy<br/>           Vein Stripping &amp; Ligation—single<br/>           Vulvectomy</p> |

FOURTH SCHEDULE (Cont'd)

| CLASS IV \$375                         | CLASS V \$450                               | CLASS VI \$550                                                    |
|----------------------------------------|---------------------------------------------|-------------------------------------------------------------------|
| Caesarian Section                      | Bowel Resection - small                     | Abdominal Perineal Resection                                      |
| Cystectomy—partial                     | Cataract Surgery—without lens implant       | Bowel Resection—large                                             |
| Cystolithotomy                         | Cholecystectomy                             | Cataract Extraction with Intraocular Lens Implant                 |
| Ectopic Pregnancy                      | Correction Squint                           | Chloecystectomy with Exploration of Common Duct                   |
| Fracture—open reduction                | Dacryocystostomy                            | Craniotomy                                                        |
| Hernia Repair—inguinal—bilateral—Adult | Gastro-enterostomy                          | Fracture—Open reduction—hip                                       |
| —femoral—bilateral—Adult               | Glaucoma Operative Treatment                | Parotidectomy                                                     |
| Laparotomy                             | Hysterectomy                                | Repair of Laceration Eye—involving outer coats, lens and vitreous |
| Mastectomy—simple                      | Intra-ocular Foreign Body removal           | Retinal Detachment.”                                              |
| Nephrolithotomy                        | Nephrectomy Prostatectomy                   |                                                                   |
| Paracentesis of Anterior Chamber Eye   | Rectovaginal/vesicle Fistula Repair         |                                                                   |
| Peripheral Iridectomy for Glaucoma     | Removal of Eye                              |                                                                   |
| Reconstruction of Eyelid               | Removal of Lacrimal Sac                     |                                                                   |
| Repair of Corneal Laceration           | Repair of Injured Eye Involving Lens Injury |                                                                   |
| Sympatnectomy                          | Trabeculectomy or Other Drainage Eye        |                                                                   |
| Tendon Graft                           | Thyroidectomy Subtotal                      |                                                                   |
| Splenectomy                            | Ulcer Gastro-duodenal Perforation           |                                                                   |
| Thyroid Adenoma Excision               | Vagotomy & Phloroplasty                     |                                                                   |
| Vein Stripping & Ligation - bilateral  |                                             |                                                                   |

Made by the Governor-General this 27th day of September, 1983.

Wilfred Jacobs  
Governor-General.

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**APPENDIX D**  
**MEDICAL BENEFITS REGULATIONS**

2-6-31

ANTIGUA.

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STATUTORY RULES AND ORDERS.

1980, No. 31.

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The Medical Benefits Regulations, 1980 made by the Minister under section 5 of the Medical Benefits Act, 1978 (No. 9 of 1978).

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[Gazetted 15th January, 1981.]

1. **Citation and Commencement.** These Regulations may be cited as the Medical Benefits Regulations, 1980 and shall come into operation on the 1st day of December, 1980.

2. **Interpretation.** In these Regulations—

“beneficiary” means—

- (a) an insured person who has paid medical benefits contributions in respect of at least twenty six weeks in any calendar year, or any period of twelve months; or
- (b) a person certified by a medical practitioner to be suffering from a disease specified in Part I of the First Schedule; or
- (c) a person who is rendered permanently incapable of work by virtue of age; or
- (d) a young person under sixteen years;

provided that in the case of paragraphs (b), (c) and (d) such person is born in Antigua or is ordinarily resident in Antigua;

“Board” means the Medical Benefits Board of Control;

“insured” means insured under the Social Security Act;

“medical benefits” means the supply of medical or surgical care and services and includes hospitalisation, drugs, laboratory tests, X-rays, electrocardiography tests or similar services;

“medical practitioner” means a registered medical practitioner approved by the Minister and whether such practitioner—

(a) is employed by Government and carries on a private practice; or

(b) is engaged solely in private practice.

**3. Registration.** (1) Every beneficiary shall be registered and issued a medical scheme registration card by the Superintendent in such form as the Minister may by notice published in the *Gazette* prescribe.

(2) An application for medical benefits shall be made by presentation of such card to the medical practitioner whose services the applicant seeks.

(3) A person who obtains medical benefits by means of a medical scheme registration card which is false in any material particular or by any other means shall be guilty of an offence and liable on summary conviction to a fine of two hundred and fifty dollars.

**4. Beneficiary not hospitalised.** (1) A beneficiary who is suffering from a disease specified in Part I of the First Schedule shall receive free medical benefits at such place and time as the Minister shall by notice published in the *Gazette* appoint.

(2) Every beneficiary is entitled to the medical benefits specified in Part II of the First Schedule.

**5. Beneficiary hospitalised.** (1) A beneficiary who is treated in the general ward of the Holberton Hospital for any disease is entitled to free medical benefits.

(2) A beneficiary who is treated in a semi-private or private ward of the Holberton Hospital for any disease is entitled to free medical benefits except for the payment of maintenance fees for the occupancy of the said ward which shall be paid—

- (a) by the beneficiary in accordance with the Holberton Hospital (Fees) Rules, 1975; and
- (b) by the Scheme in accordance with regulation 10(1).

**6. Beneficiary treated privately.** A beneficiary who is treated in a private place or private institution in Antigua for any disease, is entitled to the same medical benefits as if he were treated in the Holberton Hospital, except for the payment of maintenance fees, and the calculation of such medical benefits shall be made in accordance with regulation 11.

**7. Beneficiary treated abroad.** A beneficiary who is treated outside Antigua for any illness shall, with the approval of the Chief Medical Officer, be entitled, to be paid for medical benefits supplied not exceeding five hundred dollars, as the Chief Medical Officer may certify to the Board.

**8. Fees.** (1) A medical practitioner who treats a beneficiary under regulation 4 (1) in his private capacity either—

- (a) at his office; or
- (b) by making a house call,

is entitled to the fee specified in the Second Schedule, but no fee shall be paid—

- (i) in excess of ten office visits and five house calls in respect of that beneficiary within a period of twenty six calendar weeks; or
- (ii) for the treatment of a beneficiary, except for the making of house calls, who otherwise would have received free medical treatment under the Medical and Holberton Hospital Institution Ordinance.

(2) A consultant who treats a beneficiary under regulation 4 (1) is entitled to the fee specified in the Second Schedule only if the beneficiary is referred to him by a medical practitioner, but no fee shall be paid in excess of his office visits and two house calls in respect of that beneficiary within a period of twenty six calendar weeks.

(3) A medical specialist who performs surgery on a beneficiary in his private capacity at a recognised hospital is entitled to the fee specified in the Second Schedule: provided that where the operation is performed at a Government Hospital the specialist shall be paid from the funds of the Scheme no more than three Quarters of the fees specified in the Second Schedule.

**9. Medical practitioner to submit statement.** (1) A medical practitioner or consultant who treats a beneficiary under regulation 8 shall submit a monthly statement to the Superintendent in such form as the Minister may prescribe.

(2) The Superintendent on receipt thereof shall examine the statement and if satisfied as to its correctness shall forward the statement to the Board for its authorisation.

(3) The Board shall examine or cause the statement to be examined and issue such directions to the Superintendent as it may consider necessary.

**10. Payment of claims and fees.** (1) The fees due and payable on behalf of every beneficiary by the Scheme in respect of his accommodation and maintenance at the Holberton Hospital or Government Institution under regulation 5 shall be at such rates as the Minister may, by notice in the *Gazette*, prescribe.

(2) All sums due and payable to a beneficiary for medical benefits supplied under regulation 6 shall be made to that beneficiary from the funds of the Scheme.

(3) The fees due and payable to a medical practitioner for medical benefits supplied to a beneficiary under regulation 8 shall be paid to that medical practitioner from the funds of the Scheme.

(4) All sums due and payable for medical benefits supplied by the Holberton Hospital, Government Institution or prescribed place under these regulations shall be paid from the funds of the Scheme into the Treasury Fund.

(5) Any payment made by a beneficiary for the purchase of drugs which he would have received free by virtue of these regulations shall be reimbursed to him upon the authorisation of the Board out of the funds of the Scheme on the presentation of proper receipts: Provided that such drugs were at the time not available at the prescribed place.

**11. Calculation of cost of medical benefits.** The cost of medical benefits supplied to a beneficiary at the Holberton Hospital, Government Institution or prescribed place shall be calculated in accordance with the provisions of the Holberton Hospital (Fees) Rules 1975.

**12. Variation of fees.** The Minister may by notice in the *Gazette*, vary the fees specified in the Second Schedule.

**13. Publication of list.** For the purposes of regulation 4 (1) the Minister shall publish in the *Gazette* from time to time a list of medical practitioners and the places and times whereat beneficiaries may attend.

**14. Referees.** Whenever any dispute or question arises —

(a) as to whether or not a persons is suffering from a disease specified in Part I of the First Schedule;  
or

(b) on any other matter under these regulations,  
the Minister may appoint as referees—

(i) one or more medical practitioners for the purposes of paragraph (a); or

(ii) two or more persons for the purposes of paragraph (b),

for the determination of such dispute or question and such determination shall be final and conclusive for the purposes of these regulations.

**15. Offence.** A person who gives or sells drugs prescribed or obtained under the Medical Benefits Scheme to any person for whom it was not prescribed shall be guilty of an offence and liable on summary conviction to a fine of two hundred and fifty dollars.

16. **Revocation.** The Medical Benefits Regulations, 1979 (No. 15 of 1979) are revoked.

Made this 12th day of November, 1980.

**C. M. O'mard,**  
*Minister responsible for Health.*

Laid before the House of Representatives this 20th day of November, 1980.

**L. A. Dowe,**  
*Clerk of the House of Representatives.*

**First Schedule**

**r. 4**

**Part I**

- (a) Hypertension
- (b) Diabetes
- (c) Cardiovascular Diseases
- (d) Sickle-Cell Anaemia
- (e) Cancer
- (f) Leprosy
- (g) Certified Lunacy
- (h) Glaucoma

**Part II**

**X-rays**

**Electrocardiography**

**Laboratory tests**

## Second Schedule

r. 8

## Fees

## Medical Practitioner

|                      |         |
|----------------------|---------|
| For one office visit | \$10.00 |
| For one house call   | \$20.00 |

## General

## Consultant

|                      |         |
|----------------------|---------|
| For one office visit | \$20.00 |
| For one house call   | \$30.00 |

## Medical Specialist

|                               |               |
|-------------------------------|---------------|
| For a major operation         | \$250 Maximum |
| For an intermediate operation | \$180 Maximum |
| For a minor operation         | \$100 Maximum |

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