PD-AAI-057 532-0064 (1)

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UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

JAMAICA

PROJECT PAPER

HEALTH MANAGEMENT IMPROVEMENT PROJECT

AID/LAC/P-078

Loan Number: 532-U-015
Project Number: 532-0064

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A = Add, C = Change, D = Delete — A — Amendment Number

DOCUMENT CODE

2. COUNTRY/ENTITY: JAMAICA

3. PROJECT NUMBER: 532-0064

4. BUREAU/OFFICE: LAC — 05

5. PROJECT TITLE (maximum 40 characters): Health Management Improvement Project

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 03 DD 30 YY 85

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)

A. Initial FY 81 B. Quarter 3 C. Final FY 81

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 81 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	1370	1688	3058	3233	4517	7750
(Grant)	( )	( )	( )	(350)	( )	(350
(Loan)	(1370)	(1688)	(3058)	(2883)	(4517)	(7400
Other U.S. 1.						
Other U.S. 2.						
Host Country		423	423		2600	2600
Other Donor(s)						
TOTALS	1370	2111	3481	3233	7117	10350

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) HE	583B		530			350	7400	350	7400
(2)									
(3)									
(4)									
TOTALS						350	7400	350	7400

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 562 | 350 | 580

11. SECONDARY PURPOSE CODE: 383 B

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BRW	BUW	TNG	NUTR	EOTY		
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

Strengthen the ability of the Ministry of Health to plan, implement, and evaluate primary health care and nutrition programs.

14. SCHEDULED EVALUATIONS

Interim MM 03 YY 82 | MM 03 YY 83 | Final MM 03 YY 85

15. SOURCE/ORIGIN OF GOODS AND SERVICES

[X] 000 [X] 941 [X] Local [ ] Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)

17. APPROVED BY

Signature: Glenn O. Patterson

Title: Glenn O. Patterson, Director, USAID/JAMAICA

Date Signed: MM 3 DD 18 YY 81

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

AID 1330-4 (8-79)

PROJECT PAPER

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UNITED STATE 'NTERNATIONAL DEVELOPMENT COOP ATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D C 20523

PROJECT AUTHORIZATION

Name of Country: Jamaica

Name of Project: Health Management Improvement

Number of Project: 532-0064

Loan Number: 532-U-015

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Health Management Improvement project for Jamaica, involving planned obligations of not to exceed Seven Million Four Hundred Thousand United States Dollars ($7,400,000) in loan funds ("Loan") and Three Hundred Fifty Thousand United States Dollars ($350,000) in grant funds ("Grant") over a three-year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to assist in financing foreign exchange and local currency costs of goods and services for the project.

2. The project ("Project") consists of health manpower development, renovation and construction works, the provision of medical equipment and supplies and the improvement of management systems to enable the Ministry of Health of the Government of Jamaica ("Cooperating Country") to adequately plan, implement and evaluate primary health care and nutrition programs, with particular regard to the network of Primary Health Care Centers which are vital to extending care to the low income rural population.

3. The Project Agreements, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

a. Interest Rate and Terms of Repayment

The Cooperating Country shall repay the Loan to A.I.D. in U.S. Dollars within twenty (20) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A.I.D. in U.S. Dollars interest from the date of first disbursement of the Loan at the rate of (i) two percent (2%) per annum during the first ten (10) years, and (ii) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

b. Source and Origin of Goods and Services (Loan)

Goods and services, except for ocean shipping, financed by A.I.D. under the Loan shall have their source and origin in Jamaica or in countries included in A.I.D. Geographic Code 941, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Loan shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of Jamaica or countries included in A.I.D. Geographic Code 941.

c. Source and Origin of Goods and Services (Grant)

Goods and services, except for ocean shipping, financed by A.I.D. under the Grant shall have their source and origin in Jamaica or in the United States, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Grant shall be financed only on flag vessels of the United States, except as A.I.D. may otherwise agree in writing.

d. Conditions Precedent to Initial Disbursement (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

(1) the Project Implementation Unit (PIU) has been established, initial staff has been assigned and a time-phased staffing plan has been prepared; and

(2) a Project Director and a Project Coordinator with adequate authority have been appointed and are working in those capacities.

e. Condition Precedent to Disbursement for Procurement (Loan and Grant)

Prior to any disbursement, or the issuance of any commitment documents under the Project Agreements, to finance the procurement of goods and services, the Cooperating Country shall have obtained written approval from A.I.D. of the respective procurement procedures and such procurement and contracting documentation as A.I.D. may specify in Implementation Letters.

f. Condition Precedent to Disbursement for Renovation and Construction (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, to finance renovation and construction, including engineering services, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a plan for renovation and construction to be provided under the Project, delineating the necessary engineering and construction actions, the estimated schedules for completion and the responsible organizations and individuals. The required plan shall present the foregoing particulars in detail for the first year of renovation and construction activities and in more general terms for the succeeding years of such activities under the Project.

g. Condition Precedent to Subsequent Disbursement for Renovation and Construction (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, after one year from the date of the Project Loan Agreement, to finance renovation and construction, including engineering services,

the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a five year Maintenance Plan for all Primary Health Care Centers in Jamaica, whether or not renovated or constructed under the Project, and other facilities renovated or constructed under the Project.

h. Condition Precedent to Disbursement After Eighteen Months (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, after eighteen (18) months from the date of the Project Loan Agreement, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that the Cooperating Country has:

(1) completed a Special Project Evaluation that examines experience up to that time in implementing the Project, such evaluations of the World Bank-financed Jamaica Second Population Project as may have been completed up to that time, and the results of the baseline survey undertaken under the Project; and

(2) examined Project design in light of the above Special Project Evaluation, prepared such changes in Project design as may be advisable as a result thereof and modified Project implementation plans in accordance therewith.

i. Covenants

The Cooperating Country will, except as A.I.D. may otherwise agree in writing:

(1) revise and refine annually the engineering and construction plan and the health facilities maintenance management plan, furnished pursuant to Sections 3.f. and g. above, and will submit such revised plans to A.I.D. annually during the life of the Project;

(2) improve and maintain the physical quality of the government-rented health centers during the life of the Project in a manner satisfactory to A.I.D.; and

(3) budget funds adequate to maintain and support the Primary Health Care Centers and to finance other recurring costs after the end of the Project.

Marshall Brown

Acting Assistant Administrator
Bureau for Latin America
and the Caribbean

May 6, 1981

Date

Clearances:

GC/LAC:BVeret: _____ date 7/4/81

LAC/CAR:RDelaney: _____ date _____
LAC/DR:MBrown: _____ date _____

GC/LAC:GMWinter:ukg:7/14/81:x29182

I. PROJECT SUMMARY

A. SUMMARY OF PROBLEM

Primary health care delivery and the viability of primary health care infrastructure, systems and organizations have been declining markedly in Jamaica over the past decade as the result of deteriorating economic conditions and the associated shortages of material and personnel resources.

There is a significant shortage of skilled medical personnel due to emigration and insufficient in-country training. Over the past 10 years the number of physicians, in the public health sector, for example, has declined from over 700 to approximately 375 at present. This represents a ratio of 1.8 physicians per 10,000 people as compared to 12: 10,000 in Puerto Rico, 6: 10,000 in Barbados, 5: 10,000 in Dominican Republic, and 1: 10,000 in Haiti. The number of dentists in Jamaica has also declined. The most recent survey indicates that there were 86 in 1979 compared to 106 in 1973 with 75% of the remaining dentists working in the Kingston/St. Andrew urban areas.

The GOJ has recognized the need, for reasons of cost and availability, to emphasize the use of para-medicals. These personnel are also in short supply, and many of those presently in the health service are not trained for their expanded roles in the health care service. The MOH does not have suitable facilities for conducting necessary training.

The buildings in which health care is provided, hospitals and, particularly, public health clinics or centers, are in need of renovation and physical expansion. Many clinics function in a limited manner because of an inadequate maintenance program during the past 10 years. Plumbing, electrical wiring, roofs, water supply, and security are inadequate, and many clinics lack sufficient storage and working space. A functioning network of public health clinics is of extreme importance in Jamaica as it can offer medical care at dispersed locations accessible to the rural poor and at much less cost than that provided at hospitals.

Much essential imported medical and dental equipment is simply not on hand, while a great amount is inoperable for lack of spare parts or repairs. Moreover, the supply system for the procurement, inventory control and distribution of equipment and consumables is chaotic.

Many of the nutrition problems in Jamaica, such as malnutrition in children under 5 and anemia in pregnant and lactating women, result from the lack of public education, deficiencies in the management of the supplementary feeding program and from the lack of a nutrition surveillance system and adequate diagnostic and remedial procedures.

B. SUMMARY DESCRIPTION OF PROJECT

The Project goal is to improve the health and nutritional status of the Jamaican population by improving the efficiency, effectiveness and equity of the primary health care delivery system.

The purpose of the Project, to be achieved over a four year implementation period, is to strengthen the ability of the MOH in planning, implementing and evaluating primary health care delivery and nutrition action programs, particularly in rural areas. Emphasis will be placed on activities which upgrade and expand primary health care and nutrition services to the rural population of Jamaica through the integrated primary health care system. This is expected to diminish the urban bias of the hospital-based services which characterizes the existing system and to enable the GOJ to provide a fundamental level of care with its limited public health resources.

The Project will directly address the problems of the primary health care system through an integrated package of training, technical assistance, commodities and renovation and construction of buildings. The Project will focus on the following problem areas:

-- manpower development and training
-- health information system
-- renovation of primary health care centers
-- equipment availability/maintenance and supply management
-- nutrition surveillance and supplementary feeding

With the severe budget constraints and the out-migration of trained medical personnel over the past five years, it is essential to upgrade skills of non-physician primary health care professionals to provide improved service at lower cost. A health manpower inventory, initiated as a pre-project activity, will be further refined and implemented and will provide base-line information. This management and planning instrument will be designed for continuous updating and will enable the Ministry of Health (MOH) to identify the skills and capabilities in its staff and the additional training, skills upgrading and personnel required. The Project will provide the materials, training, and technical assistance needed to develop the system.

The MOH, particularly its Training Branch, will be upgraded, equipped and trained to plan and perform in-service training and to prepare curricula. Approximately 75,000 person days of training for over 14,000 health personnel will be furnished in the form of short courses, workshops and seminars and about 50 person months of longer courses, principally at U.S. institutions, will be provided.

The GOJ will provide an additional 10 personnel for the Training Branch, and the building to be occupied by the Branch will be renovated under the Loan to include classrooms, workshops and adequate office and storage space.

The Planning and Evaluation Division of the MOA will receive 15 PM of technical assistance as well as 4 PM of participant-training for its staff in order to upgrade its capacity to undertake macro-health planning and to coordinate and assist in planning undertaken by other divisions.

A national health information system, compiling and utilizing mortality, morbidity and nutrition data and vital statistics, will be designed and implemented with the benefit of an estimated 27 person months of technical assistance in the areas of data compilation, statistics, demography and data processing. This valuable and continuously updated system will permit the optimum use of limited resources by clearly identifying health problems, so that preventive and corrective efforts can be properly directed. The Loan will finance statistical recording supplies and software. Computer time will be furnished by the GOJ's Central Data Processing Unit (CDPU). The Project will provide significant institution building for the Statistical Information Services (SIS) Division of the MOH in the form of training, technical assistance, equipment and additional personnel. Data gathering and over-all familiarization training will be provided to the MOH field staff.

Primary Health Care (PHC) centers or clinics owned by the GOJ will be renovated or reconstructed to restore them to a reasonable operational level.

Essential imported medical and dental equipment and spare parts now lacking in the PHC network, will be financed under the Loan, and an improved supply management system for procurement, inventory control and distribution will be designed and implemented with 12 months of technical assistance from a medical supply expert. Training in supply management will be given to all appropriate staff, and materials handling equipment and supply transport vehicles will be financed under the Loan. The Loan will also finance the construction and equipping of a maintenance workshop which will repair and service equipment and fabricate spare parts and some equipment in-country to the maximum practicable extent.

The Division of Nutrition and Dietetics of the MOH will be provided with three months of techncial assistance from a nutrition planner in order to evaluate and redesign the national supplementary feeding program for implementation by the GOJ.

A nutrition surveillance system, which will be established and integrated with the health information system, will continuously acquire and update information on nutritional status to direct scarce nutrition resources to persons in greatest need. The majority of MOH clinical personnel will receive in-service training in data gathering and nutrition diagnostic and remedial procedures, while the Division of Nutrition and Dietetics will receive in-service training in the administration of nutrition surveillance.

A public education activity emphasizing selected nutrition themes will be implemented and directed primarily at women who are pregnant, anemic or have children under age 5. It will employ various modes of communication, e.g., radio campaigns, group meetings, clinic consultations, a mobile audio-visual aid unit, etc. Technical assistance will be provided for the preparation of training materials and radio scripts.

The GOJ will establish a Project Implementation Unit (PIU), headed by the GOJ Project Manager. This Unit will have authority to direct and motivate implementation of the Project.

SUMMARY OF ESTIMATED PROJECT INPUTS

US$. 4/81

	AID		
	LOAN	GRANT	GOJ CONTRIBUTION
Commodities	1,764,800		
Training			
Technical Assistance	613,500	300,000	
Support Costs (operating, maintenance and personnel)	304,200		1,125,300
Inflation Allowance (for above)	619,000	20,000	537,300
Renovation and Construction (incl. A & E, contingency and inflation)	3,323,900		307,600
Evaluation		30,000	90,000
General Contingency Allowance	306,700		
TOTALS ----------	7,400,000	350,000	2,600,000 (25.9%)

PROJECT TOTAL: $10,350,000

C. SUMMARY OF FINDINGS

It has been concluded from the analyses herein that:

1. The management of public health services in Jamaica, particularly for the primary health care network, requires strengthening and substantial restoration, if Jamaican health and nutrition status is to be improved or even maintained at the levels existing in the early 1970's;

2. With the construction and renovation work, equipment, training and technical assistance to be provided, the GOJ will be capable of managing the Project, achieving the Project goal and extending adequate primary health care to rural people, who comprise the majority of Jamaica's population.

3. The technical design and cost estimates are reasonable and adequately planned in accordance with FAA Section 611 and other applicable provisions;

4. Monitoring and evaluation of Project progress has been adequately planned;

5. The Project does not present any significant environmental issues; and

6. All statutory criteria have been satisfied.

D. RECOMMENDATIONS

Authorization of a loan to the Government of Jamaica of $7,400,000 to be repaid over 20 years with a 10 year grace period for principal repayment and at an interest rate of 2% during the grace period and 3% during the remainder of the repayment period and a $350,000 grant is recommended.

II. BACKGROUND AND CONSTRAINTS

A. HEALTH AND NUTRITION STATUS IN JAMAICA

Jamaica has traditionally enjoyed one of the better health situations and services among LDCs. However, with the problems of the past decade, emigration, very limited foreign exchanges, reduced health budgets, etc., health services, especially in the rural areas, have deteriorated. This is already reflecting itself in worsening health status.

Significant segments of the Jamaican population are in poor health, and the overall situation is getting worse (e.g., infant mortality rose in 1978 to 16.2 per 1,000 from 15.1 in 1977 -- the first increase after several years of steady decline). Infant mortality is presently estimated at 18.5/1,000 by the MOH. Mortality in the 1-4 age group is estimated at 4.5 per 1,000 (1977), which is twice that of Barbados, Trinidad and Tobago, and Puerto Rico, and is attributed primarily to malnutrition. Moreover, the incompleteness and age of existing data suggest that the overall situation is less favorable than it appears. The deteriorating food situation (both in terms of prices and availability), balance of payments problems, emigration of skilled professionals (extremely high in the health sector), high unemployment and under-employment, and cutbacks in the budgets of government ministries make it likely that the health/nutrition status of the Jamaican population will continue to deteriorate without special intervention.

Age specific mortality data, while limited, reveal that death rates are high under 5 and over 45 years. Mortality data, however, must be viewed with caution since a large percentage of registered deaths are uncertified, and even when certified, the certification often lacks accuracy. There is also significant under-reporting of mortality, especially in the infant and stillbirth areas.

Morbidity data are scarce. Certain diseases are notifiable by law, but notification is incomplete. The data that do exist reveal that the incidence of diptheria, measles, influenza, mumps, typhoid fever, tuberculosis, and whooping cough is not at levels which constitute major public health problems, but the incidence is higher than it should be in a lower middle-income country. The number of sexually transmitted diseases treated in government clinics is very high, especially in the 15-19 year age group.

In Jamaica malnutrition manifests itself especially in protein energy malnutrition (PEM) in the first and second years of life and anemia in pregnant and lactating women. The nutritional status of Jamaicans has been summarized in Jamaica's Food and Nutrition Policy, prepared by the GOJ Nutrition Advisory Council in 1978, which stated that malnutrition and the gastro-enteritis syndrome are among the main causes of admission to hospital and death of children in both the 0-23 months and 24-59 months age groups. Malnutrition accounted for approximately 5 percent of admissions of children under two years in urban hospitals, while in some rural hospitals this figure was as high as 22 percent in 1976. The cost of hospitalization of malnourished children is high, and, in 1974, was estimated at $3 million per year. The Tropical Metabolism Research Unit of the University of the West Indies in 1979 reported no decrease in the number of admissions and estimates that, with inflation, the present cost of hospitalization is about $3.9 million per annum.

A representative national nutrition survey carried out in 1978 found that one percent of the children under five are severely malnourished (Grade III - Gomez classification). A further seven percent are moderately malnourished (Gomez, Grade II) and 31 percent are mildly underweight (Gomez, Grade I). Hemoglobin levels of children under five years are generally low, e.g., 47 percent of children surveyed in 1978 had hemoglobin concentrations below 10g%. About 61 percent of pregnant women had hemoglobin concentrations below 11g%. (Hemoglobin concentration of 11 gms. in pregnant women and 12 gms. in adult non-pregnant women are considered the levels below which anemia is likely to be present). 21% of pregnant and lactating women had arm circumference measurements below what is considered to be the lower limit of normality.

B. HEALTH CARE AND NUTRITION SERVICES IN JAMAICA

Private sector agencies participate in the provision of health services, but the GOJ assumes major responsibility for the provision and delivery of these services -- both curative and preventive. Only a very small part of the Jamaican population (from 3% to 7% according to UWI surveys) can afford to take advantage of the limited private medical care available.

Curative services are provided in 27 government hospitals. Hospital services account for nearly two-thirds of the MOH total budget while preventive services account for less than one-fifth.

Preventive health services are the shared responsibility of the Ministries of Health and Local Government. While principal responsibility rests with the MOH, the Ministry of Local Government employs certain categories of primary health care workers and rents facilities for many of the health centers.

The MOH is committed to restructuring the health care delivery system with the major emphasis on Primary Health Care. The

intent is to ensure that basic health services are available at the community level with provision for referral for more sophisticated care when indicated.

Each of the 14 parishes is divided into Health Districts which form the smallest administrative units. Each district is served by interlocking health centers which offer different levels of health care services. Each Health District serves a total population of about 20,000 persons. Three levels of primary health care services are delivered from three types of Health Centers in each Health District.

The Type I Health Center is the smallest unit and serves a population of approximately 4000 persons by providing services which are closely integrated into the community. It is staffed by mid-wife and at least two community health aides with responsibilities for delivering basic maternal and child health care, family planning, and nutrition and immunization services.

The Type II Health Center has the staff and functions of a Type I, but in addition has a public health nurse and a public health inspector who are responsible for the Type I health centers in their area. A resident registered nurse provides simple treatment for common illnesses, the system intends that a doctor and/or nurse-practitioner and a pharmacist visit this center on a regular basis. This type of center serves a population of approximately 12,000 persons through a number of Type I centers.

The Type III Health Center incorporates the functions of Type I and Type II Health Centers and includes an assigned doctor, supervisory nurse, nurse-practioner and public health inspector. This center is the headquarters of the Health District and and serves a population of approximately 20,000 persons through a number of Type I and II Health Centers.

A Type IV Health Center has been established only in the Country of Cornwall. This type of Health Center administers the parish health program, accommodates the Medical Officer and the Parish (medical care and administrative) Staff, and carries out functions similar to that of Type III Centers. These centers are located on a hospital compound so that laboratory, X-ray and other facilities are available.

Type V or Comprehensive Health Centers will be located only in the urban areas of Kingston and St. Andrew and in the Spanish Town and Portmore areas of St. Catherine.

The actual number of patients seen in each type of health center varies greatly because -- shortage of staff may result in infrequently or irregularly held sessions. Patients, therefore, have developed the habit of seeking treatment in a hospital where

services are more likely to be available. Many people now being treated in hospitals could be treated effectively and less expensively in a properly functioning primary care unit, thus freeing costly hospital services for the more seriously ill. Though theoretically designed to serve 12,000 persons in its catchment area, for example, a typical Type II health center may only serve half of that number because of staff shortages and facilities which are inadequately equipped and supplied. In the aggregate, almost 750,000 visits were recorded at health centers in 1980 for maternal and child health services, which accounts for over 3/4 of all services delivered through health centers. 25% of these services for child health, 16% for family planning, 11% for antenatal and 3% for post natal services. 45% of visits were made for multi-purpose services where at least one MGH service was available along with non-MCH services, such as dressings for lacerations or ulcers.

In January 1980, there were a total of 373 functioning health centers on the Island. These health centers accounted for an average of 3,000 patient visits each, though of course the typical larger Type III center saw many more times the number of patients than the typical Type I health center. Since staff and supply shortages as well as inadequate facilities are most serious in the more numerous Type I and II Centers, this puts pressure on the larger health centers and hospitals which exacerbates the urban bias in the present health delivery system. A basic hypothesis of this project is that by improving the physical and human health infrastructure, particularly at the Type I and II levels, this pressure will be greatly relieved.

Hospital services account for the large majority of all staff positions in the Ministry of Health. Staff positions which are most directly related to staffing of health centers include doctors, registered nurses, assistant nurses, nurse practioners, public health inspectors, district midwives, health educators, nutrition assistants and dental assistants. Positions attributed to the primary health care services account for between 20%-30% of the total in the Ministry. Staff shortages are most critical for doctors (between 40%-50% of planned levels) nurses (about 70% of planned levels) and community health aides about 60% of planned levels). This project is expected to have a major positive effect on health center staffing, primarily through improved manpower planning and in-service training. In addition the GOJ has taken other measures to deal with manpower shortages such as recruitment of foreign doctors and acceleration the nurse practioner program.

Within the central Ministry (MOH), a Primary Health Care Unit has been established. This consists of a team headed by the Principal Medical Officer (Primary Care) and includes the Public Health Nursing Officer, the Principal and Assistant Public Health Officers, and two Senior Medical Officers. Responsibilities of this Unit include the coordination of primary care service delivered through other Ministry Divisions such as the Nutrition Unit, Bureau of Health Education and the Training Branch.

The demands on the MOH for improved and expanded services have increased due to population growth and policy decisions to extend service coverage; however, the MOH budget has declined in real terms, as follows:

GOJ and MOH Budgets
(Millions of 1973 Jamaican dollars)

Year	GOJ Budget (Gross)	GOJ Budget (Net)*	MOH BUDGET	MOH BUDGET % of GOJ Net Budget	MOH Budget % Increase
75/76	654.91	571.90	43.80	7.7	--
76/77	763.80	616.40	44.64	7.2	1.9
77/78	676.36	564.60	45.74	8.1	2.5
78/79	800.77	646/30	41.50	6.4	-(9.3)
79/80	607.15	452.20	38.31	8.5	-(7.7)
80/81	581.43	427.60	38.48	9.0	0.4

*Net of Debt Servicing

The Ministry's budget as a percentage of GOJ budget (net of debt servicing) has remained fairly constant over the past six years, averaging about 7.8 percent annually.

The MOH budget in 1980/81, in spite of being more than double the 1975/76 allocation in nominal terms, has decreased in real terms by 11.4% while the GOJ net budget has declined by 25.0 percent. The MOH budget allocation for 1980/81 is not sufficient to support the level of expenditure in 1975/76 in real terms. In light of the growth of population (5.6%), between 1975-1980, the effect of inflation and the economic decline in pulling larger portions of the population into the lower income brackets and, therefore, to a greater dependence on public health facilities, the current level of the MOH budget is highly inadequate. Additionally, devaluation of the Jamaican dollar has resulted in a significant loss of purchasing power during this period, and the extreme shortage of foreign exchange has drastically curtailed the importation of essential medical equipment.

The Ministry of Health has estimated that about 29% of its total budget (or approximately 40 million dollars) can be attributed to primary health care services. Though no precise data are available, costs of operating a typical Type I health center is probably between $12,000-$18,000/year, a Type II center between $25,000-$30,000/year, and a Type III center between $60,000-$80,000/year. Again, costs among health centers will vary greatly depending upon utilization, staffing and availability of equipment and supplies. The effect of this project will be a much greater output of patients seen and treated at a much lower unit cost per health center.

C. Constraints to Improvement

There are several major constraints which together inhibit the effective delivery of primary health care services in Jamaica.

Although budgetary limitations and personnel shortages are major constraints in the health sector, the principal problems relate less to the lack of resources than to their unbalanced distribution and inefficient utilization - that is, urban bias, over-emphasis on hospital-based services, and productivity shortfalls due to under-trained or sub-optimum use of personnel. Management of the health sector program is hampered especially by the absence of both an effective planning process and an adequate health information system. Data on personnel, budget and finance, supplies and facilities are not now maintained in an easily retrievable form. The absence or non-use of basic data for tracing resource flows makes it impossible to adequately assess financial needs and to relate proposed resource expenditures to existing patterns of disease or to health services utilization. Accurate and standardized clinic and hospital records are not kept and those records that do exist are not systematically analyzed. Communicable diseases are not properly reported and the environmental information system is severely under-developed.

The MOH is very much aware of these constraints. The priorities expressed in the GOJ Health Policy and the Five Year Plan are aimed at improving the resource maldistribution problem through an equitable extension of services via an emphasis on primary health care. The Plan lists eighteen problem areas or constraints in the health sector, among which are "maldistribution of staff, inadequate financial allocation; no effective planning process; too many vertical programs; lack of data; weak, inappropriate management system; separationof curative and preventive services."

The MOH's Nutrition Division is hampered by these problems in implementing nutrition programs. In addition, the commitment of the GOJ to nutrition is undermined by the lack of adequate financial support and by organizational/institutional weaknesses. Projects to improve nutritional status are not usually attractive investment opportunities since the pay-offs are often not easy to monetize and are neither visible nor effected in the short-term. In addition, administrative performance has not always been satisfactory even where projects are within individual ministries or departments; food and nutrition projects with their inter-ministerial dependence are apt to present even greater administrative problems. The absence of: 1) an adequate data base for planning and programming purposes; 2) a sufficient number of trained personnel in key technical areas; and 3) adequate resources for equipment and supplies also limit the effectiveness of efforts in this sector.

The Health Policy of Jamaica emphasizes that health is a fundamental human right. Toward that goal the GOJ has established

the objective of developing an integrated, comprehensive national health system with emphasis on primary health care services. Five areas are listed as top priority in the Health Policy: 1) management of health services including the development of a related health information system; 2) health manpower development directed especially towards meeting the personnel needs of the primary health care program; 3) environment health with special reference to the quality and quantity of drinking water supplies and the sanitary disposal of human waste; 4) nutrition with special reference to the implementation of Jamaica's Food and Nutrition Policy; and 5) the maternal and child health program with special reference to total coverage during pregnancy, child-birth, and early childhood. The Policy also states that health education must be an integral part of every health program and that community involvement is essential. Emphasis is also placed on developing effective systems of personnel and supply management, financial control and the maintenance of health care facilities. The Five-Year National Health Plan, 1978/9-1982/3, describes the programs and projects by which the policy will be implemented.

Recognizing the importance of adequate nutrition to the general well-being of the country, the GOJ established a Nutrition Advisory Council in 1973 to develop a National Policy with programs for incorporation into the National Development Plan. The Policy, approved in 1974, was revised in 1975 and 1978. The goals and objectives of the MOH's nutrition program in the current draft of the Five Year Health Plan, are taken from the National Policy. The primary goal is to "eliminate malnutrition in vulnerable groups of the population and, in particular, serious protein-calorie malnutrition and anemia in children up to five years of age and nutritional deficiencies in pregnant and lactating women."

This Project closely reflects the stated goals of the GOJ, and it is expected that Ministry of Health will provide a high level of commitment to the management of the Project. GOJ policies and goals in the health sector are clearly consistent with AID's policies and, thus, represent a sound basis for cooperation. AID's priorities of increased participation of the poor majority in development and the promotion of integrated, accessible health, nutrition and family planning services with an emphasis on primary health care delivery are virtually identifical to the policies of the GOJ.

Similarly, the AID mandate in nutrition closely parallels the high priority accorded it by the GOJ. Moreover, nutrition assistance from other donors is severely limited, and the current food situation and balance of payments, problems place Jamaica in a precarious position.

Malnutrition intensifies susceptibility to infectious diseases, thus increasing the need for curative health services. Together with other socioeconomic disadvantages, malnutrition

prevents children from attaining their reduced productivity and loss in man hours. These factors tend to converge and to retard the social and economic growth of the nation.

A high infant mortality rate may also increase the number of children which parents have as a means of assuring the survival of some offspring to adulthood. Accordingly, improving nutrition of children may increase receptivity to family planning.

This Project is also important to both USAID and the GOJ because of the positive impact that it will have on the family planning services in Jamaica, which are delivered largely through the health care system, especially through the health care system, especially through the primary health care network. Approximately 20% of all clinic sessions are for family planning services and a strengthening of the primary health care system, therefore, will eliminate some of the logistics problems that presently hinder the efficient delivery of family planning services. For example, a strengthened manpower development and training system will upgrade the family planning knowledge and skills of the health personnel who deliver family planning services; an improved health information system will enable family planning program planners to make more informed decisions and improved supply management will assure timely distribution of family planning supplies and equipment.

The beneficiaries of the Project will be recipients of primary health care services island-wide, Primary health care services by their very nature focus on the poor majority. Rural communities will benefit from the effect the Project expects to have on decreasing the urban bias that currently exists in health services. Women and children will be the largest recipients of services under the improved system, since they have the greatest need for PHC services and the vast majority of clinic sessions are for women and children.

The project is particularly important in light of the decrease in the number of physicians in Jamaica. It is designed to strengthen a health care system that is less dependent on physicians. For example, the training provided under the project is for non-physician health professionals and will upgrade their skills so they can perform some of the tasks previously performed only by physicians. Each member of the health team is to perform an expanded role in the delivery of health care. Als, the facilities to be renovated under the Project are Type I health centers and are not staffed by physicians. They have become inoperable or at best inefficient and renovating them will enable the non-physician health team to function better with the current physician shortage.

Moreover, primary health care services are inherently less costly than the essentially curative services of other levels of health care, and there is no doubt that improvement and

revitalization of the primary health care system will lead to a significant substitution of less costly services for those more expensive.

The GOJ and AID have chosen to concentrate, in this project, on overcoming six (6) major constraints on delivery of basic health services to the poor: 1) inadequate manpower development and training 2) a poorly developed health information system, 3) absence of a coordinated planning process, 4) absence of an effective supply management system, 5) a rapidly deteriorating physical infrastructure and 6) absence of an effective nutrition program. With the exception of nutrition, all of these constraints cut across functional lines and go to the very heart of the operation of Ministry of Health. Choice of these areas for project development was indicated in the 1978 Health Sector Study (Farr/Gish/Haverberg) done by AID and subsequently reconfirmed and analyzed in much greater detail in the aforementioned Ministry of Health's Five Year Plan (1978-82) and other official GOJ documents. a/

Certainly, there are other constraints to improving the health care delivery system and health status in Jamaica. The choice of these particular areas of concentration was made because 1) the areas were specifically identified in separate AID and GOJ health sector analyses as the areas most in need of assistance; 2) Primary Health Care is the top priority for the GOJ health services and the major policy focus for AID assistance in the health sector; 3) other international donor agencies are providing support to other

a/1) Government of Jamaica, Five Year Development Plan 1978-82, Draft) Parts III and IV, Prepared by National Planning Agency, Ministry of Finance and Planning, 1978.

2) Primary Health Care, the Jamaican Perspective: A Reference Manual for Primary Health Care Concepts and Approaches in Jamaica, Ministry of Health, Jamaica, 1978.

3) Report by Sub-Committee on the Development of Re-Organization Proposals, Ministry of Health, December, 1977.

4) The Health of the Nation: A Health Policy, Ministry of Health, Jamaica, July, 1977.

5) A Food and Nutrition Policy for Jamaica with Programmes for Incorporation into the National Development Plan, Prepared by the Nutrition Advisory Council, June, 1974. Revised in January, 1975 and again in August, 1978.

6) Ministry of Health and Environmental Control, Five Year Health Plan, 1978-1983, Final Version (Draft).

identified areas in need of assistance. For example, in the area of environmental health, both the IBRD and IDB are providing loans of almost $40 million to finance various sewerage and water supply projects around the Island. UNICEP is funding a comprehensive (health/education/agriculture services) project - Basic Services for Children Project - which also includes sanitation. In addition, Project Hope and a Hungarian line of credit are major sources for acquiring necessary drugs and medical supplies. Likewise, the World Bank has been providing support to the MOH for development of a Planning and Evaluation Unit and for facilities construction and heavy equipment, while PAHO provides a wide range of technical services to various divisions of the MOH.

D. Project Development

Once the MOH and AID agreed upon the major thrust of the project, work began on carrying out the proper analysis which would both 1) either confirm or deny the necessity for project intervention in each area and 2) reveal the appropriate amount and mix of inputs to be funded through the project.

A MOH Project Development Committee was established, chaired by the Principal Medical Officer and composed of the heads of the Ministry divisions involved with the proposed project. Concurrent with development of the PID, the Ministry developed its counterpart document, the Project Profile. The PID was reviewed and approved by the DAEC in AID/Washington in September of 1979 (See Annex for approval telegram), and the Project Profile was "pre-selected" by the Government of Jamaica's Project Analysis and Monitoring Company (PAMCO) in November 1979 for project development.

The Project Paper was prepared by USAID/Jamaica following the conceptual and planning efforts of a number of AID-financed technical experts who worked with GOJ counterparts in the development of project components. Experts in the following fields played important roles: manpower development and training (SERD, Inc.), systematic course design (Boston University Center for Educational Development in Health), health information system (the Bureau of Census), management, construction and supply services (Management Sciences for Health, Inc.), Nutrition Communications (DS/ED), nutrition education and curriculum design and health education (American Public Health Association contract), printery and media (Institute of Service to Education), nutrition programs (Transcentury Corporation), and supplementary feeding (AID/FFP). In All outside consultants spent from one week to a total of three months either planning the Project or working on pre-project activities at a cost of over $150,000.

Staff of LA/DR were involved from the beginning of the Project Paper process and provided technical support in Jamaica and in AID/W.

Specialized pre-project activities included the following: hiring of a full time project development coordinator within the Ministry of Health, initiation of the manpower inventory, an evaluation of the nutrition education campaign, participant training in the U.S. for a specialist in international procurement, training in the U.S. for the head of the training branch in curriculum design, surveys of health center renovation and equipment needs, two 2-week courses in Jamaica in systematic course design, an analysis of the primary needs of the Bureau of Health Education, and training and technical assistance by the U.S. Bureau of the Census for setting up a monthly clinic summary reporting system.

There are, in fact, several significant differences in funding levels and component mix between the approved PID and this Project Paper. However, there have been no fundamental changes in objectives. Changes in proposed mix and funding levels have come about primarily due to information produced from detailed analyses of each component. For example, even though the number of health centers approved for renovation has been decreased from 200 in the PID to 65 in the PP, the actual unit cost of renovation was found to be much higher than originally anticipated, resulting in an increase of over $1 million for this component. On the other hand, direct support to the Planning and Evaluation Unit was reduced due to the substantial amount of existing support to that unit available through the IBRD's JPP II Project. Similarly, consistent with the MOH's policy of integrating health education at all appropriate levels, direct support to the Bureau of Health Education has been elimianted as a separate component in the PP, while a substantial amount of support to health education activities remains in the project, particularly through the Nutrition and Manpower Development and Training components of the project.

E. Related Activities of other Donors

In addition to projects mentioned in part C which are not directly related to this project, other donors are funding a number of other activities which do bear a close relationship to this project. For example: the World Bank's Second Population Planning Project (JPP II) is actually a primary health care and health management improvement project focused on Cornwall County (the western third of the Island). The main input of that project has been the construction of 57 health centers. Through the $6.8 million JPP II project, the MOH has learned that the system of five different levels of health centers, types I through V, is a good one and is ready to implement the system island-wide. This Project is designed to assist in that effort, building on the lessons that were learned under JPP II. One reality being faced is that new health centers cannot be built island-wide due to financial constraints. Instead, this Project will renovate existing health centers.

PAHO has funded approximately $1,000,000 for a three person primary health care team consisting of a physician, nurse, and health educator who will work closely with Jamaican counterparts in the Primary Health Care Unit of the MOH over the next three years. This team will work in close collaboration with the Project implementation Unit for the proposed Project.

The Supply Management component of the Project will complement and draw support from a UNDP activity with the Ministry of Public Service which provides technical assistance in analyzing supply problems and recommending solutions. A UNDP consultant is especially concerned with problems in the field of building and equipment maintenance and supply management.

An important new development since the approval of the Project Identification document is the decision of Project Hope to move back into Jamaica with a large scale training and institutional development program beginning in the Fall of 1981. Concentrating on improving the secondary care (hospitals) system, Project Hope, will provide a resident team and consultant specialists who will concentrate on training nurse, anesthetists, nurse practicioners, pediatric nurses, physicians, and equipment maintenance personnel. Because of the close relationship to this project with the objectives and activities of the forthcoming Project Hope project, as well as those under the World Bank (JPP II) and PAHO (Primary Care) projects it is essential that there be an ongoing mechanism established which will ensure close collaboration. To this end, a Project Steering Committee for the Health Management Improvement Project will be established which includes not only MOH and AID but representatives from the IBRD, PAHO and Project Hope as well.

F. Related AID Activities

The current four-year bilateral Family Planning Project (532-0041) which began in 1977, is being implemented by the MOH through the National Family Planning Board (NFPB) and has the objective of reducing fertility by varied activities of the NFPB, the MOH and local voluntary institutions. A new four-year follow-on family planning project is now being developed which is expected to be ready for implementation in early FY '82.'

The effectiveness of the NFPB in implementing family planning/population programs is constrained by those same problems which characterize the central Ministry and which the Health Management Project will address.

Under a centrally-funded worldwide contract administered by AID/Washington, the National Center for Health Statistics (NCHS) is providing training and consultant services for three years in the Jamaica Vital Statistics Improvement (VISTIM) Project with

the MOH Registrar General's office. The project, begun in 1978 has two main objectives: 1) to revise current data processing procedures, and 2) to reduce the current backlog of unprocessed vital statistics data for the years 1972-77. The efforts of that project will be greatly assisted by the health information system component and the training opportunities in this project.

Previous primary health care projects of AID and the World Bank has paved the way for the Health Management Improvement Project. The three-year Health Improvement for Young Children Project (532-0040), which began in November 1977, was designed to provide the technical assistance component to complement the IBRD Second Jamaica Population Project (JPP II) in Cornwall County in developing and implementing an integrated primary health care delivery system as a prototype for replication Islandwide. AID provided technical assistance to the Cornwall County Health Administration (CCHA), especially in the area of primary health care training. CCHA was testing the Ministry of Health's plan to design, perform and evaluate primary health care training at the parish level. With the lessons learned under that project, the MOH has now expressed the desire to replicate that process island-wide and the Health Management Improvement Project will emphasize decentralized primary health care training at the parish level. AID will build on the Cornwall project by addressing the MOH long term needs for implementing and maintaining an effective national PHC system.

III. DETAILED PROJECT DESCRIPTION

A. GOAL

The project goal is to improve the health and nutritional status of the Jamaican people with emphasis on the rural population. This goal is framed with a special need to arrest the decline in the state of health and nutrition flowing from deteriorating economic conditions.

Attainment of the Project's goal can be measured, in part, by the extent to which the following are achieved:

a) Maintenance of an infant mortality rate not in excess of 18.5/1000,

b) A reduction of the malnutrition rate in children from 7% to 4% (under the Gomez II scale) and from 1% to .6% (under the Gomez III scale),

c) A reduction of anemia in pregnant and lactating women from 9/100 in 1978 to 4.5/100,

d) Decreased incidence of gastroenteritis in children by 10% by 1985,

e) A 10% reduction in the prevalence of common diseases, e.g. influenza, pneumonia, diabetes, etc., which can be prevented or treated by the PHC system.

The sub-goal of the Project is to increase the efficiency, effectiveness and equity of the health care servie system in Jamaica. Progress towards the sub-goal will be measured in part through the following:

a) Increased coverage of primary health care services delivery for children under three from 65% in 1979 to 86%;

b) A 20% increase in patients receiving primary health care in health centers, rather than hospitals.

B. PURPOSE

The Project purpose is to strengthen the ability of the Ministry of Health (MOH) to plan, implement and evaluate health care delivery and nutrition programs. In real terms, the material and personnel resources available to the MOH have been in a state of decline for almost a decade with a corresponding negative effect on what were once relatively good health care and nutrition programs. The Project will enable the Jamaican primary health care and nutrition services centered in the MOH to do more with less than has been available historically. The Project will restore health and nutrition resources to a viable operational level, will provide for effective administration of available resources and will establish improved systems for identifying health and nutrition problems and for marshalling, maintaining and distributing health and nutrition inputs to address those problems.

The majority of Jamaicans live in rural areas; however, hospital services which characterize the existing health care delivery system have historically demonstrated an urban bias. One effect of the Project, in the course of making health and nutrition programs more effective, will be to diminish this urban bias by upgrading and expanding primary health care and nutrition improvement services for the rural population through the island-wide primary health care network.

Attainment of the Project's purpose can be measured, in part, by the extent to which the following are achieved:

a) An established manpower development and training system providing continuous health manpower information, planning and training for all 14 parishes, central MOH units and 14,000 MOH staff, including annual needs assessments and pre-planned courses and curricula;

b) Health planners and administrators using detailed data from the health information system on the health and nutrition status of the Jamaican population to allocate resources based upon the needs of each geographic area;

c) Effective equipment maintenance and supply management systems in operation for 373 PHC centers, 27 MOH hospitals and Island Medical Stores:

d) All PHC centers and dental clinics fully equipped and operational;

e) A majority of Jamaican mothers who are lactating or have children under age 5 or common nutrition problems using valid and locally relevant nutrition guidance and practices.

f) Increased coverage of primary health care services delivery for children under three from 65% in 1979 to 86%;

g) A 20% increase in patients receiving primary health care in health centers, rather than hospitals.

C. OUTPUTS

I. Manpower Development and Training

Manpower constraints on health care include personnel shortages and unbalanced distribution and inefficient utilization of staff. The MOH has experienced extreme difficulty in recruitng and retaining an adequate number of skilled personnel. There is a special shortage of health personnel in the rural areas and in the particular health services which are needed most.

There is a need to recruit and train large numbers of new health professionals, as well as to broaden the scope of existing health personnel to cover manpower shortages in critical areas. Presently, only limited in-service training is conducted by the MOH. When such training is available, it is conducted centrally at great expense and often is not based on pre-determined curricula, nor evaluated and planned on a national level. Since the MOH is emphasizing primary health care as the method to reach Jamaica's population, many health

care personnel, especially at the parish levels, will need to be retrained for their expanded roles. Community Health Aides (CHAs), for example, have received only six weeks of pre-service training. If the Community Health Aides are to perform adequately, they will require extensive training in new areas ranging, for example, from first aid to taking sputum samples.

A small MOH Training Branch does exist, but it functions primarily to process applications for overseas training. Health manpower information is limited, and there is no operational system for its continuous updating or for its employment as a planning and management tool. Inadequate record keeping, communications difficulties, lines of authority cutting across ministries and among several levels within these ministries, as well as staff shortages, have made the collection of personnel data difficult and often impossible.

A manpower development and training system will have been developed which, by the Project's end, will be providing reliable and continuous manpower information and planning and arranging and conducting in-service training at all levels of the MOH.

A fundamental mechanism leading to the establishment of the system is the manpower inventory, computerized by the GOJ's Central Data Processing Unit, of all personnel (approximately 14,000) employed in the public sector health services. The Project will develop the capacity in the MOH to continuously update this inventory and to use it as a working instrument. MOH staff will have been trained in and provided the necessary equipment for the management and use of the system.

With the information maintained in the health manpower inventory, the MOH, its divisions, and parish health units will be able to determine training needs by analyzing the characteristics of the work force against the needs for health personnel. The inventory will contain information on such variables as number of workers in each job category, age, sex, time to retirement, present assignment, qualifications, education, experience, etc.

The capability in the MOH Training Branch to prepare manpower "needs assessments" will be developed by the Project. The Training Branch will assist other MOH divisions and parish level units in performing this analysis, in preparing detailed annual training plans and curricula, and in conducting the training.

The MOH Training Branch will prepare a comprehensive annualized training plan including evaluation which will be submitted to USAID for approval prior to implement of the training program. Annual revisions will be undertaken as implementation proceeds. Included in Section D(b) is an illustrative training plan which maybe modified as actual training needs are identified through the manpower inventory and other surveys.

At the central Ministry level on-going training programs will have been established for trainers, clerical personnel and registry staff. More importantly, at the parish level the parish training committee and other health programers will be able to plan, execute and evaluate parish level training of paramedicals and other health staff.

The Training Branch will be fully staffed and equipped to function as the "secretariat" for the Training Committee, a policy making body under the section of the MOH Permanent Secretary (Chairman). The Training Branch will receive its over-all guidance and direction from the Training Committee and carry out its policies.

The Project will develop the capability in the Training Branch to perform the functions summarized below:

(1) Continuously maintain, update and utilize the manpower inventory,

(2) Conduct needs assessments prior to the development of training programs,

(3) Design, develop, monitor and revise the MOH national training plan,

(4) Assist in the development of curricula,

(5) Arrange for training sites, materials and logistical support,

(6) Plan and conduct national level in-service training programs cutting across division and parish lines,

(7) Provide technical assistance to parishes and agencies conducting in-service training,

(8) Provide record keeping, curricula library, and related services for training programs,

(9) Provide liaison services with training programs within and outside the MOH,

(10) Evaluate training programs,

(11) Serve as the secretariat for the Training Committee.

2. Health Planning

Planning takes place within the MOA at many levels. Since the establishment of the Planning and Evaluation (PE) Unit in 1979, macro-health planning has been its principal concern. As the Unit becomes fully staffed,

however, it will assume major planning responsibility for such specialized areas as facility planning and manpower planning. As a practical matter, however, most ongoing program planning continues to take place at the Parish level within the office of the Parish Medical Officer and within the various functional divisions of the Ministry of Health, such as the Nutrition Unit and Bureau of Health Education.

This project will provide support to the MOH to improve its planning process at all appropriate levels. For example, Parish health workers will receive training through the Training Branch in methods of health planning. Training plans will be developed at the Parish level, by individual functional divisions and by the Training Branch itself. The project will finance a Manpower Planning and Training consultant to assist the MOH in carrying out these responsibilities. Likewise, the project will finance a supplementary feeding planner consultant who will work in the Nutrition Unit to plan and design a comprehensive evaluation of the national supplementary feeding program.

The project will also provide technical assistance and training support directly to the Planning and Evaluation Unit of the MOA. This support is scheduled to come on stream in CY 1983 at the expiration of the current World Bank-financed JPP II Project. Analysis of the resources now available to the Unit and confirmed through recent discussions with MOA and World Bank representatives show that additional AID resources are unlikely to be needed before that time. The absence of an effective system of health planning has been identified by both AID (Farr/Gish/Haverberg) and the GOJ (5-Year Health Plan) as a major constraint to delivery of health services. Included in the Management Improvement Programme section of the 5-Year Plan is a program for establishing the Planning and Evaluation Unit and strengthening the Ministry's existing Statistical and Epidemiology Units. Since the Five Year Plan was written in 1978, the P&E Unit has in fact been established and the Statistical and Epidemiology Units strengthened with additional staff. In addition, AID's regionally financed CAREC project has provided training to MOH personnel, principally physicians and public health inspectors, in epidemiology and disease surveillance. Though technically not part of the P&E Unit, Ministry epidemiologists work closely with P&E, as do epidemiologists from the NWI Medical School.

The P&E Unit has seven authorized positions: Director of Planning, Chief Health Planner, Facilities Planner, Manpower Development Planner, Social Scientist, Budget Analyst, and Project Research Officer. Currently, there are three vacancies: Chief Health Planner, Social Scientist, and Budget Analyst. The MOA is actively recruiting to fill these vacant positions. Problems of classification of posts as temporary instead of permanent and low grading have inhibited recruitment and staff retention. However, the posts have now been made permanent and the Ministry of the Public Service has agreed to consider upgrading the posts, which should result in the Units being fully staffed in the near future.

The current staffing pattern of the Unit as established by the M[illegible] in consultation with the World Bank is appropriate to meet the

MOH's planning needs, especially since many of those planning needs will continue to be met outside of the P&E Unit itself. As a result of the technical assistance and training support available to the Unit from this project, the P&E staff will be able to more fully and effectively utilize available resources, including data to be generated through a strengthened health information system, to carry out their planning responsibilities.

3. Health Information System

Management of health programs is hampered by the absence of effective planning and its essential prerequisite, an adequate health information system. Vital demographic and health statistics are not available in a timely manner. Accurate and standardized health center and hospital records are not kept, and those records that do exist are not systematically analyzed. Communicable diseases are not properly reported, and the environmental information system is severely underdeveloped.

The Project will establish comprehensive systems for the collection, processing, dissemination and utilization of health information. The Statistical Information Services (SIS) Division of the MOH will have primary responsibility for assuring a fully operational health information system by the Project's end. SIS staff will receive long and short term training. The SIS will receive technical assistance in all relevant aspects of information systems, including computer operations, and will receive equipment, short of the provision of actual computer facilities, which will be provided on a shared-time basis by the Central Data Processing Unit (CDPU). The SIS Division will have assisted in establishing a centralized health statistics data library and documentation center and will have conducted in-service training on the health information system for approximately 1200 MOH employees.

By the end of the Project all of the PHC centers will be utilizing standardized patient records and providing monthly reports on all major aspects of primary health care under a Monthly Clinic Summary Reporting (MCSR) system. A comprehensive annual reporting system will also have been implemented, and a program will have been established for semi-annual sample surveys of health center patient records to be performed by a specially trained team.

Systems will be put in operation for collecting, evaluating and disseminating health data from specialized and assorted health service areas which are not the primary responsibility of the PHC network, such as, epidemiology, nutrition, school health and special services. The health information systems of the secondary and tertiary health care services, which includes hospitals, public and environmental health programs, and social services, will be made fully compatible and co-functional with those developed for the PHC network.

4. Supply Management and PHC Equipment

Essential to the proper functioning of the Primary Health Care network is a system which provides for the smooth flow of parts and supplies and the provision and maintenance of appropriate equipment. As a part of the PHC network, family planning activities are also dependent ofn the timely availability of essential supplies. Moreover, the supply system must operate efficiently to conserve precious foreign exchange.

The PHC delivery system is particularly vulnerable to weaknesses in the supply system, because PHC, although a "high priority program" of the Ministry, is still in its infancy and faces strong competition from the hospital system when resources are scarce.

Within the MOH, supply management is the primary responsibility of the Health Services Administration (HSA) Division, the Director of which reports to the Ministry's Permanent Secretary. The Island Medical Stores (IMS) located in the port area of Kingston, with a staff of approximately 65 employees, is the central point in the physical distribution of most medical supplies and equipment for the public sector. Supplies are provided for the IMS by the Supply Division of the Ministry of Finance and are requisitioned from the IMS by hospitals and health centers. Other users, such as the Ministry of Local Government also purchase from the IMS.

Supplies and equipment can also be procured on the local market by local hospital boards, which makes central financial and inventory control more difficult.

There is an urgent need for the design of a new distribution network, and the development of new forms and procedures for use by central and field-level staff in ordering, shipping, receiving, and storing supplies.

The absence of proper records makes planning impossible and hampers current operations. At present, there is a backlog of more than one year in the financial accounting for stores operations, and consumer units, therefore, do not have their budgets amended to reflect their consumption. Moreover, it is virtually impossible to tell how much was actually spent on drugs and supplies even in aggregate. This disrupts the Ministry's overall budgetary process, and reduces the confidence of the Ministry of Finance in MOH budget requests. Also no properly functioning system of current inventory records is in place at the field level or at the IMS. Hospital stock records are minimal, and PHC centers typically have none whatsoever. This impedes both logistics and analysis of quantitative and financial inventory data.

Lack of training is a major constraint for health center and hospital staff with supply responsibilities. Very few field personnel, especially in the Primary Health Care Program, have had training or solid experience in supply operations and management.

PHC Centers face three important storage difficulties. First, most centers lack adequate storage space for food provided under the supplementary feeding program. Second, there is often no facility for keeping vaccines and other temperature-sensitive supplies refrigerated, due to lack of a refrigerator or of repairs to put one in working condition. Third, security is poor, with many centers lacking proper door locks, burglar bars and fencing around the compound.

The IMS is chronically short of transportation, with an aged set of vehicles from which only one is usually operative at any given time, and also lacks adequate materials handling equipment.

The Loan will provide a capital contribution to eliminate the present shortages of imported equipment faced by the Primary Health Care centers.

More importantly, by the end of the Project an effective supply management system will be in operation at all levels of the Primary Health Care system, and the 254 PHC centers in Middlesex and Surrey counties will be fully equipped and supplied in accordance with the MOH list of standard and authorized equipment. (See Annex F). Dental equipment also will have been provided to enable full operation of 73 dental clinics primarily located at PHC centers. The existing basic equipment, e.g. air compressors, air turbine units, suction units, etc., is over 20 years old and in need of replacement and upgrading.

Personnel from each of the 27 hospitals and the 373 PHC centers will have been trained in the administration of the supply management system. The needed transport vehicles, materials handling equipment, as well as essential imported medical equipment for the PHC network, and office equipment will have been provided under the Loan. Regional storage and distribution depots will have been established at 20 hospitals which will handle the distribution of supplies received from the central Island Medical Stores.

Equipment maintenance programs for the health services are hampered by the lack of spare parts, most of which must be imported. They take many months to obtain from abroad through normal supply channels. Delays of this sort have closed down health facilities for long periods of time. For example, the entire laundry at a large hospital was closed down recently for lack of a roller. For expediency, the Ministry was forced to send a technician to the U.S. to purchase the part.

By the Project's end, an Equipment Maintenance Workshop will have been constructed, staffed and equipped and will be producing spare parts and meeting equipment repair and service needs in-country to the maximum practicable extent. A quick and cost conscious system will be in operation for importing the spare parts which cannot be fabricated locally.

5. Renovation and Construction

There is a severe maintenance problem for buildings used by the MOH, largely due to the lack of financial resources. This actually resulted in the temporary closing of two of the country's largest hospitals early in 1980. Many health centers suffer from deficiencies such as leaky roofs, faulty plumbing and electrical wiring and inadequate working and storage space and security.

For the 27 hospitals and 154 health centers owned by the GOJ, major maintenance work is the responsibility of the Hospital Maintenance Unit (HMU) of the Ministry of Construction. Most of the other public sector health facilities are rented by the Ministry of Local Government, with maintenance being the responsibility of the landlord. Even if the MOH centers did not lack functioning equipment and reasonable medical supplies, they could not operate effectively without some degree of physical renovation. The health centers were constructed approximately twenty years ago, and without maintenance the buildings are quickly deteriorating, and will be lost from service. At that point, only a major capital outlay will be able to replace them or return them to service.

During the first 36 months of the Project, 65 health centers will be renovated. As a result, all of the GOJ owned centers in the PHC network are expected to be in adequate physical condition for full operation.

Essentially all of the centers to be renovated (60 of 65) are in two of the three counties in Jamaica. The World Bank's Second Jamaican Population Project (JPP II) started in 1977 is meeting the needs of the third county, Cornwall, by the construction and equipping of 57 health centers. The construction component of the World Bank project was specifically limited to Cornwall County, in that a project re-constructing or renovating all of the Island's health centers was considered to be beyond the GOJ's implementation and maintenance capacity at that time and too large an undiversified investment.

Within Middlesex and Surrey Counties there are also 187 health centers, in addition to those owned by the GOJ, which are staffed and equipped by the MOH, but located in private buildings leased by local government units. These health centers will not be renovated under the Project, because (a) this volume of dispersed physical work would exceed the GOJ's present absorptive capacity, (b) the costs would exceed what is reasonably expected to be available for this Project, and (c) AID and the GOJ, at present, do not wish to invest in structural improvements to privately owned buildings under leasehold. Putting the Cornwall and a substantial portion of the Middlesex and Surrey health centers in operational condition is preferable to having almost none in good condition, may motivate the GOJ and local governments to take independent action and may whet the appetites of other donors. Moreover, if the renovation components of this Project and JPP II prove successful, a follow-on AID project may be proposed to address the remaining health centers in Middlesex and Surrey.

6. Nutrition

In the Ministry of Health, nutrition programming is carried out by the Division of Nutrition and Dietetic Services (Nutrition Unit). The Nutrition Unit has developed a strategy which contains four elements:

- Supplementary feeding
- Nutrition surveillance
- Nutrition education and communications
- Training.

The Nutrition Division has 34 field staff including two nutritionists for each of the four regions and one nutrition assistant for each of the 14 parishes. Nutrition assistants are responsible for monitoring community nutrition status, for providing nutrition information to the public and for conducting in-service training. The field staff motivate and organize the nutrition education efforts of Community Health Aides (CHAs) and mid-wives. The nutrition assistants are severely underutilized due to lack of mobility. They must rely on public transport which is time consuming and does not reach many locations within their jurisdictions. They have few educational materials, although their impact would be dramatically increased by the provision of such materials to CHAs and to mothers.

Several classes of MOH personnel are presently involved in the dissemination of nutrition information to the general public. Because there are no standardized training curricula or materials, there have often been confusing and even contradictory nutrition messages to the public.

The staff is limited in number and in its preparation. Nutrition assistants, having received a one-year course in management and nutrition at the College of Arts, Science and Technology (CAST), require intensive pre-service training and continuous in-service training, if they are to train other MOH personnel at the parish level.

The GOJ relies on imported foods, primarily through the PL 480 program and the EEC, to support social service and feeding programs sponsored by five different ministries. The MOH's feeding program[1] is targeted primarily to malnourished and "at risk" children under five and undernourished pregnant and lactating women. TB patients, diabetics and indigents also receive food when surpluses exist. The objective of the present program is to provide a supplement of 4 lbs per month to the diets of seriously malnourished children (Gomez Grades II and III), 2 lbs per month to marginally malnourished children (Gomez Grade I) and those of normal status who are losing weight, and 4 lbs per month to all undernourished nursing mothers.

Records are not kept on either the numbers or type of beneficiaries. However, the projected beneficiary levels for 1980 were as follows:

Children under 5 years (Gomez II & III)	9,185
Children under 5 years (Gomez I and normal)	105,625
Pregnant women	38,170
Total	152,980

Economic need is commonly cited by field staff as a criteria for recipient and ration size, but no established norms exist; decisions are subjective and vary according to individuals and locality.

The supplementary feeding program is beset with administrative problems. Logistical problems are serious from the initial commodity orders to final distribution. Record keeping is not standardized and often is non-existent at the

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1 Annex J describes the program in more detail.

clinic level. Food arrives in Jamaica irregularly and does not get distributed to the clinics on a timely basis. While some clinics have more food than can be stored or distributed, many others have only enough for Grade II and III malnourished children.

Given these operational problems and the lack of nutrition statistics, the impact of the supplementary feeding program is, at best, speculative.

Nutrition surveillance is the monitoring of various indicators of nutritional status in a target group to determine nutrition trends for purposes of evaluation and planning of programs. Surveillance is more valuable in nutrition than in communicable disease control, since nutritional disorders usually are not officially notifiable and because deaths due to malnutrition are seldom recorded as such. An efficient surveillance system is more effective and less expensive than doing surveys every five or ten years.

The surveillance of nutrition status by the Nutrition Division is inadequate for sound program management and evaluation. Parish level nutrition assistants have primary responsibility for data collection and tabulation under the present system. Performance of these tasks requires up to several days per month, distracting an already minimal field nutrition staff from their primary, service-oriented activities. The data collected is often incomplete and of questionable accuracy. Tabulation procedures vary from parish to parish and aggregation or interpretation of the data is, therefore, unreliable.

The Project will develop and place in operation improved national supplementary feeding, public nutrition education and staff training programs and a nutrition surveillance system. The national supplementary feeding program will be evaluated ; logistical and operational revisions will be identified and the program re-designed and implemented. This process will include the development of a supplementary feeding strategy. Appropriate MOH staff will have been trained in nutrition program planning and management and in food logistics and record keeping. Instructional manuals for parish level staff will have been produced on all relevant subjects, such as breast feeding, weaning, and nutrition for pregnant women and mothers with children under age 5. Field staff of the MOH will be suitably trained for and performing nutritional diagnostic procedures, remedial follow-up and standardized reporting.

Nutrition surveillance reporting will be incorporated into the new health information system for greater utility and to avoid duplication. For the most part, data will be gathered in the Monthly Clinic Reporting System and in Sample Surveys of In-Clinic Records. By the Project's end, a continuous information system will be compiling the following types of nutrition data:

<u>Children Under Five</u>

Birth Weights
Weight for Age
Morbidity (gastroenteritis, measles, respiratory tract infections and other communicable diseases)
Mortality
Breastfeeding
Participation in supplementary feeding, nutrition and education

Weight for Height (among identifiable second and third degree malnourished)

Immunization Status
Dietary childcare and other socio-economic patterns

Pregnant and Lactating Women

Hb levels
Weight gain in pregnancy
Participation in supplementary food/iron programs, nutrition education

General Population

Incidence of diabetes, hypertension and obesity

Health Centers will be fully equipped for the performance of essential physical tests related to nutrition and for record keeping and reporting.

An Island-wide public education program in nutrition will have been developed and put in operation. The educational program will employ a variety of the available modes, including radio, pamphlets, posters, slide shows, assorted audio and visual aids, photo-novels, etc., and will include community presentations, as well as group and individual instruction at health centers.

Finally, a pilot activity will have been completed under the Project to test the viability of community based production of educational materials to supplement the national educational program. Pilot activities also will have been conducted in innovative nutrition interventions, and a longitudinal study tracking the progress of a representative sample of women through clinic nutrition treatment and supplementary feeding will have been completed.

D. INPUTS

a. Summary of Estimated Project Inputs by Component
(U.S. $, 4/81)

	AIDa/	GOJ
I. MANPOWER DEVELOPMENT AND TRAINING		
Technical Assistance -		
Health Manpower Planning and Training Specialist - 12 PM	120,000	
In-Country Training -		
Medical Management and Training Skills, 35,000 training days for total of 6,000 MOH staff	345,000	
U.S. Training -		
Health Media Planning 3 PM	5,000	750
Commodities -		
Equipment and supplies for offices, training, and data compilation and processing	17,900	30,190
Additional Personnel (10) for Training Branch		161,264
Additional travel, allowances and overhead		59,060
COMPONENT TOTAL ($739,164)	487,900	251,264
II. HEALTH PLANNING		
Technical Assistance -		
Health Planning Advisor - 15 PM	150,000	
COMPONENT TOTAL ($150,000)		

a/ All AID financing is loan, except those items marked by an asterisk (*)

	AID	GOJ
III. HEALTH INFORMATION SYSTEM		
Technical Assistance -		
System design, data compilation and processing, statistics, 27 PM	123,000	
In-Country Training -		
Data compilation and processing and system familiarization, 3,000 training days for total of 1,250 MOH staff	28,118	19,270
U.S. Training -		
Statistics and data processing for 6 trainees for 27 PM total	54,854	3,000
Commodities -		
Equipment and supplies for offices, training, and data compilation and processing	125,200	43,000
Rental of computer time and keypunch equipment		52,000
Additional personnel (4) for SIS Division		80,784
Additional travel, allowances and overhead	8,270	5,610
COMPONENT TOTAL ($543,106)	339,442	203,664
IV. SUPPLY MANAGEMENT AND PHC EQUIPMENT		
Technical Assistance -		
Medical Supply Expert, 12 PM	120,000	
In-Country Training -		
Supply management and system familiarization, 2,800 training days for 900 MOH staff	20,790	16,856
Commodities -		
Medical and dental equipment materials handling and maintenance workshop equipment, tractor and 2 trailers, training materials	1,160,610	
Additional maintenance and supply personnel(s) (5)		45,000
Additional travel and allowances		4,500
Additional utilities and other overhead		90,000
COMPONENT TOTAL ($1,457,756)	1,301,400	156,356

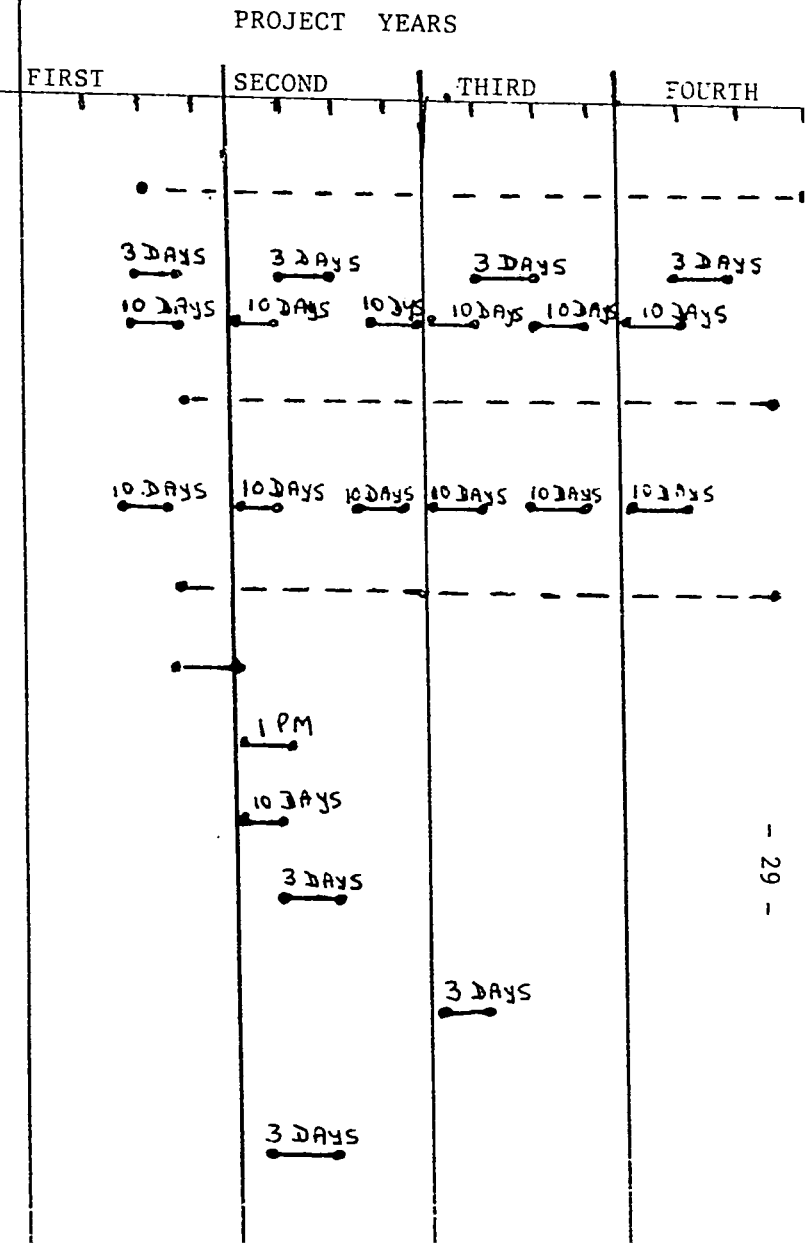
	AID	GOJ
VII. RENOVATION AND CONSTRUCTION		
Renovation of 65 health centers and Training Branch/Materials Production Center and construction of Central Maintenance Workshop (A & E, inflation and contingency included)	3,323,923	307,614
Building maintenance		137,700
MOH engineering assistant		15,168
Additional travel and allowances		10,110
COMPONENT TOTAL (3,794,515)	3,323,923	470,592
NUTRITION		
Technical Assistance -		
Supplementary Feeding Planner 5 PM	50,000	
Educational materials, development specialist, 3 PM	30,000	
Radio Script Preparation (local) 8 PM	12,500	
Educational materials, artist (local) 8 PM	8,000	
CuSO4 Iron Folate Evaluation and sample survey of clinic/population data (local) 2.5 PM	30,000	
In-Country Training -		
Nutrition and nutrition surveillance, supplementary feeding management, for 35,000 training days for 2,000 MOH staff	14,050	42,252
Commodities -		
Materials and equipment for training, public education, diagnostic and remedial procedures, offices, and data compilation and processing	323,455	51,000
Additional travel and allowances	1,400	4,000
Radio airtime	96,000	
COMPONENT TOTAL ($662,657)	565,405	97,252

		AID	GOJ
VIII.	PROJECT IMPLEMENTATION UNIT		
	Personnel - 7 staff + 9 parish drivers		246,967
	Travel and allowances		26,072
	Commodities -		
	Materials and equipment for office and field support studies	137,643	166,856
	Building rental, utilities and other overhead		45,908
	Vehicle maintenance -		141,152
	Field support studies	168,540	
	PIU TOTALS ($933,506)	306,183	626,955
IX.	EVALUATION		90,000
X.	INFLATION ALLOWANCE (excluding construction)	639,042 b/	537,305
XI.	GENERAL CONTINGENCY ALLOWANCE*	306,705	166,612
	GRAND TOTALS ($10,350,000)	7,750,000	2,600,000

b/ Includes $20,000 grant funded

b. ESTIMATED TRAINING

COURSE/SUBJECT	TRAINEES	MONTHS OR DAYS/ TRAINEE	Est. cost - US$ 4/81 AID	GOJ
I. MANPOWER DEVELOPMENT COMPONENT				
Practical skills	2000 ancillary staff	5	56,000	
Pharmacy/Dispensary skills	150 pharmacists	3	8,000	
Training of trainers	60	10	70,000	
Office procedure	400 clerical and registry staff	3	20,000	
National level program evaluation	100 health administrators	10	70,000	
Parish level health care skills	6000 clinical personnel	3	94,000	
Health media planning(overseas)	1	3 PM	5,000	750
Photographic techniques for ed.materials	1	1 PM	4,000	
Health education evaluation	60	10	10,000	
Health policy	50 senior MOH officials	3	5,000	
Preventive maintenance	10 workshop and media production managers	5	2,000	
Community health leadership	500 local Gov't. officials and private sector leaders	3	5,000	
Audio/visual usage	40 trainers	3	1,000	
COMPONENT TOTAL ($350,750)			350,000	750



COURSE/SUBJECT	TRAINEES	MONTHS OR DAYS/ TRAINEE	Est.Cost - US$ 4/81 AID	GOJ	PROJECT YEARS FIRST	SECOND	THIRD	FOURTH
II. HEALTH PLANNING								
	3 Health Planning Officers	3 PM	16,627	1,500			12 PM	
III. HEALTH INFORMATION SYSTEM COMPONENT (US Training)								
Systems Development and data processing/programming for sample surveys	1 programmer	3 PM	5,000	500	3 PM			
Advanced data processing and systems analysis	1 programmer	8 PM	16,600	500		8 PM		
Survey Methods and statistical technology	1 statistical officer	4 PM	16,627	500	8 PM		8 PM	
(In-Country Training)								
Intro. to data processing	2 statistical clerks	6 PM		2,000	6 PM		6 PM	
Introductory statistics/data collection	14 PHO clerks	1 wk.	4,400	1,100	1 wk.	1 wk.		
Statistics for non-professionals	4 SIS clerks	3 PM		2,000		3 PM		
Medical records standardization and storage	1200 Health Center and Parish level personnel	2	16,318	13,670				
Survey enumeration	14 PHO records clerks	3	3,900	500		3 DAYS		
Data interpretation/ analysis for managers	15 MOH Senior Managers	3	3,500	.		3 DAYS	3 DAYS	
COMPONENT TOTAL ($105,242)			82,972	22,270				

COURSE/SUBJECT	TRAINEES	MONTHS OR DAYS/ TRAINEE	Est.Cost - US$ 4/81 AID	GOJ	PROJECT YEARS FIRST	SECOND	THIRD	FOURTH
IV. SUPPLY MANAGEMENT AND PHC EQUIPMENT COMPONENT								
Stores Management	14 Senior Supply Personnel	2 wks.	2,000	2,000		2 WKS.		
Curriculum Development for trainers	4 Supply trainers	1 wk.	2,000	2,000		1 WK.		
Field level stores management	900 local supply personnel	3	16,790	12,856				
COMPONENT TOTAL ($37,646)			20,790	16,856				
V RENOVATION & CONSTRUCTION NUTRITION COMPONENT -	(no component specific training)							
Nutrition skills refresher and upgrading	16 nutrition assistants	26	1,750	2,476	10 DAYS	10 DAYS	3 DAYS	3 DAYS
Nutrition surveillance and training skills	1000 RNs and ERNs	12	1,950	15,200		3 DAY	COURSES	
Nutrition skills refresher	18 dietetic assistants	52	1,750	2,476	20 DAYS	20 DAYS	6 DAYS	6 DAYS
Refresher nutrition	400 Public Health inspectors	6	1,950	6,000				
Nutrition surveillance and training skills	500 district midwives	10	1,950	7,000				
Nutrition surveillance and training skills	280 Public Health nurses	6	2,000	6,000				
Basic nutrition, surveillance and communication skills	1000 community health aids	12	4,000	10,100				
Supplementary feeding program management	14 program managers	1	700			1 DAY		
COMPONENT TOTAL ($56,302)			14,050	42,252				

	AID	GOJ
TOTALS	467,812	82,128
Estimated Inflation Allowance	140,956	22,170
Total Estimated Cost, Project Training	608,768	104,298
	($713,066)	

ESTIMATED TECHNICAL ASSISTANCE

	Estimated Cost USS 4/81 AID	First	Second	Third	Fourth
		PROJECT		YEAR	
I. MANPOWER DEVELOPMENT AND TRAINING					
Health Manpower Planning and Training Specialist, 12 PM	120,000		12 PM		
II. Health Planning	120,000				
Health Planning Advisor 15 PM	150,000			12 PM	3 PM
III. HEALTH INFORMATION SYSTEM					
42 total PM in: Program and systems analysis; Statistics and sample design; Data analysis and interpretation; Survey and questionnaire design; Demography	123,000		27 PM		
IV. SUPPLY MANAGEMENT AND PHC EQUIPMENT					
Medical Supply Expert 12 PM	120,000	12 PM			
V. RENOVATION & CONSTRUCTION (no component specific T.A.)					
VI. NUTRITION -					
Supplementary Feeding Planner 5 PM	50,000	3 PM	1 PM		1 PM
Educational Materials Development Specialist 3 PM	30,000		3 PM		
Radio Script Preparation 8 PM (local)	12,500		4 PM	2 PM	2 PM
Educational Materials Artist (local) 8 PM	8,000		2 PM	4 PM	2 PM

	Estimated Cost US$ 4/81 AID	PROJECT YEAR First	Second	Third	Fourth
VII. PROJECT IMPLEMENTATION UNIT					
Health Management/Planning Evaluation Consultant 2 PM	30,000 (grant)	2 PM			
Health Systems Management Advisor 30 PM	300,000 (grant)	24	PM	6	PM
4 field support studies 8 PM	168,540		2 PM 2 PM	2 PM	2 PM
TOTALS	782,040 Loan 330,000 Grant				
PROJECT TOTAL	1,112,040				
Inflation Allowance	20,000 Grant 165,470 Loan				
T.A. Total Estimate	947,510 Loan 350,000 Grant 1,297,510 Total				

1. Inputs to Manpower Development and Training

The Health Manpower Planning and Training Specialist, who will provide approximately 12 person months of technical assistance to be financed under the Loan, will develop and assist the MOH divisions and parish level health units in carrying out 'needs assessments' based on the Manpower Inventory. The principal duties of the consultant (see job description at Annex I) will be in the areas of interpretation of the manpower inventory, needs assessments, training requirements and development of a long term in-service training program. The consultant, who will serve as a counterpart to the chief of the Training Branch, will also assist MOH and parish level organizations in preparing curricula and training plans.

The Project will renovate a presently vacant building to be occupied as the Training Branch and Media Production Center. Six offices, seven classrooms and ten workshops will be provided.

Most of the in-service courses will be taught by MOH personnel, including Training Branch and parish health officers, with some assistance from Loan-financed advisors. Training supported under the Project will be performed at the central level only when clearly demonstrated that it cannot be effectively carried out at the parish level.

The GOJ will provide approximately ten additional personnel for the Training Branch, which now has only two full time staff members. It is planned that one chief trainer, two trainers, three clerical recorders, three secretaries and a driver/attendant will be added. At least 50% of the total staff time of the Training Branch will be used to provide training and assistance at the parish level. The GOJ will contribute travel and allowance costs for trainers, trainees and technical assistance personnel and assorted furnishings and equipment for the Training Branch.

2. Inputs to Health Planning

The Planning and Evaluation Unit (P&E) of the MOH will have responsibility for carrying out overall health planning responsibilities for the Ministry (e.g., producing the Five-Year Health Plan) as well as specialized planning responsibility in certain areas (e.g., facilities planning and manpower planning). In addition, the Unit will provide technical assistance and training for Parish Staff and staff of other divisions of the Ministry responsible for ongoing program planning for their respective areas of operation.

In addition to the periodic consultation and technical assistance received from the Manpower Planning and Development Planning and Training Specialist based in the Training Branch, the P&E Unit will receive 15 PM of assistance in health planning from outside technical experts (see Annex for Job Description of Health Planner Consultant). It is expected that up to 12 PM of this assistance will be provided on overall aspects of policy and program

planning and organization, while 3 PM will be used for budget planning and analysis and social science research. In addition, staff of the Planning Evaluation Unit will receive up to 4 PM of external training in methods and applications of health planning in order to improve their ability to effectively carry out their planning responsibilities.

3. Inputs to Health Information System

The Statistical Information Services (SIS) Division of the MOH will have responsibility for co-ordinating the information system, including the new data bank and library, standardized records, data processing, the Monthly Clinic Summary Reporting (MCSR) system, and sample survey procedures. Approximately 27 person months of short and medium term technical assistance will be financed under the Loan (see job descriptions in Annex I). It is anticipated that this technical assistance will be provided by four or five persons who will assist the SIS Division in the following areas:

- Program and System Analysis;
- Statistics and Sample Design;
- Data Analysis and Interpretation; and
- Survey and Questionnaire Design

During the first 18 months of the Project the technical assistance personnel will assist the SIS Division in the technical design of the new system and in preparing and adapting the required software. Concurrently, the technical assistance personnel will assist in arranging for an anticipated 2.25 years of Loan-financed overseas training for SIS personnel. This training for the most part, will consist of short courses for about six trainees at such institutions as the U.S. National Center for Health Statistics and the U.S. Bureau of the Census.

Since the basic data will have to be developed by the operational health care units, SIS staff and technical assistance personnel will provide field assistance and in-service training courses in the general operation of the system and in data reporting for the approximately 1200 health personnel who will be directly engaged in data gathering. Additionally, a number of one to three day workshops will be tailored to meet the various occupational specialties involved in data gathering and reporting work. To facilitate implementation of the system in the early stage of the project, technical assistance personnel, in consultation with the SIS division and parish training teams, will present several two to five day courses for parish health office clerks. This training will focus on the procedures for compiling and recording the data received from various sources for input to the health information system.

The Loan will finance the procurement of computer supplies and photocopying and other office equipment.

The SIS staff which will be increased from the present twenty-four to approximately twenty-eight by the Project's end will need to have the following technical personnel to properly implement and maintain the health information system:

1 Senior Statistician (serving as Division Chief)
1 Mathematical Statistician
2 Data Collection Statisticians
1 Analytical Statistician
3 Data Processing Specialists.

The SIS will hire at least four employees during the first and second years of the Project, while other staff needs will be met by present employees (with in-service training where appropriate) and by absorbing personnel seconded from the National Family Planning Board. The GOJ will also contribute the rental for three key punch machines, the purchase of computer time, software and computer supplies and the costs of travel and allowances for trainers and trainees.

4. Inputs to Supply Management and PHC Equipment

The Loan will be used to procure essential medical and dental equipment to replace inoperable and unrepairable equipment, an initial supply of spare parts which cannot be fabricated locally, imported tools and equipment for the Central Maintenance Workshop, materials handling equipment, eg. bulk carriers, hand trucks, etc., a truck tractor and two trailers for the distribution system. Commodity procurement to be financed under the Loan will be divided into three packages, except that $100,000 will be provided in each year of the Project for smaller off-shelf purchases and for informal procurement of imported items to meet unforeseen or urgent needs.

The Loan will finance 12 months of technical assistance by an experienced medical supply expert starting in about the sixth month of the Project. (See job description at Annex I). The consultant will assist in designing and implementing an improved medical supply, procurement, distribution and inventory control system, including the establishment of 20 regional depots at hospitals. He will further refine the list of commodities to be financed under the Loan and will assist with the procurement and delivery of commodities. He will have a major role in preparing pamphlets and operational manuals for the entire MOH staff, assisting with short courses for 900 MOH personnel, and providing training for selected trainers and for two MOH supply personnel who will take over his specific job upon his departure.

The Loan will finance audio visual aids and some training materials for the supply management component of the Project, while the Government of Jamaica will contribute additional training materials, travel expenses and allowances for trainers and trainees.

5. Inputs to Renovation and Construction

The Loan will be used to finance the minor renovation of 63 health centers and major renovation and reconstruction at the Spanish Town and Trench Town Health Centers. Other Loan-financed construction will include the renovation of the Training Branch facilities and the construction of the Central Maintenance Workshop.

Cost estimates, procurement procedures and the organizations responsible for the physical works are discussed in detail in the Engineering and Implementation sections. Professional engineering services will be utilized to analyze all renovation and construction work under the Project and prepare operational recommendations, engineering designs, construction plans, and procurement documentation and to furnish construction supervision. For minor renovation work, such as plumbing repairs, detailed engineering design and formal procurement of construction services will not be appropriate, and the MOH, with the assistance of the responsible engineering organization and with the approval of AID, will procure such services under standard small value contracting procedures.

Construction and renovation work is to be given high priority and completed during the third year of the Project, so that operational physical facilities can be integrated into the other Project Components as early as possible.

6. Inputs to Nutrition

An anticipated three months of technical assistance for the design of the new supplementary feeding program will be financed under the Loan during the first year of the Project, as well as two follow-up visits in the second and fourth years of the Project. The supplementary feeding planner (see job description in Annex I) will assist the Division of Nutrition and Dietetics (Nutrition Unit) in evaluating the present program, and in preparing policy, programmatic and operational changes. He will research the available data and conduct and arrange for individual and structured group interviews. Baseline data will be developed together with planning for improved ration size and composition, new outreach techniques and improved logistics.

Supervisory personnel and 14 parish nutritionists, who will play an important role in implementing the new program, will receive in-service training in nutrition program planning and management and the interpretation of nutrition data.

The broad public nutrition education activity will be started in about the 18th month of the Project. The Loan will finance three months of technical assistance by an expert in the development of non-formal public education materials (see job description in Annex I), and the GOJ will contribute the

services of a local artist for eight months. A radio campaign will involve four nutritional themes, each running for two months during which five 45 seconds "spots" will be broadcast daily island-wide. The Loan will finance the costs of radio air time and of a local contractor for the preparation of radio scripts and of a pilot activity in local community based production of educational materials.

An essential element of public education will be training and the preparation of instructional guides for the field staff who will be carrying out much of the public education in the communities and health centers. Similarly, provision will be made for management seminars before the introduction of each new educational theme.

Nutrition surveillance training for MOH clinical staff to be administered by the Training Branch, using the technical expertise of the Division of Nutrition and Dietetics, will be extended for an approximate total of 34,000 training days to 3,200 clinical personnel. Staff trainees will include nutrition assistants, dietetic assistants, public health nurses, registered nurses, enrolled (practical) nurses, midwives and public health inspectors. This training will focus on nutrition surveillance in terms of procedures, record keeping and the compilation of clinic summary data and on food logistic procedures and remedial follow-up through nutrition education, food and iron supplements and referrals.

The Project will contribute to the procurement of commodities to equip clinics for nutrition surveillance, of materials for data compilation and processing, and of educational materials for staff training and public education. Nutrition surveillance equipment for 300 health centers includes, representatively, height gauges, scales, testing materials (eg. $CuSO_4$ solution), iron folate tablets to treat anemia, record keeping materials, nutrition manuals, and library acquisitions on supplementary feeding. Staff training and public education materials will include food demonstration equipment, pamphlets, flip charts, photo-novels, slides, films, projectors, etc.

The Loan will finance the equipment and materials for five MOH pilot activities at selected clinics in nutrition intervention and rehabilitation, as well as the services of a local contractor during the third year of the Project to conduct a longitudinal study to track the progress of a representative group of women through clinic nutrition treatment and the supplementary feeding program. Similarly, the Loan will finance an evaluation by a local contractor of the effectiveness of $CuSO_4$ and iron folate treatments.

7. Inputs to Project Implementation Unit

The GOJ will establish a Project Implementation Unit (PIU), which is further described in the sections on Administration and Implementation. This Unit will be comprised of the Project Coordinator, a procurement specialist, a staff engineering assistant, two financial analysts, two secretaries and a messenger. The role of the PIU will be to direct, schedule, and coordinate the GOJ's implementation of the project. It will

prepare and maintain GOJ reports and financial accounts and prepare or arrange for evaluations. Approximately four Field Support Studies will be conducted under the project and arranged by the PIU. The studies are necessary to provide policy makers with baseline or evaluation information. Specific subjects to be studied will be identified as the project proceeds. However, probable areas are hospital management efficiency, clinic utilization, causes of perinatal mortality and effectiveness of training.

The PIU will direct and coordinate the procurement of goods and services and technical assistance. It will assign one of the 9 staff vehicles to be financed under the Loan to each of the nine parish health units outside Cornwall and the mobile Audio Visual Aids Unit and one station wagon to the Bureau of Health Education and one station wagon to the Training Branch.

The engineering assistant will assist the Project Manager and the MOH chief engineer in monitoring and expediting renovation, construction and equipment installation.

In order to assist the Project Implementation Unit to define and carryout its responsibilities for overall project management, a health systems management advisor will be attached to the Project Implementation Unit. The management advisor will have as his counterpart the Project Director who is the Principal Medical Officer for Primary Care. He will also work closely with the Permanent Secretary of the MOH on management issues important to effective delivery of services but which go beyond Primary Care. Thirty PM of technical assistance will be provided in the project for this purpose, with the first 24 PM on site in Jamaica and the remainder for periodic site visits as needed to ensure effective project implementation.

PART IV

TECHNICAL ANALYSES

A. ENGINEERING ANALYSIS

1. GENERAL SCOPE OF WORK

The following renovation and construction work will be carried out under the project:

a) major renovation of two Primary Health Care Centers (Spanish Town and Trench Town);

b) minor renovation of 63 Primary Health Care Centers;

c) major renovation of an MOH building in Kingston to house the Training Branch and Materials Production Center (Training Center);

d) construction of the Central Maintenance Workshop (for equipment).

Renovation of Health Centers will restore the buildings to fully operational condition, make minor modifications to fit present activities, provide for additional storage space and increase facility security. Two of the PHC Centers, as well as the presently vacant building to be used as the Training Center will require very extensive renovation. Additionally, successful operation of the classrooms in the Training Center, which is in a closely confined area, will require renewal of the air conditioning system.

The Central Maintenance Workshop is to be constructed 100 yards from the existing Island Medical Stores. The site is the property of the MOH. Since this Workshop will maintain and repair the medical equipment of the MOH, this location will enable an easy transfer of the repaired equipment from the Workshop to the Stores for re-issue. The actual construction will add two large bays and other facilities to an existing concrete block storage shed and will approximately triple the square footage of the present structure.

2. INSTITUTIONAL ANALYSIS

The organizations described below will have significant roles related to the renovation and construction work to be carried out under the Project.

The Office of Engineering, MOH, is the construction management arm of the Ministry. Staffed by an experienced professional engineer, this office has the responsibility to monitor and supervise building construction activities for the MOH. Since the present and the predicted high inflation rates militate for an accelerated construction process, it will be necessary to assist the MOH, Office of Engineering, with external engineering services during the pre-construction and construction phases (see sub-section 3).

The Technical Services Directorate, Ministry of Construction, is the architectural-engineering (A & E) design arm of the GOJ. Staffed with architects, civil and structural engineers, surveyors and quantity surveyors, this office is capable of developing the bid (tender) packages, which include the working drawings, specifications, cost estimates, draft construction contracts, necessary advertisements for the IFB (invitation for bids), etc. In effect, this organization fulfills "in house" the functions of a private A&E consultant on various GOJ construction projects.

The Construction Directorate, Ministry of Construction, is the construction implementing or supervising arm of the GOJ. Staffed with engineers and technicians, this office executes horizontal and vertical construction projects either with staff personnel and equipment or through private contractors. The Directorate in each case has a "Clerk of Works" assigned to the job site, who supervises construction and verifies monthly vouchers.

The Hospital Maintenance Unit (HMU), Ministry of Construction, is responsible for the maintenance and repair of health facilities and medical equipment. Although GOJ reorganization plans foresaw the transfer of the HMU from the Ministry of Construction to the MOH o/a April 1, 1980, this change has not yet been implemented. The HMU at the present time has 299 permanent employees. (The issue of building maintenance relative to this project is discussed in sub-section 5).

The National Development Agency (NDA) is a semi-autonomous, government owned corporation, established mainly for the management of capital projects funded by external donors. This agency is staffed with architects and engineers and is capable of producing construction IFB packages (design drawings, estimates, draft contracts, etc) and of monitoring and supervising the construction phase. Acting similarly to a private A&E consulting firm, this Agency, not being supported by the GOJ budget, charges a professional fee for its services.

Various private A&E firms are well established and highly professional elements of the Jamaican economic structure. These firms can perform the same construction design/mangement services as the MOC/Technical Services Directorate or the NDA. Although the Jamaican construction industry has been stagnating during the past few years, a number of construction companies still exist, especially in Kingston. These firms have extensive experience, but very limited operating capital and no hard currency to purchase imported construction materials. In the countryside, an adequate number of skilled workers (e.g., carpenters, masons, painters, etc) are available for minor repair and renovation works.

CONSTRUCTION MANAGEMENT (CM)

The overall CM responsibility for the Project will rest with the MOH through the Project Implementation Unit (PIU) in cooperation with the Ministry's Office of Engineering (MOH/Eng). This Office will prepare a general engineering and construction plan for the Ministry's and USAID's approval as a condition precedent to disbursement.* This plan shall delineate all the responsible organizations and offices for the first construction year in detail

Other conditions precedent related to renovation and construction are described in the Implementation section and the draft authorization.

and for the second and third year in general. The plan shall be reviewed by all responsible parties periodically (preferably at 6 month intervals) and amended, as necessary, with the approval of the MOH and USAID/Jamaica. The A&E services will be divided for the various facilities as follows:

a) The major renovation of the Spanish Town and Trench Town PHC Centers will be designed and the construction managed by the Technical Services Directorate, Ministry of Construction.

b) Procurement and supervision services for the minor renovation of the 63 dispersed PHC Centers will be provided by the National Development Agency (NDA).

c) The Office of Engineering, MOH, will engage the services of a private Jamaican A&E firm for the design and construction supervision services related to the Training Center. The A&E selection process will follow the guidelines laid out in Chapter 1, Handbook II.

d) The new building for the Central Maintenance Workshop will be designed and the construction supervised by the Technical Services Directorate, Ministry of Construction.

Final design working drawings, engineering specifications, cost estimates and tender documents will be prepared by the designated GOJ agency or private A&E firm and approved by the MOH and USAID. Invitation for bids (IFB), prequalification of contractors, opening of bids, selection of contractors and the award of construction contracts will follow the guidelines of Chapter II, Handbook 11. The construction contracts will be designed by the engineering organizations and approved by USAID.

In the case of minor renovations to the PHC Centers where the engagement of a general contractor is not necessary (e.g. relatively small and simple work) or not feasible (e.g. remote location), the NDA will sign contracts with local skilled workers for the execution of the work, using small value procurement methods, acceptable to the GOJ and USAID. (Similar to the USG Purchase Order procedure).

The construction supervision, in general, will be the responsibility of the A&E agency (or firm), which developed the tender (bid) documents. The same agency (or firm) will verify the monthly vouchers of the contractors for reimbursement by the MOH.

The Project Implementation Unit, in cooperation with MOH/ENG, will monitor the engineering design and construction progress. Periodic project review meetings will address the progress of renovation and construction with the participation of all interested GOJ, USAID and private parties. The procedure for the final acceptance of work, will be based on current GOJ practices and regulations.

4. COST ESTIMATES

The detailed cost estimates and preliminary designs for the facilities are attached at Annexes B-5 and G, respectively. These are based on site visits to the buildings (including 26 randomly selected PHC Centers), a study of existing blueprints and specifications and estimates by professional quantity surveyors.

The cost estimates reflect the current (November 1980) construction prices and the rate of inflation in the construction industry. The estimated rates of inflation were determined, through consultation with the Ministries of Construction and Health, private firms, the NDA and the USAID/Jamaica economist, to be as follows:

- 1981 (Construction Year 1) = 35%
- 1982 (Construction Year 2) = 30%
- 1983 (Construction Year 3) = 25%

In view of the high rate of inflation in the construction industry the MOH will make concerted efforts to streamline the reimbursement process and assure that the constractors receive periodic payments on time.

The estimated average renovation cost for the minor renovation of 63 PHC Centers was initially developed by the Office of Engineering of the MOH in cooperation with the Technical Service Directorate of the MOC utilizing site visits and an analysis of required work at 26 randomly selected centers. Based on these site visits, quantity surveys were prepared and average costs were estimated.

The U.S. direct hire engineer who is Chief of the Engineering Office at USAID/Haiti, after visiting seven centers, reviewed the quantity surveys and checked the then current construction unit costs with the MOC and with private A&E firms. Based on his analysis, he verified the estimated average renovation cost as $15,145 as of November 1980 for the health centers.

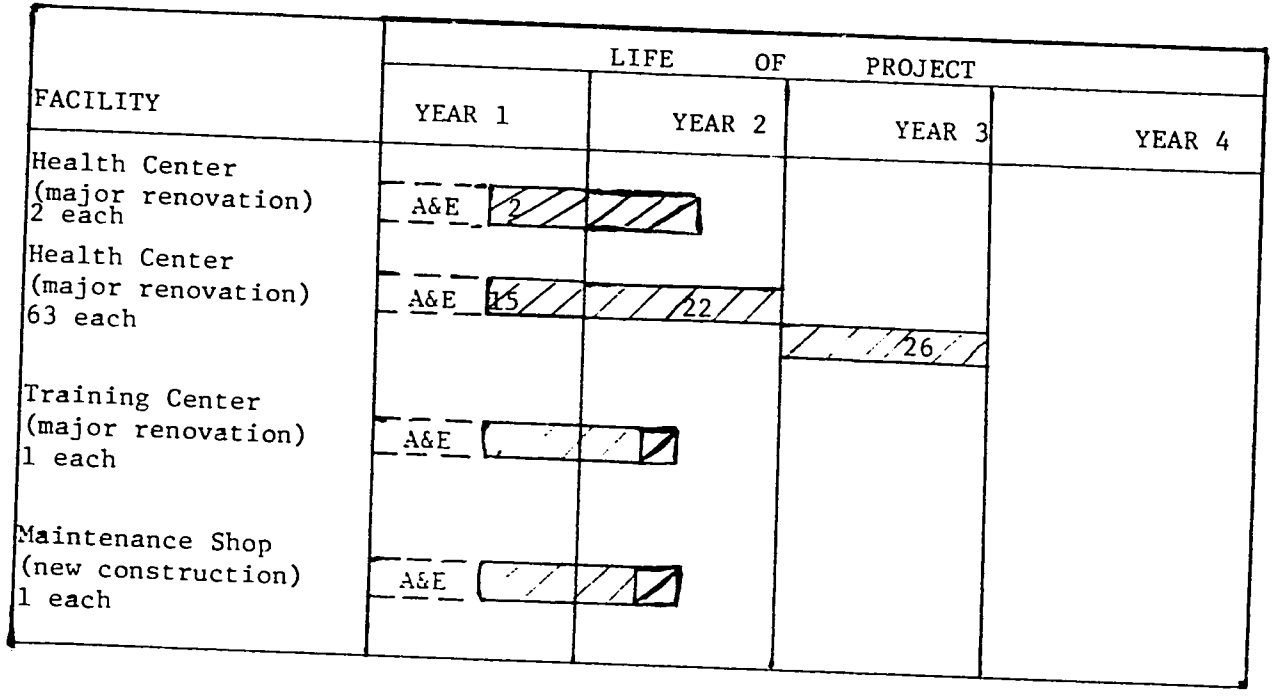
SUMMARY OF ESTIMATED COST

RENOVATION AND CONSTRUCTION

(IN US $)

FACILITY	USAID			GOJ			PROJECT TOTAL (US$)
	FX (US$)	LC (US$)	TOTAL	FX US$)	LC (US$)	TOTAL	
Health Centers (major) 2 ea.	41,960	192,868	234,868	-	23,751	23,751	258,619
Health Centers (minor) - 63 ea	311,087	185,179	2,146,266	-	217,038	217,038	2,363,304
Training Center (major) - 1 ea	37,115	244,249	281,964	-	-	-	281,964
Maintenance Shop (new) 1 ea.	127,710	533,115	660,825	-	66,825	66,825	727,650
TOTAL	517,872	2,806,051	3,323,923	-	307,614	307,614	3,631,537

HEALTH FACILITIES CONSTRUCTION SCHEDULE



BUILDING MAINTENANCE

The maintenance of MOH health facilities in Jamaica is the responsibility of the Hospital Maintenance Unit (HMU). The HMU is tasked with the upkeep and repair of medical equipment, as well as building maintenance. Adequate budgetary support for the HMU will be essential to assure a reasonable level of operational capability. The GOJ demonstrated its commitment to maintain the public health facilities by requesting an increase on the yearly budget of the HMU from J$2.0 million in GOJ FY 80/81 to J$12.00 million in FY 81/82.

The Project envisions a systematically scheduled maintenance operation for the health facilities in the future. To assist in addressing this request, the GOJ will be required to develop a multi-year "public health facilities maintenance management plan" within 12 months after the signing of the Loan Agreement as a condition precedent to further disbursement for construction and renovation. This comprehensive plan will indicate the financial (budgetary), manpower and material resources allocated for the maintenance of the various health facilities, describe the tasks to be performed (routine or intervention work), the time frame, implementing sub-unit (in-house or contractor), etc. This document will be periodically reviewed, preferably half-yearly, by all interested parties and amended, if warranted.

6. CENTRAL MAINTENANCE WORKSHOP, FUNCTION AND EQUIPMENT

Very few spare parts needed by the MOH are manufactured in Jamaica, and importation represents a significant drain on limited foreign exchange. Specialist spare parts, such as motor car spares, do not lend themselves to local manufacture. Analysis, however, will be made of all spare parts used by the MOH and lists established of those which can be manufactured in Jamaica. The lists will be for two groups; (a) those items which can be manufactured using equipment at present available in the island and (b) those items which could economically be manufactured if certain machines or equipment were purchased.

The formation of the Central Maintenance Workshop will be on a phased basis, starting with basic needs, eg.:

Machine Shop
Electrical Workshop
Electronic Workshop
Stores
Material Preparation
Tool Room
Technical Services
Administrative Services

Gradual development of a complete maintenance unit will continue, adding the following:

Foundry with Pattern Shop
Fitting and Assembly Shop
Fabrication and Blacksmith Shop
Drawing Office

Production Planning and Control Unit
Raw Material Store in include material preparation with saws, profile cutters, etc.
Technician Training Center
Inspection Unit
Consumbable Stores
Rest and Catering Center

In addition to the construction of a building for offices, stores and workshops for the central maintenance workshop, the Project will provide a selection of basic machines and equipment for manufacturing spare parts and for servicing and repairing equipment. A list of required machines and equipment is provided in Annex E.

B. ECONOMIC ANALYSIS

1. Limitations of a Benefit-Cost Analysis in the Health and Nutrition Area

The quantification of benefits expected to arise from a health and nutrition project presents serious difficulties. The present project emphasizes the institution-building element, with heavy emphasis on manpower training, upgrading of management, improvement of maintenance facilities and development both of the Ministry of Health's information system and of its planning and project implementation capability. It is difficult to establish a direct relationship between such improvements and specific social welfare benefits. It is even more difficult to place a value on such benefits in monetary terms.

A second reason why a monetary quantification of benefits is particularly difficult in this area is that improved health is an end in itself. It's quantification in terms of increased output or reduced expenditure of resources often understates its true welfare effect. In addition, to a worker, better health may have a much greater value than the increase in his output may have for society. And what is the social benefit resulting from a decline in infant mortality? To the parents of children saved, the welfare effect may defy practical measurement.

In view of these considerations, a monetary valuation of the benefits accruing from a health-nutrition project must be viewed with some skepticism. Nonetheless, some of the expected benefits can be quantified by means of available data and experienced "guesstimates." These were arrived at with the assistance of the staff of the Ministry of Health. While the data are admittedly imprecise, we have endeavored to make them conservative in order to minimize the danger of overstating the value of selected project benefits.

2. A Partial Cost/Benefit Study

a. Estimating Benefits

An attempt was made to quantify three distinct types of benefits under this project: a) savings on hospitalization-related costs for the general population; b) savings on hospital costs resulting from a reduction in the admission of malnourished children; and c) more effective utilization of drugs. The nature of these benefits and the results of the quantification process will be explained below. The methodology employed for quantification is explained in Annex D.

1) Avoidance of Hospitalization: It is expected that the improvement in the primary health care system will result in increasing the number of people that can be attended at health centers. Early diagnosis and treatment provides a benefit to society that is partially measurable in terms of reduced requirements for hospitalization. The saving to society would take two forms: a saving to the hospital system and a saving to individuals able to avoid hospitalization. Some individuals would save, first, by avoiding the relatively high cost of transport to the parish hospital; and second, by avoiding hospitalization, individuals would be able to forego a loss in

earnings equal, at a minimum, to the length of the hospitalization. The total saving to society resulting from reduced hospitalization was estimated at J$2.8 million (see Annex D).

2) Saving on Hospitalization Costs Resulting from a Reduction in Admission of Malnourished Children: This effect was estimated separately because the Project includes a separate and substantial nutrition component. The training of personnel, improvements in food storage, reduction in food spoilage and improvement in the food distribution system must be expected to reduce the number of malnourished young children. The calculation made the conservative assumption that only 10% of the seriously malnourished children (those falling in Classes II and III of the Gomez classification) will be spared hospitalization as a result of the project. These amount to an estimated 2,600 children (as of December, 1980) and would result in a saving on hospitalization costs of about J$400,000 per year.

3) More Effective Utilization of Drugs: The Project is expected to result in a significant improvement in the utilization of drugs by reducing spoilage and losses and by improving their distribution (i.e., ensuring that they reach the neediest patients quickly). The Ministry of Health budget for drugs in the 1980-81 budget proposal was J$13.0 million, and it was conservatively assumed that the social benefits resulting from improved drug utilization would be at least J$1.3 million annually.

The sum of these annual benefits comes to J$4.7 million (US$2.68 million). These social benefits (or "savings") are recapitulated in Annex D. The full amount of these benefits will not be obtained until the year following completion of the Project (1985). The projected time phasing of the benefits over the period 1981-85 also is shown in Annex D.

The benefit-cost analysis is presented in Annex D. Costs and benefits were projected over the year period 1981-96, i.e., 12 years after completion of the project. The derivation of the costs is presented in the tables in Annex D to this Project Paper. The benefits were projected in constant U.S. dollars throughout the 16-year period, and after 1985, were projected to increase at an average annual compound rate of only 1.5%, equal to the rate of increase of population that prevailed during the seventies.

Both benefits and costs were discounted using the opportunity cost of capital to the society as a whole to obtain their "present value." The discount rate of 11 percent is used because it is generally accepted to approximate the opportunity cost of capital. It excludes inflation. If the current* market rate of interest of 18 to 20 percent had been adopted as the discount rate, the benefits should have been projected to grow at the current rate of inflation in the U.S. (13-14% annually). The final result of the analysis would have remained essentially unchanged.

Note that the benefit-cost ratio on the assumptions made is favorable at 1.19. A ratio of 1.0 would have meant that the project's rate of return is equal to 11 percent in real terms (i.e., over and above the rate of inflation). Thus, the real rate of return is above the 11 percent discount rate.

It must be emphasized again that the quantification and valuation of benefits in a health and nutrition project is subject to serious reservations. The quantification of the benefits is obviously the result of a number of subjective judgments made by the Mission in close cooperation with qualified Ministry of Health technicians.

It should be noted that certain important qualitative elements escaped the quanitification process altogether. For example, an expected benefit from the Project is the improvement in the quality of health care that was not reflected in our estimation of the benefits. Moreover, the reduction of malnutrition in seriously malnourished children is believed to produce social benefits significantly in excess of the savings in hospital costs (which we have estimated), as serious malnutrition may affect a person's well-being and productivity throughout his life and thus entail a very high social cost.

Yet another benefit which escapes quantification is that which will accrue as a result of the upgrading of the hospital equipment maintenance system. Better maintained equipment will work for longer periods without breakdown, and the benefits from this better service, although obvious, were not calculated here.

b. Cost Calculations

The cost figures given in the benefit-cost exercise presented in Annex D consist of project-financed costs for 1981-84, plus recurrent costs thereafter during the analysis period. For 1985, these recurrent costs were taken from Annex C (recurrent cost analysis). Subsequent recurrent costs were assumed to grow 2 percent per year in real terms.

Theoretically, all quantified costs and benefits should be in real terms, but costs shown in this benefit-cost exercise include inflation from 1982 through 1984 (the process of reconstructing costs to derive constant value costs would be time-consuming). Using costs that include inflation has the effect of overstating these costs vis-a-vis benefits, which are stated in real 1981 terms. Offsetting the effect of this computational short-cut is the fact that the analysis does not include non-project costs needed to achieve the benefits quantified in the calculations. For example, not all costs of avoiding hospitalization are included on the cost side. Obvious cost omissions, associated with more visits to out-patient health facilities, include increased usage of publicly-funded drugs and medicines at health facilities and increased travel costs to the public. Similar omissions exist for other cost elements.

The net effect of excluding inflation and including all costs is unclear, but the modifications, if performed, would probably come close to cancelling each other. Since the benefit-cost analysis is recognized (and was intended) to be only a partial analysis aimed at providing a rough order-of-magnitude estimate of project viability, the analysis was not pushed further to make it more all-inclusive or less subject to uncertainty.

c. Other Considerations

Thus far, no special attempts have been made to convert the benefit-cost analysis presented above and in Annex D from essentially a financial analysis to an economic analysis -- i.e., one using economic prices and values rather than market values. It is clear, however, that using unskilled labor does not cost the society as much in real resources as it does in financial resources. Most recent analyses have thus shadow-priced unskilled labor at about 50 percent of its financial cost. Likewise, it is clear that foreign exchange should be valued at a premium over its official market cost. A ten percent foreign exchange premium has been used by analysts over the past several years, and current conditions indicate this is a minimum both at present and over the near to medium term future.

Most such economic valuation changes would work to increase the economic feasibility of the proposed project.

d. Sensitivity

One way of assessing the importance of uncertainty regarding the extent, timing or valuation of benefits and costs is to undertake an analysis of the variability of the basic measure of project viability (in this case, the benefit/cost ratio) as assumptions are changed. In view of the "partial" nature of the analysis undertaken for this project, no sensitivity analysis was performed.

3. Cost-Effectiveness*

In addition to performing benefit-cost studies to determine basic economic (and financial) feasibility of a proposed project, cost-effectiveness studies are needed to assess whether resources are being used in such a way as to maximize (or improve) net benefits generated by project activities. In a world where the nature, timing and valuation of benefits and costs are known with certainty, project design would be a relatively simple matter. In the real world, however, a critical deficiency in selecting preferred health policies is the absence of quantitative estimates of the consequences of policies.

Generally, there is a lack of information relating a program or combination of programs to specific effects on the health of a given population in a particular environment. There is reasonable agreement that sanitation, improved nutrition, control of communicable diseases, immunizations, family planning, health education and medical care are helpful, and possibly in that order. What is usually not known for any situation is what specific difference there would be in the health status of a population if we did more of one sort of thing and less of another with available resources, or what quantitative difference there might likely be if we did some things quite differently.

Changes in effects on health status will be a function of the health problems of the population, both their nature (life threatening or disabling

*This discussion draws heavily on J.J. Clinton, Health, Population and Nutrition Systems in LDCs: A Handbook, Washington, D. C: Family Health Care, Inc., 1979, expecially pp. 129-49.

potential) and their expected rate of occurrence, the potential of specific health sector activities to affect either the occurrence, duration, or the consequences of disease, the costs of these activities, and the extent to which they will be used by the population.

Very large amounts of health statistics are currently accumulated with great effort all over the world without any guidance from health policy formulation needs. These health statistics are by and large elaborations of medical care records or at best specific disease frequency data. As a result, health policy formulation is forced into a straight jacket of reducing disease frequencies without information on the actual health status of a population, which is rarely expressed in the frequency, degree and duration of disability.

Methodologies are being developed for relating health sector resource allocation choices to their ultimate effects on the health status of a population. They recognize as a practical matter both that some interventions produce joint products in that they affect a number of health problems and that some interventions are complements as well as substitutes for other interventions.

Cost effectiveness calculations relate specific programs in nutrition, sanitation, medical care, immunizations, and vector control (and family planning, if desired) to the occurence and size of health problems, utilization of different health service patterns, and the effectiveness of applying these health service patterns. Cost effectiveness calculations require the derivation of coefficients, for each health problem and age group, of:

- annual occurrence of the problem
- proportion seeking and receiving care
- visits per case
- disability days per case if treated
- disability days per case if untreated
- case fatality rate if treated
- case fatality rate if untreated
- fertility rates (as applicable)

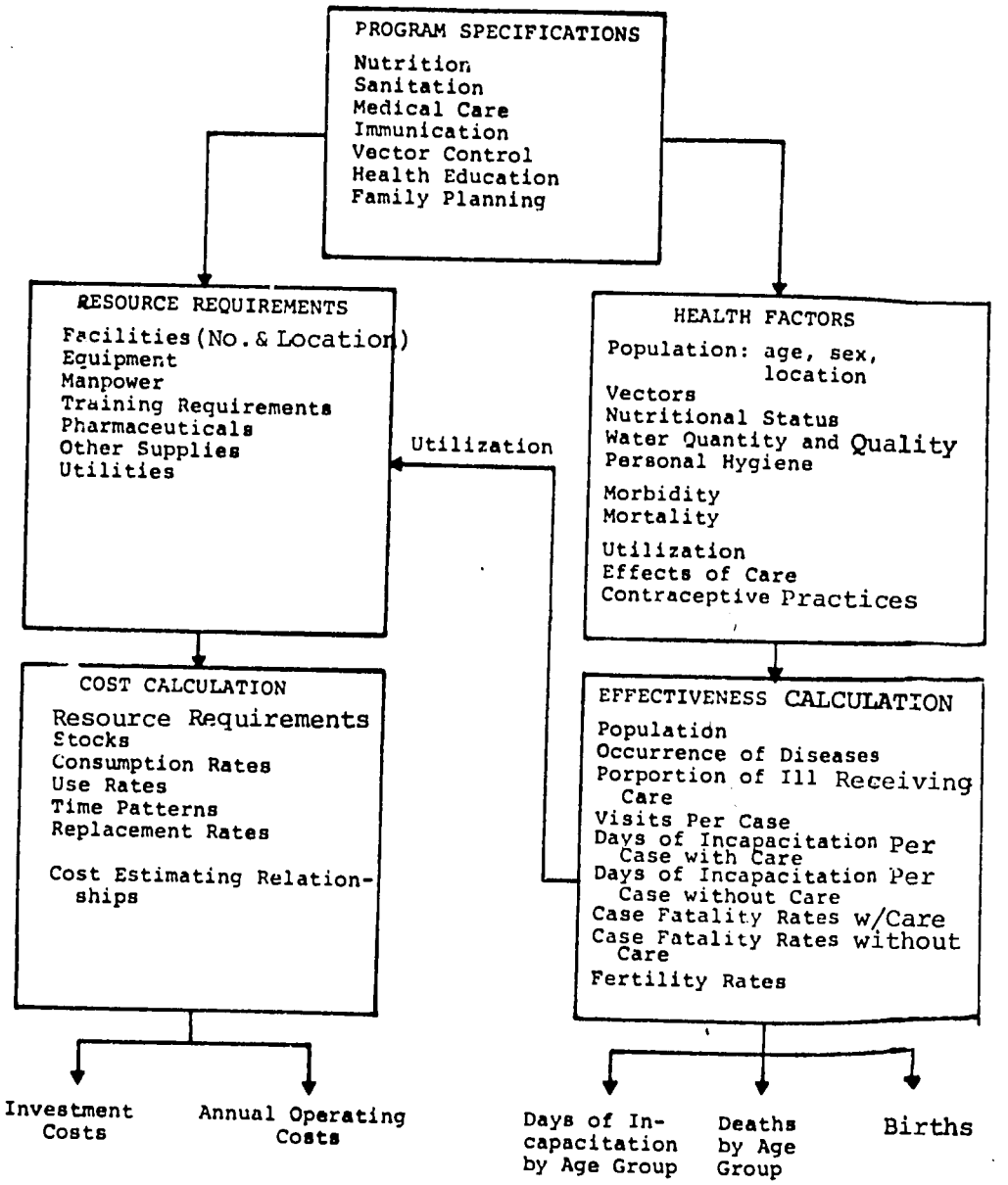
These interrelationships and subsequent derivation and the costs of benefits of health programs can be shown graphically (see the attached model).

The proposed project will support Jamaican efforts to improve health planning, building on the base described in other sections of this paper. Given Jamaica's limited manpower and financial resource constraints, it is clear that improvements in resource utilization would be very desirable and of lasting importance.

FIGURE 5-B

A MODEL OF HEALTH SECTOR POLICY

COST AND EFFECTIVENESS



C. FINANCIAL ANALYSIS

The estimated total cost of this project is $10,350,000 of which $7,400,000 will be financed by the AID Loan and $350,000 by the AID Grant; the balance of $2,600,000 will be provided by the GOJ. An estimated $2,828,000 of the loan will be utilized to finance foreign exchange costs, and the remainder of $4,372,000 will be used for Jamaican dollar costs.

The summary financial plan is as follows:

	PROJECT YEAR ($000)				
	1	2	3	4	Total
Foreign Exchange	1370	993	552	318	3233
Local Currency	1688	1133	1349	47	4517
Total AID	3058	2126	1901	665	7750
GOJ Contributions	423	641	752	784	2600
Project Total	3481	2637	2543	1339	10350

As reflected in the following table 39% of the total AID contribution of $7.75 million will be expended in the first year and over 66% by the end of the second year. This results from the emphasis in the initial two years on commodity procurement and construction and renovation of health facilities.

	Year 1			Year 2			Year 3			Year 4			
	AID		GOJ	AID		GOJ	AID		GOJ	AID		GOJ	
LOAN FUNDED	FX	LC		FX	LC		FX	LC		FX	LC		Total
Commodities	870	252	62	339	128	99	161	66	110	172	35	129	2,423
Training	28	67	23	19	184	41	21	149	26	-0-	141	14	713
Technical Assistance	156	-0-	-0-	365	129	-0-	89	84	-0-	28	97	-0-	948
Support Costs (Operating, Maintenance, and Personnel)	-0-	4	167	-0-	33	365	-0-	92	435	-0-	61	564	1,721
Renovation and Construction (Contingency and A & E Included)	261	1,292	129	104	612	72	153	902	107	-0-	-0-	-0-	3,632
Evaluation	-0-	-0-	15	-0-	-0-	22	-0-	-0-	25	-0-	-0-	28	90
General Contingency Allowance	55	73	27	36	47	42	18	56	49	8	13	49	473
Sub-Total - Loan	1,370	1,688	423	863	1,133	641	442	1,349	752	208	347	784	10,000
GRAND FUNDED													
Technical Assistance	-0-	-0-	-0-	130	-0-	-0-	110	-0-	-0-	110	-0-	-0-	350
Total AID + GOJ	3,481			2,637			2,543			1,539			10,350

The financial plans and estimates presented in the Project Paper are not intended to restrict reasonable flexibility in realigning uncommitted funds to meet essential implementation requirements.

The recurrent costs, for post Project years, as shown in Annex C, are not expected to impose a significant charge on the GOJ budget, It is expected that they will account for less than .5% of the MOH budget. Recurrent costs are defined as those costs which the GOJ will have to assume after the Project Assistance Completion Date (PACD) in order to continue the activities initiated under the Project.

Disbursements of foreign exchange will be accomplished by direct payment by AID or through the use of Letters of Commitment and in accordance with AID's standard procedures. Local currency disbursements will be accomplished by reimbursements to the Borrower for those costs so stated in the budgets, forms and procedures to be specified in the Loan Agreement and related Implementation Letters.

D. SOCIAL SOUNDNESS, BENEFICIARY, AND W.I.D. ANALYSIS

1. SOCIO-CULTURAL CONDITIONS AND THE IMPACT OF HEALTH CARE

It is estimated that Jamaica will have a population of 2,143,000 at the end of 1980.

For local government purposes, Jamaica is divided into 12 rural parishes, with two additional parishes comprising the major city of Kingston and St. Andrew. These parish divisions are relevant, since many current health projects are administered at the parish level, and there are variations in health conditions among the parishes. In addition to Kingston and St. Andrew, which was estimated at the end of 1979 to contain about 600,000 persons, there are several parish towns with populations ranging from 2,500 to close to 50,000 persons. The urban population of Jamaica is estimated to be about 41% of the total population (see attached table).

Both rural and urban communities reflect problems of poverty and under-development. There is a recent trend for large numbers of the unemployed or under-employed rural labor force to flow to the urban areas. Throughout the society, the most serious problem is a low standard of living manifested by poor housing, poor nutrition, and poor community facilities. While nutrition problems are reported to be concentrated in the under-five age group, pregnant and lactating mothers and agricultural workers also suffer from dietary insufficiencies.

Many conditions indicate a persistent need for well organized curative and preventive services at the community level. Birth rates are still relatively high (an average of 29.3 per 1,000 over the past five years), and this indicates the need for an ongoing family planning thrust. While infant mortality has been substantially reduced, health conditions for children in the 1-4 age group require continued attention. The incidence of certain notifiable diseases, such as gastroenteritis, measles, and sexually transmitted diseases, is still at high levels, while diseases such as tuberculosis and typhoid persist.

In addition to health needs, poor living conditions within many communities and heavy rural to urban migration point to an important role for primary health care as a means of stabilizing the physical environment and ameliorating living conditions of low income families.

Cultural patterns of health care use also suggest that health care at the local level is effective and economical. Jamaicans are already familiar with community health care. A dual system of "district medical care" and environmental health services has been built up over the past 100 years, and it is this system which is now in the process of integration into a unified Primary Health Care System. Studies have indicated heavy dependence on this system for free medical attention and drugs. (McKenzie, 1967; Rawlins, 1967; Winchester-Weekes, 1980). Only 3 to 7 percent of the respondents in the studies had ever used private (fee-paying) medical services.

BEST AVAILABLE DOCUMENT

Government health centers are used especially for family health and childhood ailments. Thus, in one typical week at an urban health center (Rawlins, 1976) the purposes of patient visits were stated as follows:

Sick Children	45.3%
Child Welfare Clinic	17.0%
Sick Females	13.3%
Family Planning	9.1%
Ante-Natal	8.0%
Immunizations	3.3%
Other (Dressings)	4.0%
	100.0%

Where adequate health care is not available at the local level, many patients travel to the nearest hospital which creates costly bottlenecks in health care and inefficient use of costly facilities. Alternatively, where adequate health care is not available at the local level, many patients are reported to fall back on traditional folk medicine systems. Often, when such treatment proves ineffective and the health condition has worsened, hospitalization is the only resort.

2. ORGANIZATIONAL ENVIRONMENT

An overall problem in the health services, which the Project will address, is the maintenance of adequate management linkages between the central administration, which is initiating improved systems, and the local level where the health care must be delivered.

Intensive interaction is necessary between the Training Branch and all levels of the local health care system. Major input is needed from parish authorities, health service staff at all levels, and community representatives to determine priorities for training and specific local needs. Since decentralized training is the aim and since many local training resources are to be used, there is a great need for careful monitoring of training quality and for expertise and support from training officers.

The Training Branch is conceptualized in this Project as a pervasive coordinating and servicing resource for the entire health services system, rather than as an independent entity. All training will not be undertaken by the Training Branch, but it will stimulate and coordinate a wide range of training activities and resources, particularly at the parish level.

In the Health Information System, successful implementation is predicated upon the cooperation of local records clerks. The quality of statistics will depend on the adequacy of the intake, which affects both health information and nutrition surveillance activities. Strengthening of resources at the local level is vital and is a major element of the Project.

The need for improvement of buildings and supply management stems from past neglect and poor communications. This Project attempts to rectify the ill effects of past neglect and avert recurrence through installation of a supply management system and provision of training at all appropriate levels. The present problems lie both in communication

between the central administration and the local level and in the initiative of local personnel toward the central administration. The Project Implementation Unit must see that organizational steps are taken for regular review, reporting on facilities, and preventive action before corrective action becomes too costly.

3. COMMUNITY IMPACT

It is a reasonable assumption that improvements in administration will be reflected in improvements in services. Some administrative improvements may make life more tolerable for staff, but will not necessarily improve the quality of service. However, one study, Training for Health Services, prepared by Hiestand in 1966 indicates that (a) expanding the skills of lower level personnel releases the time of the more highly qualified professional, making him more productive; and (b) training of higher level professional in supervision helps to improve the quality of service.

It is possible that increased data collection for the Health Information System may meet with some patient resistance, though initiation of the Monthly Clinic Reporting System, carried out as a pre-project activity, went smoothly. On the other hand, better supplies and buildings will almost certainly meet with community support, since these are key services valued by patients.

The Project will enhance the capabilities of administrators of supplementary feeding programs and will improve the capability of the staff to provide nutrition supervision and information to the community. However, only where the community is capable of taking advantage of the nutrition information will nutrition levels be improved. If the community members are too poor or too traditional or too resistant to follow the nutrition education, there will be little improvement. Accordingly, the Project appropriately incorporates an evaluation of the effectiveness of its public nutrition education activity.

4. KEY BENEFICIARIES, POTENTIAL DIFFUSION OF BENEFITS, AND OVERALL EXPECTED SOCIAL EFFECT, THE ROLE OF WOMEN

The Project addresses the first priority in Jamaican Government Health Policy, the improvement of health services management (National Development Plan for Jamaica, 1978-82). It also addresses the need for improved Primary Health Care, which is a useful and socially acceptable method of helping lower income communities.

In general, the vast majority of Jamaicans, particularly in rural communities, will be the key beneficiaries of better Primary Health Care.

In Jamaica, as in most other countries, women have more contacts with health practitioners than men. Increasing the availability of health services through better efficiency and effectiveness of the PHC system will make it easier for women to satisfy their health care needs. The health care of children is primarily the responsibility of women. PHC improvement will make it much easier for mothers to provide care for their children. While children and mothers are particularly likely to benefit from PHC services,

the entire community benefits from environmental health services and readily available treatment facilities.

In a time of constant change and considerable rural-urban migration, the health services give comprehensive coverage to both urban and rural populations, and especially to low income populations. This Project, which is oriented toward improving planning, management and service facilities, is sound in its concept and design.

The overall expected social benefits are:

a) More economic and efficient provision of services based on informed and conscious planning;

b) Improvement of health services delivery;

c) Improved contributions to stable and orderly living conditions, especially in poor communities.

Finally, with respect to the active participation of the beneficiaries in the Project, the entire Primary Health Care concept is based upon a high degree of community involvement in the development and utilization of resources in accordance with locally identified needs and priorities.

TABLE 1

POPULATION PROJECTION, 1980-2000
(In Thousands)

	1960	% of Total	1970	% of Total	1980	% of Total	1990	% of Total	2000	% of Total
Total population	1609.8	100.0	1848.5	100.0	2143.4	100.0	2463.2	100.0	2775.3	100.0
Urban[1/]	540.5	33.6	751.0	40.6	1019.1	47.6	1330.2	54.0	1669.8	60.2
Rural	1069.3	66.4	1097.5	59.4	1124.3	52.5	1133.0	46.0	1105.5	39.8

Average Annual Compound Growth Rate, 1980-2000

Total population	1.3%
Urban	2.5%
Rural	-0.1%

[1/] 13 principal towns

TABLE 2

PROJECTION OF POPULATION CLASSIFIED AS POOR
(In Thousands)

	1980	% Poor	1990	% Poor	2000	% Poor	Increase 1980-2000
Total population	2143.4	100	2463.2	100	2775.3	100	631.9
Assumed poor	1352.8	63	1452.3	59	1475.2	53	122.4
Total Urban	1019.1	100	1330.2	100	1669.8	100	650.7
Assumed Poor	509.6	50	625.2	47	701.3	42	191.7
Total Rural	1124.3	100	1133.0	100	1105.5	100	-18.8
Assumed Poor	843.2	75	827.1	73	773.9	70	-69.3
Proportion of total number of poor living in:							
Urban areas	37.7		43.1		47.5		
Rural areas	62.3		56.9		52.5		

E. ADMINISTRATIVE FEASIBILITY

The Ministry of Health as implementing agency for this Project will be responsible for overall policy and administrative direction. The Ministry of the Public Service will play an important role in the assignment of new personnel and the Ministry of Finance in the provision of counterpart financing. The Ministry of Construction and the National Development Agency will provide essential engineering and construction management services. Senior representatives of each organization have been involved throughout the GOJ project development and approval process. Close liaison among all three ministries will have to be maintained for the project to succeed.

Strengthening the primary health care delivery system is explicitly recognized as a top priority within the GOJ. Thus, there are no major policy constraints with which this Project must contend.

Within the organizational structure of the MOH (attached) the personnel directing the Project are well situated to develop and maintain an effective system of operation. The designated Project Director is the Principal Medical Officer for Primary Health Care. Since Primary Health Care cuts across many of the traditional public health services, monthly review meetings will be held consisting of senior personnel representing key services. These meetings, which are chaired by the Principal Medical Officer for Primary Health Care, will incorporate a Project-specific review process.

The Project Implementation Unit will be attached to the Primary Health Care Services Division, with the Project Manager reporting regularly to the Principal Medical Officer and consulting with the Chief Medical Officer periodically. The Project Manager will have overall responsibility and authority for the planning, coordinating, monitoring and evaluation of the project activities of the various Ministry Divisions and the Parish Medical Offices. Thus, the Project Implementation process is designed to build upon an established Primary Health Care administrative system and should result in the further strengthening and institutionalizing of that system within the MOH.

Initial responsibility for monitoring and backstopping of the Project within AID rests with the Health/Nutrition/Population Division of USAID/Jamaica. The Director, USAID/Jamaica, will designate a Project Manager as counterpart to the GOJ Project Manager. The Mission has adequate personnel resources (both on staff and through the occasional use of external technical resources) to carry out Project management responsibilities.

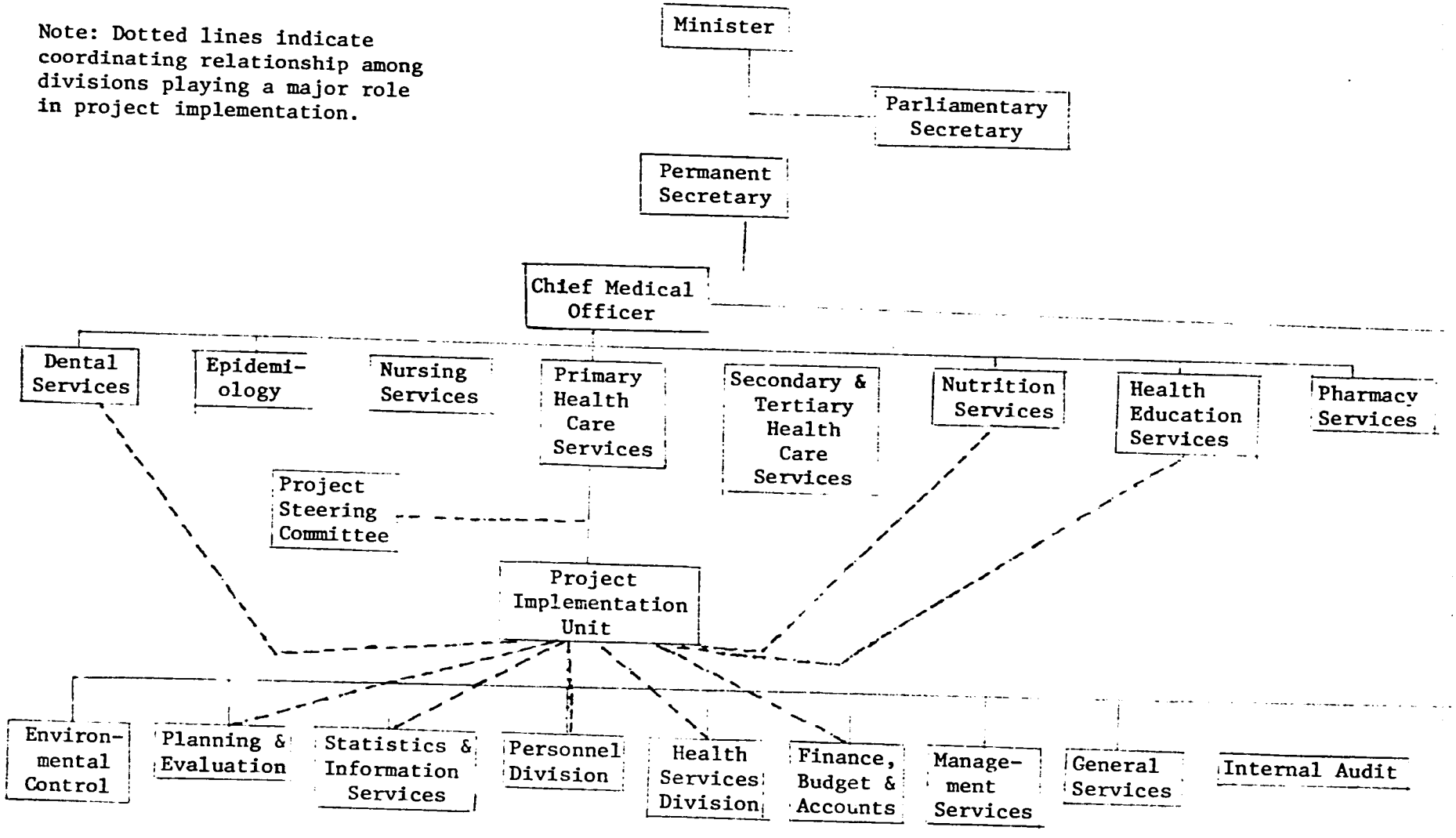
One of the most serious potential administrative constraints to Project Implementation is the high rate of emigration of skilled managers and technicians in the public sector. While there is no way to completely guard against this phenomenon, changed conditions in Jamaica may reduce the emigration trend, and there are several concrete measures which have been taken in the Project to keep it at a minimum. Since emigration is highest among those trained abroad, overseas participant training will be available only when similar training is determined to be unavailable in Jamaica. Additionally, participants will be bonded and required to sign agreements stipulating an extended in-country service requirement upon completion of training abroad.

To assure that persons sent for training abroad will return to work in Jamaica, the Ministry of Health will execute a loan agreement with each participant to be trained abroad for three months or more. The loan agreements will provide that unless the participant returns to perform service to Jamaica for a period at least twice the length of training, the participant will repay to GOJ the full costs of the training including both AID and GOJ contributions.

The Project is designed to improve the MOH Primary Health Care management system through selected intervention in key areas such as manpower development and health information systems. Its focus is on the process and support elements of the management system, as opposed to the management structure. The Project, through its various components, will provide information, analyses and material resources needed to support management functions. The PIU will serve as a catalyst for strengthening existing management systems. The Project, because of its high priority and integrated organizational design, should be able to overcome any major administrative problems it encounters within the MOH.

ORGANIZATIONAL CHART-MINISTRY OF HEALTH

Note: Dotted lines indicate coordinating relationship among divisions playing a major role in project implementation.



PART V

IMPLEMENTATION ARRANGEMENTS

A. IMPLEMENTATION PLAN

1. PROJECT IMPLEMENTATION UNIT

Progress of the Project will be monitored by measuring achievements against planned activities. Heads of components will monitor activities to ensure that schedules are being met. The Project Implementation Unit (PIU) will also monitor project activities. To this end, the PIU will convene monthly project meetings.

These review meetings, chaired by the Project Director, will be attended by all component heads, the Chief Medical Officer, the Project Manager, and from time to time, other persons as appropriate, for example, the Permanent Secretary and the Director of Finance of the Ministry of Health, representatives from the Planning Analysis and Monitoring Company, the Project Development Resource Team of the Ministry of Finance, and the AID Project Manager.

In order to facilitiate the problem solving function of the PIU, the Project Manager will visit the parishes on a regular basis to interact with primary health care administrators and health services delivery staff, in order to have first hand knowledge of the problems associated with implementation. The PIU will develop solutions for reference to the appropriate component head.

The Accounting Officers and the staff of the Project Implementation Unit will monitor all financial activities relating to the Project. They will prepare and maintain all financial records, and prepare financial reports as required by the various agencies, including the Ministry of Health, the Ministry of Finance and USAID.

In order to ensure effective monitoring of implementation activities, monthly progress reports based on the monthly review meetings will be prepared by PIU for wide dissemination.

Approximately four Field Support Studies will be undertaken aimed at providing policy makers with baseline evaluation information. These studies will be identified as the Project proceeds, and will be based on consultation with component heads. The PIU's role in these studies will be to develop a statement of work for the contractors, prepare and negotiate contracts, monitor progress of the studies through discussion and reports, certify successful completion, and disseminate findings.

Continuous informal evaluations will be maintained through routine monitoring by component heads and the PIU. There will also be formal evaluations as described in the Evaluation Plan.

2. PROCUREMENT

The PIU will coordinate the purchase of supplies and equipment under the Project, and actual commodity procurement will be carried out by the Supply Division of the Ministry of Finance, a central purchasing organization. As a pre-project activity, a staff member from the Health Services Division attended an international procurement seminar in Washington to gain skills in AID's procurement and issue requisitions to the Supply Division.

Approximately $400,000 of commodities to be procured locally will be financed by the GOJ from its contribution to the Project. Approximately $2,000,000 of commodities of local and Code 941 source and origin will be financed under the AID Loan, with an estimated $480,000 for locally procured commodities and $1,520,000 for Code 941 source and origin imports. Except for an estimated $100,000 per year, the imported commodities purchased under the Loan will be divided into three major procurement packages as indicated in the Implementation Schedule and Annex B-1.

Host country procurement of the Loan-financed commodities will be administered in accordance with Chapter 3 of AID Handbook II. The Medical Supply Expert to be financed under the Loan will assist with procurement for about 12 months.

General oversight of all construction management will be the responsibility of the MOH Engineering Officer.

As indicated in the Engineering Analysis, architectual and engineering (A&E) services for the renovation of the Spanish Town and Trench Town Health Centers and the construction of the Central Maintenance Workshop will be provided by the Ministry of Construction. Similar design, engineering, contracting and supervision services for the renovation of the 63 dispersed health centers will be provided by the National Development Agency (NDA). The GOJ, in accordance with Chapter 1 of AID Handbook 11, will contract with a private firm for A&E services, including tendering, for the renovation of the Training Center.

The GOJ, with the services of the designated A&E organizations, will enter into Loan-financed contracts for construction and renovation services in accordance with Chapter 2 of AID Handbook 11.

Local and Code 941, including U.S., firms will be eligible for contracts for engineering services and for construction. However, it is expected that the estimated cost of the contracts will not be sufficient to elicit interest from firms outside Jamaica.

If the appropriate division of construction and renovation work results in the prospect of very small contracts, the GOJ with AID concurrence may limit eligibility to local and Code 941 firms operating in Jamaica to expedite contracting.

A separate host country contract will be entered into with an engineering firm for supervision of the Training Center renovation. With the concurrence of AID, this contract may be negotiated on a non-competitive basis with the A&E firm which provided engineering design and IFB services. The contract will call for the provision of all engineering, supervision and quantity survey services as may be required for the physical works. The contract and associated procurement documents are to be approved in advance by AID in accordance with Chapter 1 of AID Handbook 11.

The approximately three person years of U.S. training to be financed under this Loan will be arranged through Mission issued PIO/P's using the placement and administrative services of the AID Office of International Training.

Wherever feasible, Loan-financed technical assistance will be provided under host country personal service contracts or contracts with firms or institutions in accordance with Chapter 1 of Handbook 11. If necessary, however, such technical assistance will be arranged through AID personal services contracts, PASAs, or other direct AID recruiting mechanisms.

B. EVALUATION PLAN

Aside from the continuous informal evaluation activities of the PIU and USAID, formal project evaluations will be conducted on a yearly basis. During the 12th month of implementation an internal evaluation will be performed by USAID/Jamaica using the Project Evaluation Summary (PES) form or its equivalent.

At the beginning of the project a comprehensive base line survey will be done. The Project Implementation Unit will be responsible for coordinating the survey which will be carried out by either the Planning and Evaluation Division or through a contract with the University of the West Indies. In either case, USAID will contribute a health systems management expect to help design and carry out the baseline survey. The purpose of the survey will be to establish a comprehensive base line against which achievement of the project goal, sub-goal and purpose will be measured. The survey will also be developed in such a manner to develop information needed for establishing targets and other information necessary for ongoing project management purposes. For example, clinic utilization and worker productivity are two efficiency-related factors to be included in the survey, since this project is expected to have a major impact on both.

In addition, at approximately the 18th month of the project, a special evaluation will be carried out on how well the project design is suited to needs then apparent. General experience since the authorization of the project will be examined to see if priorities should be shifted in response to changing circumstances. It is expected that the bases to be considered for this special evaluation will include the results of the JPP II evaluation and the baseline survey, plus general experience since project inception.

C. CONDITIONS, COVENANTS AND NEGOTIATING STATUS

The standard conditions precedent to initial disbursement of the Loan will apply. These involve the designation of official GOJ representatives and the provision of specimen signatures and of a legal opinion concerning the validity of the Loan Agreement. An additional condition precedent to initial disbursement will require the GOJ to submit satisfactory evidence that the PIU has been established and that a Project Manager and Project Director have been appointed and are working those capacities.

As indicated in the Engineering Analysis, the GOJ will submit an overall general engineering and construction plan as a condition precedent to disbursement for any construction and renovation work. The submission of a satisfactory health facilities maintenance management plan with provision for adequate financing will be a condition to disbursement for the renovation of any PHC Center additional to the 15 Centers scheduled for completion in the first year of the Project. The GOJ will submit a special evaluation of how well the project design reflects current needs; the evaluation will be a condition to disbursements after 18 months.

A.I.D. approval of procurement procedures and selected documentatio will be required as a condition precedent to disbursement for host country procurement of goods and services financed under the Loan, where appropriate under Handbook 11 and Supplement B to Handbook 1.

These conditions precedent may be modified or waived as appropriate by the Mission Director or other A.I. D. officials, subject to the limits of conferred authority and applicable A.I.D. policies.

The Loan Agreement will contain a covenant providing in substance (a) that the GOJ will take adequate measures to assure that facilities in reasonable operating condition are provided for primary health care services not presently being performed in buildings owned by the GOJ and (b) that the GOJ will submit to A.I.D. annually a report setting forth the progress to date in providing such facilities together with an updated plan for providing such facilities by the end of the Project.

The GOJ will also covenant that it will provide adequate funding to meet the recurrent costs generated by the Project subsequent to the PACD.

The Ministries of Health, Finance and Construction have reviewed the Project Paper and discussed it with USAID/Jamaica. The GOJ, acting through these Ministries, is in agreement with the design and plan of the Project and with the usual terms and conditions applied to A.I.D. loans. The Ministry of Finance has formally requested A.I.D.'s assistance in carrying out the Project (see Annex P).

Project Design Summary
Logical Framework

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,750,000
Date Prepared: 12/17/80

Project Title and Number: Health Management Improvement (532-0064)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Program Goal: To improve the health and nutritional status of the Jamaican people.	Measures of Goal Achievement: Maintenance of the infant mortality rate at no higher than 18.5/1000 by 1985. Reduction of malnutrition in children from 7% (Gomez II) and 1% (Gomez III) in 1978 to 4.5% and .6% respectively in 1985. Reduction of anemia in pregnant and lactating women from 9/100 in 1978 to 4.5/100 in 1985. 10% decrease in incidence of gastroenteritis in children. 10% reduction in prevalence of common diseases, e.g., influenza, pneumonia, diabetes, etc., which can be prevented or treated by PHC system.	MOH records, Nutrition surveillance data and Health Information System.	Assumptions for achieving goal targets: - Primary health care continues to receive top priority and reasonable level of material resources. - Abnormal climatic conditions, severe economic dislocations or catastrophic events do not substantially affect food production or availability. - Adequate number of qualified key mid and top level supervisors and technical personnel in MOH.
Project Sub-Goal To increase the efficiency, effectiveness and equity of the health care system in Jamaica.	Measures of Sub-Goal Achievement 20% increase in patients receiving primary health care in PHC centers. Increase in coverage of primary health care services delivery for under 3-year olds from 65% in 1979 to 86% by 1985.		
Project Purpose: To strengthen the ability of the MOH to plan, implement, and evaluate primary health care (PHC) and nutrition programs.	An established manpower development and training system providing continuous health manpower information, planning and training for all 14 parishes, central MOH units and 14,000 MOH staff including annual needs assessments and pre-planned courses and curricula. Health planners and administrators utilizing detailed data from HIS on health and nutrition status of Jamaican population to allocate resources based upon the needs of each geographic area.	Review and analysis of recruitment, assignment and training actions. Project impact evaluations. Analysis of allocations of health and nutrition resources.	- Sufficient qualified MOH staff. GOJ meets recurrent costs. - GOJ building and equipment maintenance function effectively. - SIS promptly processes and disseminates data to receptive planners.

ANNEX A

Project Design Summary
Logical Framework

Project Title and Number: Health Management Improvement (532-0064)

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,750,000
Date Prepared: 12/17/80

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
	Effective equipment maintenance and supply management systems in operation for 373 PHC centers, 27 MOH hospitals, and IMS	Reports and site inspections.	World Bank JPP II Project for Cornwall County successfully completed and adequate measures to provide reasonable physical plant for essential PHC service not presently occupied government owned buildings.
	All PHC centers fully equipped and operational for medical and dental services.		
	Majority of Jamaican mothers who are lactating or have children under age 5 or common nutrition problems utilizing valid and locally relevant nutrition guidance and practices.	Impact evaluations, reports and investigations.	Nutrition education relevant to local food availability and conditions.
Outputs:			
I Manpower Development and Training	Magnitude of Outputs:	GOJ, AID and consultant reports and inspections.	Assumptions for Achieving Outputs:
Manpower Inventory operational.	Skill and job related information for approximately 14,000 MOH staff entered on computerized inventory available to all planning units.	Review and analysis of print-outs. Review of needs assessment reports and training activities.	Planned inputs provided.
Annual needs assessments produced.	For all MOH staff starting with second year of project.		CDPU continues to assist with training and computer facilities.
Curricula and annual pre-planned training programs completed.	Training at level of approximately 60% of that performed during LOP for all 14 parishes and all MOH departments.		Timely renovation of Training Center.
In-service training conducted.	Planned LOP training completed in operation of manpower development/training system and professional skills.		Sufficient qualified trainers available.
MOH staff trained and equipped to administer system.	Performing 11 specific functions in project description.		Active functioning of Training Committee.
Training Branch serving as secretariat for MOH Training Committee.			

Project Design Summary
Logical Framework

Project Title and Number: Health Management Improvement (532-0064)

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,750,000
Date Prepared: 12/17/80

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
III. Health Information System			Assumptions for achieving Outputs:
Institutionalized system for collection, processing, dissemination and use of comprehensive data on Jamaican health and nutrition status.	Operational intra- and inter- divisional functions institutionalized at SIS Division. Health statistics data library/documentation center established in SIS Division.	AID, GOJ and consultant reports, target evaluations, analysis of training actions and data printouts/compilations.	Planned inputs provided.
Relevant staff trained and equipped to administer system.	Computer programs for monthly and annual reports developed using CDPU computer facilities.		CDPU continues to assist with training and computer facilities.
	Review of all secondary/tertiary and specialized health services data needs completed.		Population willing to provide personal information.
	Monthly (MCRS) and annual PHC data collection system in operation islandwide (373 health centers). Standardized patient records in use in all PHC facilities (373 health centers).		
	Planned LOP training completed.		
Vital statistics and demographic data incorporated into systems.	Semi-annual sample surveys of patient records completed starting in 2nd year of Project.		VISTIM and HMI projects assist with improvement of vital statistics.
IV. Supply Management & PHC Equipment			
PHC centers fully equipped for medical and dental services.	254 PHC centers (Surrey and Middlesex) equipped per MOH standard list.	GOJ, AID and consultant reports, target evaluations, site inspections, analysis of contracting procurement and training actions.	Planned inputs provided.
Central Maintenance workshop functioning.	CMW servicing, repairing and producing spare parts for MOH equipment to maximum practicable extent.		Timely construction of CMW.
Effective supply management system in operation and fully equipped and MOH staff trained to utilize and administer system.	Planned LOP training completed. 373 PHC centers re-supplied on regular and timely basis.		MOH receptive to recommended supply management improvements.

Project Design Summary
Logical Framework

Project Title and Number: Health Management Improvement (532-0064)

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,750,000
Date Prepared: 12/17/80

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
V. Renovation and Construction			
PHC centers and training center renovated and operational.	65 health centers (Middlesex and Surrey Counties) renovated and provided with storage space for commodities for supplementary feeding program.	GOJ, AID and A & E reports	Timely provision of A & E and construction services and materials.
CMW constructed.	7 classrooms, 10 workshops and 6 offices provided for training center. 2 bays and other facilities added to existing storage building.	Site inspections.	
VI. Nutrition			
Supplementary feeding program developed and implemented.	Consultant (5 PM) assisted in investigations and evaluations. 2 national level workshops. Improved national level programs.	GOJ, AID and consultant reports, target evaluation, analysis of procurement and training actions. Site inspections.	Planned inputs provided.
All health center and Nutrition Division staff trained and performing nutritional diagnostic procedures, remedial follow-up and proper reporting into the HIS for children under 5 and pregnant and lactating women.	Planned LOP training completed.		Population willing to provide personal information.
Nutrition surveillance system institutionalized and incorporated in Health Information System.	National data using CDPU computer facilities. Sample studies and evaluations on $CuSO_4$/iron folate treatment and effectiveness of nutrition services for women completed.		CDPU continues to assist with training and computer facilities.
Development, pre-testing, production, distribution and evaluation of multi-media nutrition education campaign on four themes.	Starting in 18th month of Project, each theme reaching a majority of Jamaican women who are pregnant or have children under age 5 or special nutrition problems, eg., anemia.		

Project Design Summary
Logical Framework

Project Title and Number: Health Management Improvement (532-0064)

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,750,000
Date Prepared: 12/17/80

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Initiation of a pilot community based educational materials production project to supplement national program.	Two or three selected communities.		
VII. Project Implementation	Project Implemented: From baseline survey through final evaluation.		
Inputs:			
I. Manpower Development and Training			
Technical assistance in health manpower planning, needs assessments, curriculum development and training program development.	12 person months with emphasis on initial stages of project.	Reports, evaluations and inspections by GOJ, AID and consultant; analysis of procurement actions and disbursements.	Timely procurement of services of highly qualified and industrious consultant.
In-service professional and medical management training for substantial portion of MOH staff.	Approximately 35,000 training days for rough total of 6,000 MOH staff.		Prompt development of training programs and timely delivery of T.A., commodity and training center renovation inputs.
US training in health media planning.	3 PM.		
Training materials, equipment and supplies for office, services and data compilation and processing.	Approximately $50,000 of appropriate supplies and equipment (see commodity list).		Timely host country procurement.
Additional personnel for Training Branch.	3 PMAs, 3 CRs, 3 STs, and 1 driver/attendant.		Timely recruitment and hiring.
Adequate support of Training Branch operations.	Travel, allowance and other overhead costs (est. $60,000).		GOJ budgeting and payment.

Project Design Summary
Logical Framework

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,200,000
Date Prepared: 12/17/80

Project Title and Number: Health Management Improvement (532-0064)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
II Health Information System			
Technical assistance in system design, data compilation and processing, demography and statistics.	27 PM.	Reports, evaluations and inspections by GOJ, consultants and AID; analysis of procurement actions and disbursements.	Timely procurement of services of highly qualified and industrious consultants.
In-service training of appropriate PHC and central staff in data compilation and processing and system familiarization.	Approximately 3,000 training days for rough total of 1,250 MOH staff.		Timely development of HIS system and training programs with benefit of delivery of T.A., supplies and additional personnel inputs.
US training in statistics and data processing.	5 trainees for total 19 PM.		Timely selection and enrollment.
Training materials and equipment and supplies for office services and data compilation and processing.	Approximately $168,000 of supplies and equipment (see commodity list).		Timely host country procurement.
Rental of computer time and key punch equipment.	Use of CDPU computer and 3 key punch machines.	" " (+ printouts and disbursement)	Timely GOJ procurement.
Additional personnel for SIS Division.	4 Statisticians.		Timely recruitment and hiring.
Adequate support for HIS development and implementation.	Payment of travel, allowance and other overhead costs (est. $14,000).		GOJ budgeting and payment.
III Supply Management & PHC Equipment			
Technical assistance for commodity procurement, supply management improvement, and supply training.	12 PM in early stage of Project.	Reports, evaluations and inspections by GOJ, consultants and AID, analysis of procurement actions and disbursements.	Timely procurement of services of highly qualified and industrious consultant.
Supply management and system familiarization training for MOH staff.	Approximately 2,800 training days for rough total of 900 staff.		Prompt development of training program and timely delivery of T.A.

Project Design Summary
Logical Framework

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,200,000
Date Prepared: 12/17/80

Project Title and Number: Health Management Improvement (532-0064)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Medical and dental equipment and supplies, materials handling and maintenance equipment, tractor and 2 trailers, training materials.	Approximately 1160,000 of appropriate supplies and equipment (see commodity list).	Reports, evaluations and inspections, by GOJ, consultants and AID, analysis of procurement actions and disbursements.	Timely host country procurement.
Additional maintenance and supply personnel.	Skilled machinists, supply personnel (5).		Timely recruitment and hiring.
Adequate support for supply management and procurement.	Travel, allowance and other overhead costs (est. $95,000).		GOJ budgeting and payment.
IV Renovation and Construction			
Renovation of Middlesex and Surrey MOH PHC centers and Training Center, construction of workshop.	65 PHC centers, 1 Training Center, 1 equipment maintenance workshop, plus A&E and construction contingency (approximately $3,500,000).	Reports, evaluations and inspections, by GOJ, consultants and AID, analysis of procurement actions and disbursements. (+ A&E reports).	Timely procurement of services and availability of materials.
Building maintenance.	Maintenance of above structures during LOP (approximately $140,000).		Effective HMU maintenance program and GOJ budgeting.
Support to MOH engineering officer.	1 engineering assistant and travel, allowance and overhead costs (approximately $25,000).		Timely recruitment, hiring and budgeting.
V Nutrition			
Technical assistance for improvement of supplementary feeding program and development/implementation of staff training and public education.	Supplementary feeding planner 5 PM Ed. materials development specialist 3 PM Radio Script preparation 8 PM Ed. materials artist 8 PM		Timely procurement of highly qualified and industrious consultants.
Compilation/processing of nutrition data.		Analysis of data and print-outs	CDPU continues to assist with training and computer facilities.
$CuSO_4$/iron folate evaluation.	Local contractor 2.5 PM		

Project Design Summary
Logical Framework

Project Title and Number: Health Management Improvement (532-0064)

Life of Project:
From FY 81 to FY 85
Total U.S. Funding: $7,200,000
Date Prepared: 12/17/80

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
In-service training for MOH staff in nutrition, nutrition surveillance and supplementary feeding management.	Approximately 35,000 training days for rough total of 2,000 staff.	Reports, evaluations etc. (Analysis of data and print-outs).	Prompt development of training programs and timely delivery of T.A. and training materials.
Training materials for staff training and public education, nutrition diagnostic and remedial, office and data compilation/processing equipment.	Approximately $375,000 of appropriate supplies and equipment (see commodity list)		Timely host country procurement and utilization.
Radio air time.	4 major themes for 2 months each, five 45 second "spots" daily (approximately $95,000).		Timely preparation of programs/scripts.
Support for Nutrition Division.	Travel, allowance and other overhead costs (approximately $5,500).		GOJ budgeting and payment.
VI General Implementation Support (PIU)			
Personnel	8 staff and 9 parish drivers	Reports, evaluations, and inspections by GOJ, AID and consultants.	
TA - Baseline Survey	2 PM ($30,000) provided for survey		Timely recruitment and GOJ budgeting
Materials and equipment for office and field support studies.	Approximately $305,000 of appropriate supplies and equipment (see commodity list).		Timely host country procurement and utilization.
Support for PIU.	Travel, allowance, rental, utilities and other overhead costs (approximately $72,000)		GOJ budgeting and payment.
Vehicle maintenance, replacement and operation.	Approximately $141,000		
Field support studies.	4 to be further delineated during implementation (approximately $170,000).		
Technical Assistance Health Systems Management Advisor	30 PM (approximately $320,000) will have been provided.		

ESTIMATED COMMODITY PROCUREMENT

(Cost estimates as of 4/81; foreign exchange estimates are CIF Kingston)

(U.S. $)

	YR. I			YR. II			YR. III			YR. IV		
I. MANPOWER COMPONENT	AID			AID			AID			AID		
	FX	LC	GOJ	FX	LC	GOJ	FX	LC	GOJ	FX	LC	GOJ
One Motor Vehicle and Spare Parts	11,000											
4 Storage Cabinets @ $280			560			560						
5 Filing Cabinets @ $365			925			925						
10 Office Desks			1,690									
20 Office Chairs @ $85.00			1,700									
50 small conference tables @ $28.00			1,400									
100 conference chairs @ $33.00			3,300									
12 large conference tables @ $150.00			1,800									
Screens, chalkboard easels			2,810									
2 electric TW, 2 manual TW, 1 duplicating machine		2,000			2,000							
2 film projectors @ $1,200	2,400											
2 Overhead Projectors @ $250.00	500											
POL, parts, supplies etc. for motor vehicle maintenance			1,000			4,000			4,000			4,000

	I AID YR FX	I AID LC	I GOJ	II AID YR FX	II AID LC	II GOJ	III AID YR FX	III AID LC	III GOJ	IV AID YR FX	IV AID LC	IV GOJ
Stationery			130			130			130			130
Other Supplies			250			250			250			250
Component Total ($48,090)	13,900	2,000	15,565		2,000	5,865			4,380			4,380
			AID LOAN	$17,900	(FX 13,900 LC 4,000), GOJ			30,190				
II. HEALTH INFORMATION SYSTEM COMPONENT												
1 Duplicating Machine		2,000										
3 Selectric Typewriters		2,000			1,000							
5 Filing Cabinets		750			450							
200 stand-up shelves for selected health centres		15,000			15,000							
Computer supplies - Software		5,000			3,500			500	1,000			1,500
Medical Record forms		60,000										
Miscellaneous Data collection forms for H/C		15,000			5,000	10,000			10,000			10,000
Stencils, duplicating paper for reports, etc.			2,000			2,000			2,000			2,000
Other office supplies			1,000			500			500			500
Component Total ($168,200)		99,750	3,000		24,950	12,500		500	13,500		60,000	14,000
			AID LOAN	125,200	(FX -0-, LC 125,200), GOJ			43,000				
III. EQUIPMENT AND SUPPLY MANAGEMENT AND PHC COMPONENT EQUIPMENT												
Spare parts	100,000			100,000			100,000			100,000		
Island Medical Stores Equipment	38,090											
Health Centre Equipment (254 H/C)	214,000	71,460										
Maintenance Workshop Equipment				150,000								
Truck (tractor, trailers & spare parts	56,180											
Dental Equipment	200,000											

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	YR I AID FX	AID LC	GOJ	YR II AID FX	AID LC	GOJ	YR III AID FX	AID LC	GOJ	YR IV AID FX	AID LC	GOJ
Stationery & Manuals		25,280			2,800			2,800				
Component Total ($1,160,610)	608,270	96,740		250,000	2,800		100,000	2,800		100,000		
IV. RENOVATION AND CONSTRUCTION COMPONENT (no separate commodity procurement)			(AID LOAN 1,160,610 ((FX1,058,270, LC/02340) GOJ -0-)									
V. NUTRITION COMPONENT												
Scales												
245 adult @ $105	25,725											
176 infant @ $31	5,460											
431 child for CHA's @ $37	15,950											
26 portable height guages	990											
6 slide projectors	1,200											
1 electric typewriter	1,000											
Food handling/storage training materials for field staff				1,575			1,575					
Food demonstration equipment and supplies		12,000			12,000			3,000			3,000	
Educational materials, local commodities for pilot level innovations, record-keeping forms, etc.					10,850			16,700			14,200	
Reference literature and forms	500		1,000		2,000	1,000		2,000	1,000		1,000	2,000
Test tubes & lancets	1,555			1,360			2,050			3,400		
Cu SO4	835		2,000	1,670		2,000	2,505		2,000	4,170		2,000
Iron folate tablets	10,000			10,000		5,000	10,000		7,500	13,000		12,500
Print-run flip charts 1,500 large @ $8.60 1,000 small @ $5.75		10,500			20,100			10,500				
15 instruction guides		1,000			2,000			1,000				
40,000 brochures		2,000			4,000			2,000				

	I AID FX YR	I AID LC	I GOJ	II AID FX YR	II AID LC	II GOJ	III AID FX	III AID LC YR	III GOJ	IV AID FX YR	IV AID LC	IV GOJ
1,000 posters		3,500			7,000			3,500				
500 photo-novels												
Paper, forms & supplies	5,000		1,000	10,000	2,000	1,000	5,000	2,000	1,000		1,000	2,000
Audio visual supplies & film development	5,000			5,000			5,000			8,000		
Materials for pre-tests		1,500			1,500							
15 copies/6 CFM slide sets @ $15.00 each		1,350										
1,200 CHA Manuals		1,375										
200 MOHSS field manuals					1,430							
In-service training materials		3,225	2,000		3,225	2,000		1,740	2,000		1,740	2,000
Component Total ($374,445)	73,215	36,450	6,000	29,605	66,105	11,000	26,130	42,440	13,500	28,570	20,940	26,500
		[AID LOAN 323,455 (FX 157,520, LC 165,935), GOJ 51,000]										
VI. PROJECT IMPLEMENTATION UNIT												
9 Parish vehicles	101,124											
One Four-Wheel Drive (BHE) Mobile a/v unit	16,854											
One van (BHE)	14,045											
Office furniture & equipment			14,045									
Office supplies			7,023			7,023			7,023			7,023
Periodicals for Documentation Center	700	705		700	705		700	705		700	705	
POL			8,427			33,708			33,708			33,708
Automotive Supplies & Parts						5,056			5,056			5,056
Component Total ($304,499)	132,723	705	29,495	700	705	45,787	700	705	45,787	700	705	45,787
		[AID LOAN 137,643 (FX 134,823, LC 2,820), GOJ 166,856]										
TOTAL BY YEAR AND SOURCE (ALL COMPONENTS) (2055854)	328,108	235,645	54,060	280,305	96,560	75,152	126,830	46,445	77,167	129,270	21,645	84,667
TOTAL AID (FX & LC)	1,063,753			376,865			173,275			150,915		
TOTAL AID & GOJ	1,117,813			452,017			250,442			235,582		

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ESTIMATED APPLICATION OF INFLATION ALLOWANCE*

YR. I			YR. II			YR. III			YR. IV		
AID			AID			AID			AID		
FX	LC	GOJ	FX	LC	GOJ	FX	LC	GOJ	FX	LC	GOJ
41,405	17,673	8,109	58,864	31,140	24,236	34,307	19,585	32,540	43,179	11,435	44,731

GRAND TOTALS

AID		INFLATION ALLOWANCE	ESTIMATED COMMODITIES WITH INFLATION
FX	$1,364,513	$ 177,755	$ 1,542,268
LC	400,295	79,833	480,128
	$1,764,808	**257,588**	2,022,396
GOJ$	291,046	109,616	400,662
	$2,055,854	367,204	2,423,058

*Estimated annual inflation rates of 10% for FX costs and 15% for LC costs with half rate applied to 1st and 4th years.

ESTIMATED COST OF TECHNICAL ASSISTANCE *

(US$ 4/81)

	YR. I AID FX	YR. I AID LC	YR. II AID FX	YR. II AID LC	YR. III AID FX	YR. III AID LC	YR. IV AID FX	YR. IV AID LC
I. MANPOWER DEVELOPMENT AND TRAINING COMPONENT								
Health Manpower Planning and Training Specialist - 12 PM	30,000		90,000					
(COMPONENT TOTAL $120,000)								
II. HEALTH INFORMATION SYSTEM COMPONENT								
42 total PM in:								
Program and systems analysis	28,000		126,000		70,000		21,000	
Statistics and sample design								
Data analysis and interpretation								
Survey and questionnaire design								
Demography (local)				8,000		12,000		8,000
	28,000		126,000	8,000	70,000	12,000	21,000	8,000
(COMPONENT TOTAL $273,000)								
III. SUPPLY MANAGEMENT AND PHC EQUIPMENT COMPONENT								
Medical Supply Expert 12 PM	60,000		60,000					
	60,000		60,000					
(COMPONENT TOTAL $120,000)								
IV. RENOVATION AND CONSTRUCTION COMPONENT								
(No component specific T.A.)								
V. Health Systems Management								
Health Systems Management Specialist (30 PM)			100,000		100,000		100,000	
Baseline for Evaluation (2 PM)			30,000					
(COMPONENT TOTAL $330,000)								

*All loan funded except V. Health Systems Management

	YR. I AID FX	YR. I AID LC	YR. II AID FX	YR. II AID LC	YR. III AID FX	YR. III AID LC	YR. IV AID FX	YR. IV AID LC
V. NUTRITION COMPONENT								
Nutrition Program Planner 5 PM	30,000		10,000					10,000
Educational Materials - Development Specialist 3 PM			30,000					
Radio Script Preparation - 8 PM Local				6,000		3,250		3,250
Educational Materials - Artist (Local) 6 PM				6,000		2,000		
	30,000		40,000	12,000		5,250		13,250
					(COMPONENT TOTAL $100,500)			
V PIU								
4 field support studies 8 PM				84,270		42,135		42,135
					(COMPONENT TOTAL $168,540)			
ALL COMPONENTS	148,000	0	316,000	104,270	70,000	59,385	21,000	63,385
ESTIMATED APPLICATION OF INFLATION ALLOWANCE*								
Loan 7,400			48,980	24,630	18,930	25,040	7,000	33,490
Grant -0-		-0-	-0-	-0-	10,000	-0-	10,000	

*Estimated annual inflation rates of 10% for FX costs and 15% for LC costs with half rate applied to 1st and 4th years.

PROJECT TOTALS TECHNICAL ASSISTANCE

	AID LOAN	INFLATION ALLOWANCE	TOTAL WITH INFLATION
FX	555,000	82,310	637,310
LC	227,040	83,160	310,200
SUB-TOTAL	782,040	165,470	947,510
	AID GRANT		
FX	330,000	20,000	350,000
PROJECT TOTAL	1,112,000	185,470	1,297,510

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ESTIMATED COST OF TRAINING

(U.S. $ - 11/80)

COURSE/SUBJECT	YR I AID LOAN FX	YR I AID LOAN LC	YR I GOJ	YR II AID LOAN FX	YR II AID LOAN LC	YR II GOJ	YR III AID LOAN FX	YR III AID LOAN LC	YR III GOJ	YR IV AID LOAN FX	YR IV AID LOAN LC	YR IV GOJ
I.												
MANPOWER DEVELOPMENT COMPONENT -												
Practical skills		7,000			17,500			17,500			14,000	
Pharmacy/Dispensary skills		2,000			2,000			2,000			2,000	
Training of trainers		10,000			20,000			20,000			20,000	
Office procedure		3,000			6,000			6,000			5,000	
National level program evaluation		10,000			20,000			20,000			20,000	
Parish level health care skill		10,000			27,000			29,000			28,000	
Health media planning (overseas)	5,000		750									
Photographic techniques for ed.materials					4,000							
Health ed. evaluation					10,000							
Health policy					5,000							
Preventive maintenance								2,000				
Community health leadership					5,000							
Audio/visual usage					1,000							
COMPONENT TOTALS ($350,750)	5,000	42,000	750		117,500			96,500			89,000	

AID LOAN: FX $5,000, LC$345,000, GOJ $750

ANNEX B-3

ESTIMATED COST OF TRAINING

(U.S. $ - 11/80)

COURSE/SUBJECT	YR. I AID LOAN FX	YR. I AID LOAN LC	YR. I GOJ	YR. II AID LOAN FX	YR. II AID LOAN LC	YR. II GOJ	YR. III AID LOAN FX	YR. III AID LOAN LC	YR. III GOJ	YR. IV AID LOAN FX	YR. IV AID LOAN LC	YR. IV GOJ
II. HEALTH PLANNING												
II. HEALTH INFORMATION SYSTEM (US TRAINING)							16,627		750			
Systems Development and data processing/programming for sample surveys	5,000		750									
Advanced data processing and systems analysis				16,600		750						
Survey methods and statistical technology	16,627		750									
(In-Country Training) Intro. to data processing			500			1,000			500			
Introductory statistics/ data collection		2,200	550		2,200	550						
Statistics for non-professionals						2,000						
Medical records standardization and storage		4,000	1,570		5,668	3,000		4,650	6,100		2,000	3,000
Survey enumeration					3,900	500						
Data interpretation/ analysis for managers					3,500							
COMPONENT TOTALS ($105,242)	21,627	6,200	4,120	16,600	15,268	7,800	16,627	4,650	7,350		2,000	3,000

[AID LOAN: FX$54,854, LC$28,118, GOJ$22,270]

ESTIMATED COST OF TRAINING

(U.S. $ - 11/80)

COURSE/SUBJECT	YR. I AID LOAN FX	YR. I AID LOAN LC	YR. I AID LOAN GOJ	YR. II AID LOAN FX	YR. II AID LOAN LC	YR. II AID LOAN GOJ	YR. III AID LOAN FX	YR. III AID LOAN LC	YR. III AID LOAN GOJ	YR. IV AID LOAN FX	YR. IV AID LOAN LC	YR. IV AID LOAN GOJ
IV.												
SUPPLY MANAGEMENT PHC EQUIPMENT COMPONENT												
Stores Management		2,000	2,000									
Curriculum Development for Trainers		2,000	2,000									
Field level stores management		8,000	6,000		8,790	6,856						
COMPONENT TOTALS ($37,646)		12,000	10,000		8,790	6,856						
			[AID LOAN: LC$20,790, GOJ$16,856]									
V.												
RENOVATION AND CONSTRUCTION COMPONENT	(No component specific training)											
VI.												
NUTRITION COMPONENT												
Nutrition skills refresher and upgrading		500	868		750	868		500	370			370
Nutrition surveillance and training skills		150	2,000		1,000	7,000		600	3,600		200	2,600
Nutrition skills refresher		700	868		1,050	868			370			370
Refresher nutrition					1,000	3,000		750	2,000		200	
Nutrition surveillance and training skills		250	1,000		750	2,500		750	2,250		200	1,250

ESTIMATED COST OF TRAINING

(US$ - 11/80)

COURSE/SUBJECT	YR I AID LOAN FX	YR I AID LOAN LC	YR I GOJ	YR II AID LOAN FX	YR II AID LOAN LC	YR II GOJ	YR III AID LOAN FX	YR III AID LOAN LC	YR III GOJ	YR IV AID LOAN FX	YR IV AID LOAN LC	YR IV GOJ
Basic nutrition, surveillance and communication skills		600	1,500		2,200	4,250		1,000	2,550		200	1,800
Supplementary feeding program management					700							
COMPONENT TOTALS ($56,302)		2,200	6,236		7,450	18,486		3,600	11,140	-	800	6,390
				AID LOAN: LC$14,050, GOJ$42,252								
	26,627	62,400	21,106	16,600	149,008	33,142	16,627	104,750	18,490	-	91,800	9,390

ESTIMATED APPLICATION OF INFLATION ALLOWANCE*

1,331	4,680	1,583	2,573	35,203	7,830	4,498	44,171	7,797		48,500	4,960

	AID LOAN	INFLATION ALLOWANCE	TOTAL WITH INFLATION
FX	$ 59,854	$ 8,402	$ 68,256
LC	407,958	132,554	540,512
	467,812	140,956	608,768
GOJ	82,128	22,170	104,298
PROJECT TOTAL	$549,940	$163,126	$713,066

*Estimated annual inflation rates of 10% for FX costs and 15% for LC costs with half rate applied to 1st and 4th years.

ESTIMATED SUPPORT COSTS

(U.S. $ - 4/81)

	YR. I		YR. II		YR. III		YR. IV	
	LC		LC		LC		LC	
	AID	GOJ	AID	GOJ	AID	GOJ	AID	GOJ
I.								
MANPOWER DEVELOPMENT & TRAINING COMPONENT								
Additional personnel (10) for Training Branch		38,440		39,707		40,935		42,182
Additional travel and allowances		9,340		9,340		8,340		8,340
Additional utilities and other overhead				7,900		7,900		7,900
COMPONENT TOTAL ($220,324)		47,780		56,947		57,175		58,422
II.								
HEALTH INFORMATION SYSTEM COMPONENT								
Additional personnel (4) for SIS division		15,273		21,230		21,837		22,444
Additional travel and allowances	3,470		2,800	670	2,000	1,470		3,470
Rental of computer time and key punch equipment		13,000		13,000		13,000		13,000
COMPONENT TOTAL ($146,664)	3,470	28,273	2,800	34,900	2,000	36,307		38,914

[AID LOAN: LC$8,270, GOJ$138,394]

ESTIMATED SUPPORT COSTS

(U.S. $ - 4/81)

	YR. I		YR. II		YR. III		YR. IV	
	AID	LC GOJ	AID	LC GOJ	AID	LC GOJ	AID	LC GOJ
III.								
SUPPLY MANAGEMENT & PHC EQUIPMENT COMPONENT								
Additional maintenance personnel (5)				15,000		15,000		15,000
Additional travel and allowances				1,500		1,500		1,500
Additional utilities and other overhead				30,000		30,000		30,000
COMPONENT TOTAL ($139,500)				46,500		46,500		46,500
		[GOJ:	$139,500]					
IV.								
RENOVATION AND CONSTRUCTION COMPONENT								
Building maintenance				18,700		27,000		92,000
MOH engineering assistant		5,056		5,056		5,056		
Additional travel and allowances		3,370		3,370		3,370		
COMPONENT TOTAL ($162,978)		8,426		27,126		35,426		92,000
		[GOJ:	$162,978]					
V.								
NUTRITION COMPONENT								
Additional travel and allowances	700	2,000					700	2,000
Radio airtime			24,000		48,000		24,000	

ESTIMATED SUPPORT COSTS

(U.S. $ - 4/81)

	YR. I LC AID	YR. I LC GOJ	YR. II LC AID	YR. II LC GOJ	YR. III LC AID	YR. III LC GOJ	YR. IV LC AID	YR. IV LC GOJ
CuSO4 iron folate evaluation and sample survey of clinic/population data					15,000		15,000	
COMPONENT TOTAL ($131,400)	700	2,000	24,000		63,000		39,700	2,000
[AID LOAN: LC$127,400, GOJ: $4,000]								
VI. PROJECT IMPLEMENTATION UNIT								
Personnel (7 staff and 9 parish drivers)		40,552		67,928		68,804		69,683
Travel and allowances		6,518		6,518		6,518		6,518
Vehicle maintenance		9,692		43,820		43,820		43,820
Building rental, utilities and other overhead		11,477		11,477		11,477		11,477
COMPONENT TOTAL ($460,099)		68,239		129,743		130,619		131,498
[GOJ: $460,099]								
ALL COMPONENTS	4,170	154,718	26,800	295,216	65,000	306,027	39,700	369,334
TOTAL (1,260,965)								

ESTIMATED SUPPORT COSTS

(U.S. $ - 4/81)

ESTIMATED APPLICATION OF INFLATION ALLOWANCE*

YR. I		YR. II		YR. III		YR. IV	
AID LOAN		AID LOAN		AID LOAN		AID LOAN	
LC	GOJ	LC	GOJ	LC	GOJ	LC	GOJ
313	11,603	6,331	69,745	27,410	129,048	20,974	195,123

PROJECT TOTALS SUPPORT COSTS

	AID LOAN	INFLATION ALLOWANCE	TOTAL WITH INFLATION
FX			
LC$	135,670	55,028	190,698
	135,670	55,028	190,698
GOJ	1,125,295	405,519	1,530,814
PROJECT TOTAL	1,260,965	460,547	1,721,512

* Estimated annual inflation rate of 15% for LC costs with half rate applied to 1st and 4th years.

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CONSTRUCTION FX & LC BREAKDOWN PER YEAR

	A I D			G O J				
CONSTR. YEAR	FX	LC	SUB TOTAL	FX	LC	SUB TOTAL	PROJECT TOTAL	REMARKS
YEAR 1	261,185	1,291,790	1,552,975	-	128,530	128,530	1,681,505	
YEAR 2	103,722	611,886	715,608	-	72,364	72,364	787,972	
YEAR 3	152,965	902,375	1,055,340	-	106,720	106,720	1,162,060	
TOTAL	517,872	2,806,051	3,323,923	-	307,614	307,614	3,631,537	

DETAILED ESTIMATE FOR MAJOR RENOVATION OF SPANISH TOWN AND TRENCH TOWN HEALTH CENTERS

HC/2

HEALTH CENTERS

(Major Renovation)	2 ea.
Est. Total cost (US $) (as of Nov. 1980)	148,900
Est. Total cost (April 1, 1981)	163,790
Inflation for one year, approx. 35%	57,327
Adjusted constr. cost (base cost + inflation)	211,117
A & E services @ 15% (includes constr. supervision)	31,668
Contingencies @7.5%	15,234
Estimated total cost (constr. cost + A & E serv. + Contingen.)	258,619

FX & LC Breakdown

Assumptions -

1) 30% material & 70% labor cost

2) 50% of material: imported (=15% of total constr. cost).

3) A & E services - GOJ contribution, except special consulting services (approx. 25% of A & E cost = 3.75% of constr. cost).

4) 2 HC's will be built in Year 1.

YEAR 1	A I D			G O J		
Item	FX	LC	TOTAL	FX	LC	TOTAL
Constr.	31,668	179,449	211,114	-	-	-
A & E	7,917	-	7,917	-	23,751	23,751
Conting.	2,375	13,457	15,830	-	-	-
TOTAL	41,960	192,906	234,868		23,751	23,751

GRAND TOTAL (AID & GOJ) = 258,619

HC/63

DETAILED ESTIMATE FOR MINOR RENOVATION OF 63 HEALTH CENTERS

HEALTH CENTERS (minor renovation)	63 ea.
Est. unit cost (US$) (as of Nov. 1980)	15,145
Est. unit cost (1 April 1981)	16,660
(For 15 units: 15x16,660 to be built in Year 1)	249,900
Inflation for one year, approx. 35%	87,465
Adjusted constr. cost (Year 1) (base cost + inflation)	337,365
A & E services @ 15% (Year 1) (includes constr. supervision)	50,605
Contingencies @ 7.5% (Year 1)	25,302
Est. total cost for Year 1 (base cost + A&E + contingencies)	413,272
For 22 units: 22x16,660 (to be built in Year 2)	366,520
Inflation for two years, approx. 75.5% (compounded: 35% + 30%)	276,723
Adjusted construction cost (Year 2) (base cost + inflation)	643,243
A & E services @ 15% (Year 2)	96,486
Contingencies @ 7.5% (Year 2)	48,243
Est. total cost for Year 2	787,972
For 26 units: 26x16,660 (to be built in Year 3)	433,160
Inflation for three years, approx. 119% (compounded: 35% + 30% + 25%)	515,460

HC/63

Adjusted construction cost (Year 3) (base cost + inflation)	948,620
A & E services @ 15% (Year 3)	142,293
Contingencies @ 7.5% (Year 3)	71,147
Est. total cost for Year 3	1,162,060
Est. total cost for 63 units (Year 1 + Year 2 + Year 3)	2,363,304

FX & LC breakdown

Assumptions -

1) 30% material & 70% labor cost.

2) 50% of material: imported (= 15% of total construction cost)

3) A & E services - GOJ contribution, except special consulting services (approx. 25% of A & E cost = 3.75% of construction cost).

4) Approx. 15 HC will be built in Year 1
" 22 HC " " " " Year 2 and
" 26 HC " " " " Year 3

YEAR 1	A I D			G O J		
ITEM	FX	LC	TOTAL	FX	LC	TOTAL
Constr.	50,605	286,760	337,365	-	-	-
A & E	-	12,651	12,651	-	37,954	37,954
Conting.	3,795	21,507	25,302	-	-	-
TOTAL	54,400	320,918	375,318		37,954	37,954

YEAR 2	A I D			G O J		
ITEM	FX	LC	TOTAL	FX	LC	TOTAL
Constr.	96,486	546,757	643,243	-	-	-
A & E	-	24,122	24,122	-	72,364	72,364
Conting.	7,236	41,007	48,243	-	-	-
TOTAL	103,722	611,886	715,608	-	72,364	72,364

YEAR 3	A I D			G O J		
ITEM	FX	LC	TOTAL	FX	LC	TOTAL
Constr.	142,293	806,327	948,620	-	-	-
A & E	-	35,573	35,573	-	106,720	106,720
Conting.	10,672	60,475	71,147	-	-	-
TOTAL	152,965	902,375	1,055,340	-	106,720	106,720

YEAR 1, 2 & 3	A I D			G O J		
	FX	LC	TOTAL	FX	LC	TOTAL
TOTAL	311,087	1,835,179	2,146,266	-	217,038	217,038

TOTAL (AID & GOJ) = US$2,363,304

DETAILED ESTIMATE FOR RENOVATION OF TRAINING BRANCH AND MATERIALS PRODUCTION CENTER

TRAINING CENTER (major renovation)	1 ea.
Est. cost (US $) (as of Nov. 1980)	155,000
Est. cost (1 April 1981)	170,500
Inflation for one year, approx. 35%	59,675
Adjusted construction cost (base cost + inflation)	230,175
A & E services @ 15% (includes construction supervision)	34,526
Contingencies @ 7.5%	17,263
Est. total cost (construction cost + A & E services and contingencies)	281,964

FX & LC breakdown

Assumptions -

1) 30% material & 70% labor cost

2) 50% of material is imported (=15% of total construction cost)

3) A & E services - by Jamaican private consulting firm

4) The TC will be built in Year 1.

YEAR I	A I D			G O J		
Item	FX	LC	TOTAL	FX	LC	TOTAL
Constr.	34,526	195,649	230,175	-	-	-
A & E	-	34,526	34,526	-	-	-
Conting.	2,589	14,674	17,263	-	-	-
TOTAL	37,115	244,849	281,964	-	-	-

GRAND TOTAL (AID & GOJ) = $281,964

DETAILED ESTIMATE FOR CONSTRUCTION

OF CENTRAL MAINTENANCE WORK-

SHOP

MS

MAINTENANCE SHOP (new construction)	1 ea
Est. Constr. cost (US $) (as at Nov. 1980)	400,000
Est. Constr. cost (April 1, 81)	440,000
Inflation for one year (approx. 35%)	154,000
Adjusted constr. cost (base cost + inflation)	594,000
A & E Services @ 15% (includes constr. supervision)	89,100
Contingencies @ 7.5%	44,500
Est. Total Bldg Cost	727,650

FX & LC Breakdown (blgd. & equipment)

Assumptions -

1) 50% material & 50% labor cost for construction

2) 40% of constr. material is imported (=20% of total constr. cost)

3) A & E services by the Tech. Services Director and to Min. of Constr. (= GOJ contribution), except special consulting services (approx. 25% of A & E cost = 3.75% of constr. cost).

4) All machinery and equipment: imported

5) The Maintenance Shop will be built in Year 1.

YEAR 1	A I D			G O J		
Item	FX	LC	TOTAL	FX	LC	TOTAL
Constr.	118,800	475,200	594,000	-	-	-
A & E	-	22,275	22,275	-	66,825	66,825
Conting.	8,910	35,640	44,550	-	-	-
TOTAL	127,710	533,115	660,825	-	66,825	66,825

ESTIMATED RECURRENT COSTS OF PROJECT FOR GOJ AFTER PACD

(U.S. $, Inflation @ 15% p.d.)

Incremental Cost	1st Year After PACD	2nd Year After PACD	3rd Year After PACD
I. MANPOWER DEVELOPMENT AND TRAINING			
Additional Personnel Training Branch	75,000	86,250	100,000
Additional Travel and Allowances	7,900	9,000	10,400
Additional Utilities and Other Overhead	15,000	17,250	20,000
	97,900	112,500	130,400
II. HEALTH INFORMATION SYSTEM			
Additional Personnel S.I.S. Division	42,000	48,300	55,500
Additional Travel and Allowances	6,500	7,500	8,600
Rental of Computer time and key punch equipment	25,000	28,750	33,000
	73,500	84,550	97,100

ANNEX

ESTIMATED RECURRENT COSTS OF PROJECT FOR GOJ AFTER PACD

(U.S. $, Inflation @ 15% p.)

Incremental Cost	1st Year After PACD	2nd Year After PACD	3rd Year After PACD
III. SUPPLY MANAGEMENT AND PHC EQUIPMENT			
Additional Equipment Maintenance Personnel	24,500	28,200	32,500
Spare Parts and Misc.	140,000	160,000	180,000
Additional Travel and Allowances	2,450	2,820	3,250
Additional Utilities and Other Overhead	56,500	65,000	75,000
	223,450	256,020	290,750
IV. RENOVATION AND CONSTRUCTION			
Building Maintenance (4%)	275,000	320,000	366,000
V. NUTRITION			
Additional Travel and Allowances	3,300	3,800	4,400
VI. GENERAL SUPPORT			
Vehicle Maintenance, Operation and Replacement	112,000	135,000	139,000
Additional Drivers	32,000	36,800	42,300
	144,000	161,800	181,300
TOTALS	$ 817,150	$ 938,670	$ 1,069,950

2

Estimation of Partial Benefits for Health & Nutrition Development

I Increase in Number of People Attended at Health Centers

Number of people attended at health centers in 1976.	801,000[1/]
Estimated 10 to 15% increase in the number of people that can be seen as a result of the project.	80,000 to 120,000
What "saving" or social benefit does this represent for society?	

A. Savings to Hospital System

Budget for hospital services in 1978/79	J$52.0 million[2/]
Estimated proportion for in-patient services: 2/3 of total or $52.0 x .667 =	J$34.7 million
Given the hypothesis that improved health care (greater outreach, improved health services) will mean 10 to 15% fewer in-patients, saving in-patient hospital care costs are expected to be 6%* of 34.7 =	J$ 2.1 million

B. Savings of Individuals Able to Avoid Hospitalization

Average annual number of individuals admitted as in-patients over 1976-78	137,000
Number of patients assumed able to avoid hospitalization as a result of the project: 10 to 15% of 137,000 or	17,125

(i) Savings realized by avoiding loss in income:

National income per capita in 1978:

$$\frac{\text{J\$3,177.1 million}^{3/}}{\text{2.1 million}} = \text{J\$1515.9}$$

1/ Source: National Planning Agency, Economic and Social Survey of Jamaica 1976, page 264. Approximately the same figure results from use of Jan-Feb. 1980 data on people served at clinics.

2/ National Planning Agency, Economic and Social Survey of Jamaica, 1978, page 17.2.

* A reduction of only 6% in cost was assumed (in lieu of the 10-15% reduction in admissions) because certain hospital costs are "fixed", i.e. independent of the number of admissions.

Adjustment for inflation and decline in real income in 1979:

J$1512.9 x 1.17[4/] = J$1770

Per Capita Income per day: $\frac{1770}{365}$ = J$4.85[9/]

Savings to 17,125 individuals as a result of avoiding losses in earnings resulted from hospitalization:

J$4.85 x 5 days[5/] x 17,125 individuals = J$415,280 — J$ .4 million

(ii) Savings realized by avoiding transportation costs to nearest urban hospital:

J$30[6/] x 17,125 individuals = J$513,750 — J$ .5 million

Adjusting for the patients living in cities having hospital (estimated 35%) would reduce savings. J$513,750 x .65 = J$334,000. — J$ .3 million

II Savings in Hospital Costs Resulting from a Reduction in Admission Malnourished Children

Annual cost of hospitalization of malnourished children (estimate for 1979) — J$ 3.9 million[7/]

On the expectation that the number of malnourished children now being hospitalized can be reduced by 10% as a result of the Nutrition Component of this project, the savings will be: — J$ .4 million

Total number of children in the 0-5 age bracket in 1979 — 316,400[8/]

3/ Source: Department of Statistics, National Income & Product, 1978, pages 4-5

4/ The increase in the consumer price index between November 1978 and November 1979 was 20%; the real GDP in 1979 is assumed to have declined by 3%.

5/ Estimated average length of stay in Jamaica's general hospital for patients afflicted by non-chronic diseases.

6/ Estimated by Ministry of Health.

7/ Source: The actual cost in 1974 was J$3.0 million. The J$3.9 million estimate for 1979 was by the Tropical Metabolism Research Unit and is cited in the Nutrition Component part of the Jamaica AID Mission Project Paper for the proposed loan.

8/ Ministry of Health, Five Year Health Plan, 1978-83, mimeographed draft, page 9.

9/ Note that his figure does not have to be adjusted for unemployment, as it is an average figure applicable to the entire population, rich and poor, young and old, employed and unemployed. Presently available data do not allow any conclusions as to whether people admitted to hospitals are significantly richer, older or more employed than the general population (which would raise benefits) or significantly poorer, younger or less employed than the general population (which would lower benefits).

Total estimated number of malnourished children (8.2% in Class II and III of Gomez classification) 9/	26,078
Number of malnourished children assumed to avoid hospitalization as a result of the project (10% of 26,078).	2,608

III Reduced Drug Spoilage and Their More Effective Utilization

Ministry of Health budget for drugs in 1980/81	J$ 13.0 million 10/
Hoped for savings as a result of project (10%)	J$ 1.3

Recapitulation: Total Annual Benefits Following Completion of Project

	In Millions of J$	In Millions of US$
1. Savings resulting from reduced hospitalization		
A. To hospital system	2.1	1.18
B. To individuals by avoiding loss in earnings	.4	
C. To individuals by avoiding transport costs to hospital	.3	.19
2. Saving in hospital cost resulting from reduced malnutrition of children.	.4	.22
3. Reduced drug spoilage and their more effective utilization.	1.3	.73
Total Estimated Annual Benefits	4.5	2.54

9/ Nutrition Advisory Council, A Food and Nutrition Policy for Jamaica (as revised in August 1978), page 5.

10/ Source: Ministry of Health.

Time Phasing of Benefits, 1981-84

(In Millions of U.S. Dollars)

	1981	1982	1983	1984	1985 and After
1. Savings from reduced hospitalization	0	0	.5	1.1	1.59
2. Saving in hospital costs from reduced child malnutrition	0	0	.1	.2	.22
3. More effective distribution of drugs.	0	.2	.3	.5	.73
					2.54
Total Social Benefits	0	.2	0.9	1.8	2.54

Benefits And Costs

	(In Thousands of Constant U.S. Dollars) Projected Costs		(In Thousands of Constant U.S. Dollars) Projected Benefits	
	Undiscounted	Discounted 11%/year 5/	Undiscounted	Discounted 11%/year 5/
1981	3451 1/	3451	0	0
1982	2622 1/	2362	200	180
1983	2393 1/	1943	900	731
1984	1334 1/	975	1800	1316
1985	817 2/	538	2540	1674
1986	833 3/	494	2578 4/	1529
1987	850	455	2617	1400
1988	867	418	2656	1280
1989	884	384	2696	1170
1990	902	353	2736	1109
1991	920	324	2777	978
1992	938	297	2819	894
1993	957	274	2861	818
1994	976	252	2904	749
1995	996	231	2948	684
1996	1016	212	2992	625
		12711		15137

Benefit Cost ratio $= \frac{15,137}{12,711} = 1.19$

1/ Page 2 of Financial Analysis.

2/ From Annex C.

3/ Assumed to increase at 2% annually in real terms over 1985 base.

4/ Conservatively projected to increase at an annual rate of 1.5%, equal to the projected average annual rate of increase of the population, over 1985 base.

5/ The discount rate used is the social discount rate, or opportunity cost of capital, as estimated by the World Bank.

Basic Machines & Equipment Required for Central Maintenance Workshop

I. Capstan Lathe with roller box and die head attachments ¼" to 1¼" capacity.

II Copy Lathe at 8" centre height at 3 ft. centres with four jaw and self centring chucks.

III External Grinder at 3 ft. centres 4" diamater capacity.

IV Screw Cutting Machine with screw cutting capacity up to 2" diamter will full range of dies.

V Gear Cutting Machine for gear blanks up to 6" diameter with range of hobbs.

VI Universal Milling Machine with dividing head, table size 3'-6" x 1'-3", with full set of cutters.

VII Keyway Slotting Machine for internal keyways maximum stroke 6". Keyway sizes ¼" to 1".

VIII Radial Drilling Machine, table size approximately 3 ft. x 2 ft. complete with vice, tapping and boring attachments, tapping capacity ¼" to 1½" diameter.

IX Portable Electric Welding Plant complete with welding equipment and supply of welding rods.

X Air Compressor, diesel operated to provide 100 lbs. per square inch capacity.

XI Mechanical Hacksaw with 6" diameter cutting capacity.

LIST OF EQUIPMENT FOR HEALTH CENTRES

INSTRUMENTS	TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V
Forrester Sponge Forceps	6	12	12	12	12
Straight Scissors	2	3	6	6	6
Dressing and Tissue Forceps	2	4	6	6	6
Artery Forceps	6	6	12	12	12
Speculum (GL-11)	6	9	12	12	12
(GL-12)	3	3	6	6	6
Uterine Tentaculum	4	4	6	6	6
Forceps Probe (6 inch)	-	2	4	4	6
Bowls (HS-6120)	1	1	2	2	4
(HS-6130)	1	1	2	2	4
Kidney dishes (HS-6170)	1	1	2	2	4
(HS-6180)	1	1	2	2	4
Ives Anoscope	-	-	1	1	1
Needle Holders	-	2	2	2	3
Scalpel Handles(2 sizes)	-	2	3	3	6
Surgical Blades(2 sizes)	*				
Foreign Body Spud	-	-	2	2	2
Aseptic ear syringe	-	-	1	1	1
Disposable Syringes with needles	*				

* Please state quantity required for one year.

HEALTH CENTRES

IMPORTED MEDICAL EQUIPMENT

GENERAL

	ITEM	TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V
1	Water Cooler	-	1	1	1	1
2	Sterilizer	1	1	1	1	1
3	Adult Scale	1	1	1	1	1
4	Baby Scale (Clinic)	1	1	1	1	1
5	Baby Scale (Field)	-	-	-	-	-
6	Examination Lamp	1	3	3	3	3
7	Examination Couch	-	-	-	1	1
8	Pedal Bin	1	3	6	6	8
9	General Trolley	-	-	1	1	2
10	Instrument Trolley	1	1	2	2	2
11	Dressing Trolley	-	1	2	2	2
12	Stool	1	2	3	3	4
13	Stethoscope	1	2	3	3	4
14	Desk Sphygmomanometer	1	3	6	6	6
15	Portable "	1	1	1	1	2
16	Diagnostic Set	-	-	1	1	2
17	Nursing Kit (Midwives Bag)	-	-	-	-	-
18	Resuscitator (Inc.masks)	-	-	1	1	1
19	Suction Pump	-	-	1	1	1

* State number needed for the parish.

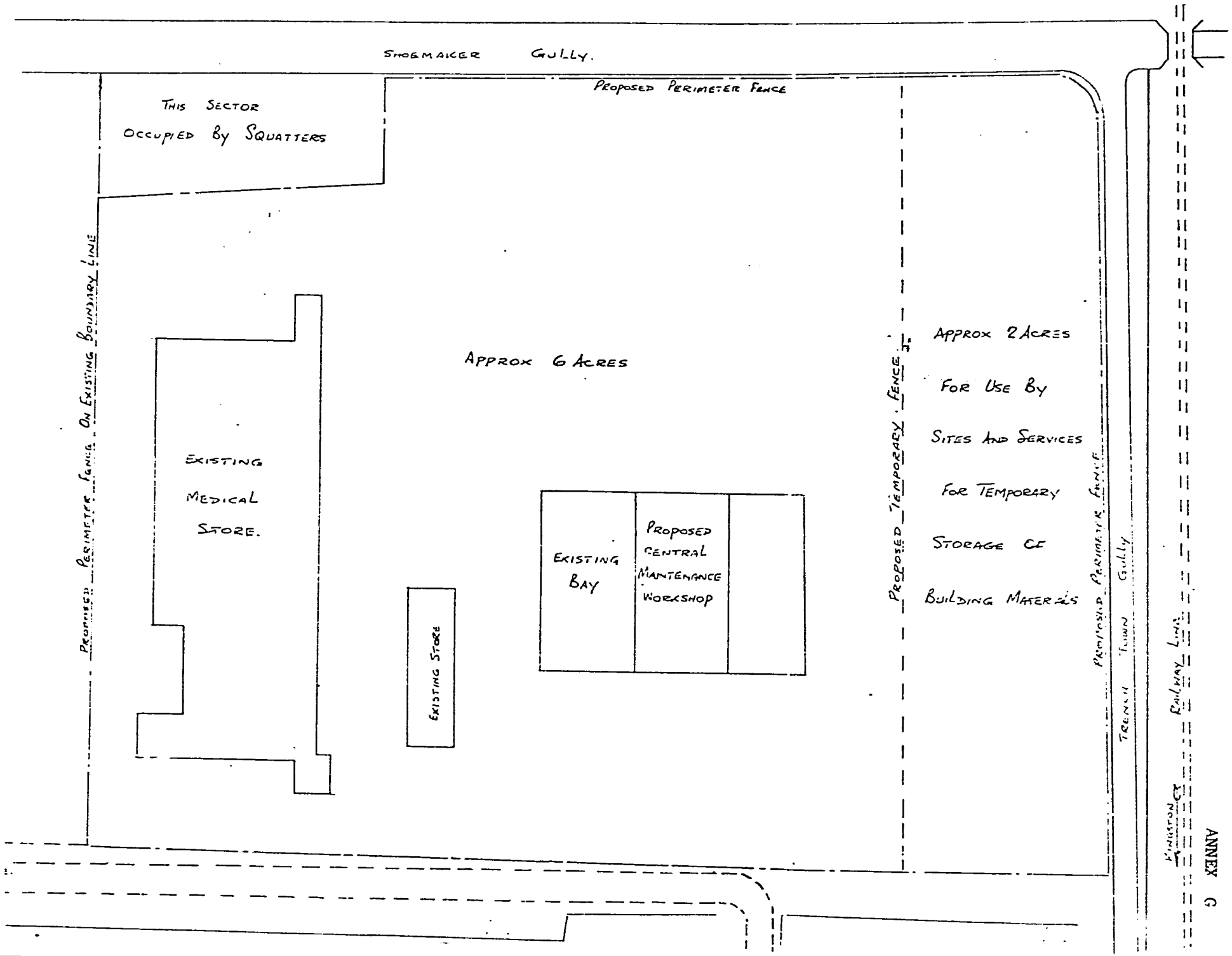
2. PHARMACY:

PHAPMACY

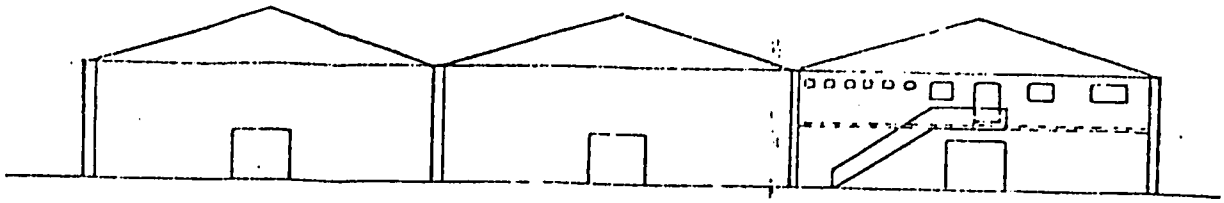
	ITEM	TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V
1	Refrigerator (approx. 30 cu.ft)	-	-	-	1	1
2.	Refrigerator (approx. 18 Cu.ft.)	-	-	1	-	-
3.	Mixer/Emulsifier	-	-	1	1	1
4.	Autoclave	-	-	1	1	1
5.	Laminator Flow hood	-	-	-	1	1
6.	Oven	-	-	1	1	1
7.	Still	-	-	1	1	1
8.	Bunsen Burner	-	-	1	1	1
9	Prescription Balance	-	-	1	1	1
10	General Balance	-	-	1	1	1
11	Analytic Balance	-	-	1	1	1

L ORATORY

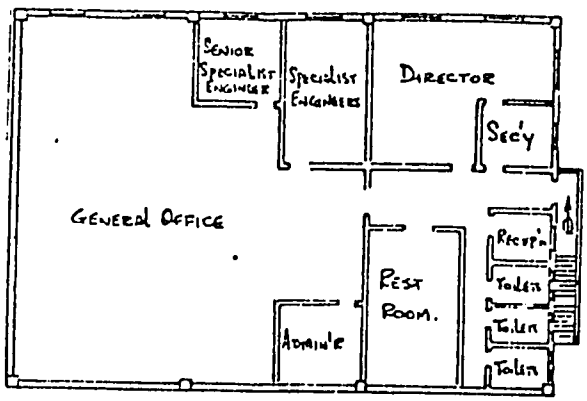
1	Incubator	-	-	1	1	1
2	Drying Oven	-	-	1	1	1
3.	Microscope	-	-	1	1	1
4	Centrifuge	-	-	1	1	1
5	Haematocrit Centrifuge	-	-	1	1	1
6	Spectrophotometer	-	-	1	1	1
7	Pipette Washer	-	-	1	1	1
8	Pipette Filler	-	-	2.	2	2


SHOEMAKER GULLY.
PROPOSED PERIMETER FENCE
THIS SECTOR OCCUPIED BY SQUATTERS
PROPOSED PERIMETER FENCE ON EXISTING BOUNDARY LINE
APPROX 6 ACRES
EXISTING MEDICAL STORE.
EXISTING STORE
EXISTING BAY
PROPOSED CENTRAL MAINTENANCE WORKSHOP
PROPOSED TEMPORARY FENCE
APPROX 2 ACRES FOR USE BY SITES AND SERVICES FOR TEMPORARY STORAGE OF BUILDING MATERIALS
PROPOSED PERIMETER FENCE
TRENCH TOWN GULLY
KINGSTON RAILWAY LINE

ANNEX G



FRONT ELEVATION ON 'B'



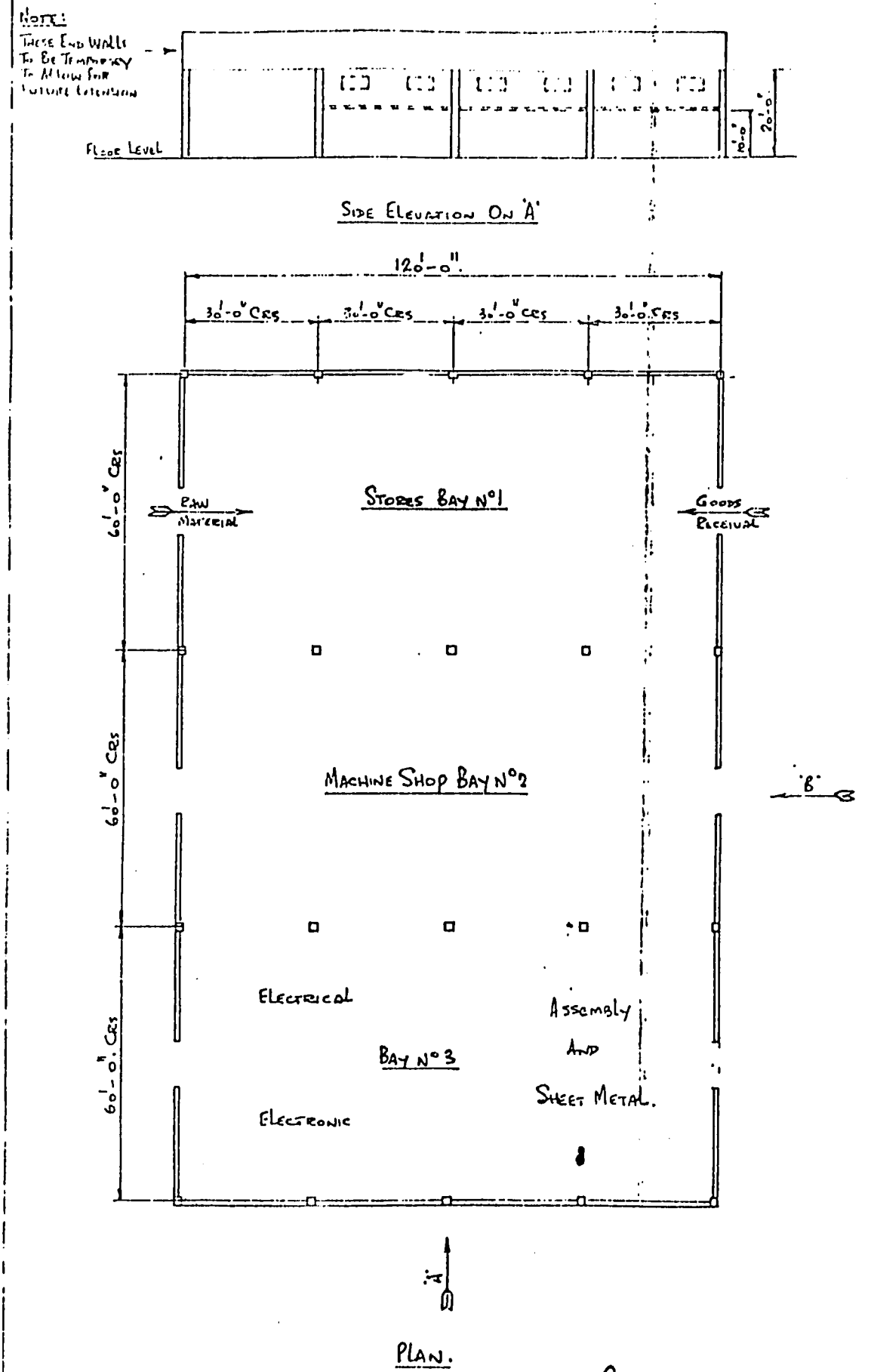
MEZZANINE FLOOR OVER BAY 1

PROPOSED BUILDING FOR THE CENTRAL HOSPITAL MAINTENANCE UNIT CENTRAL WORKSHOP, AT MARCUS GARVEY DRIVE, ADJACENT TO ISLAND MEDICAL STORE

NOTE :- BAY N°2 IS ALREADY IN EXISTENCE

(PREPARED BY A. WALTON, UNDP/JAMAICA)

FIGURE 3(a): CENT. MAINT. WORKSHOP



PLAN.

BEST AVAILABLE DOCUMENT

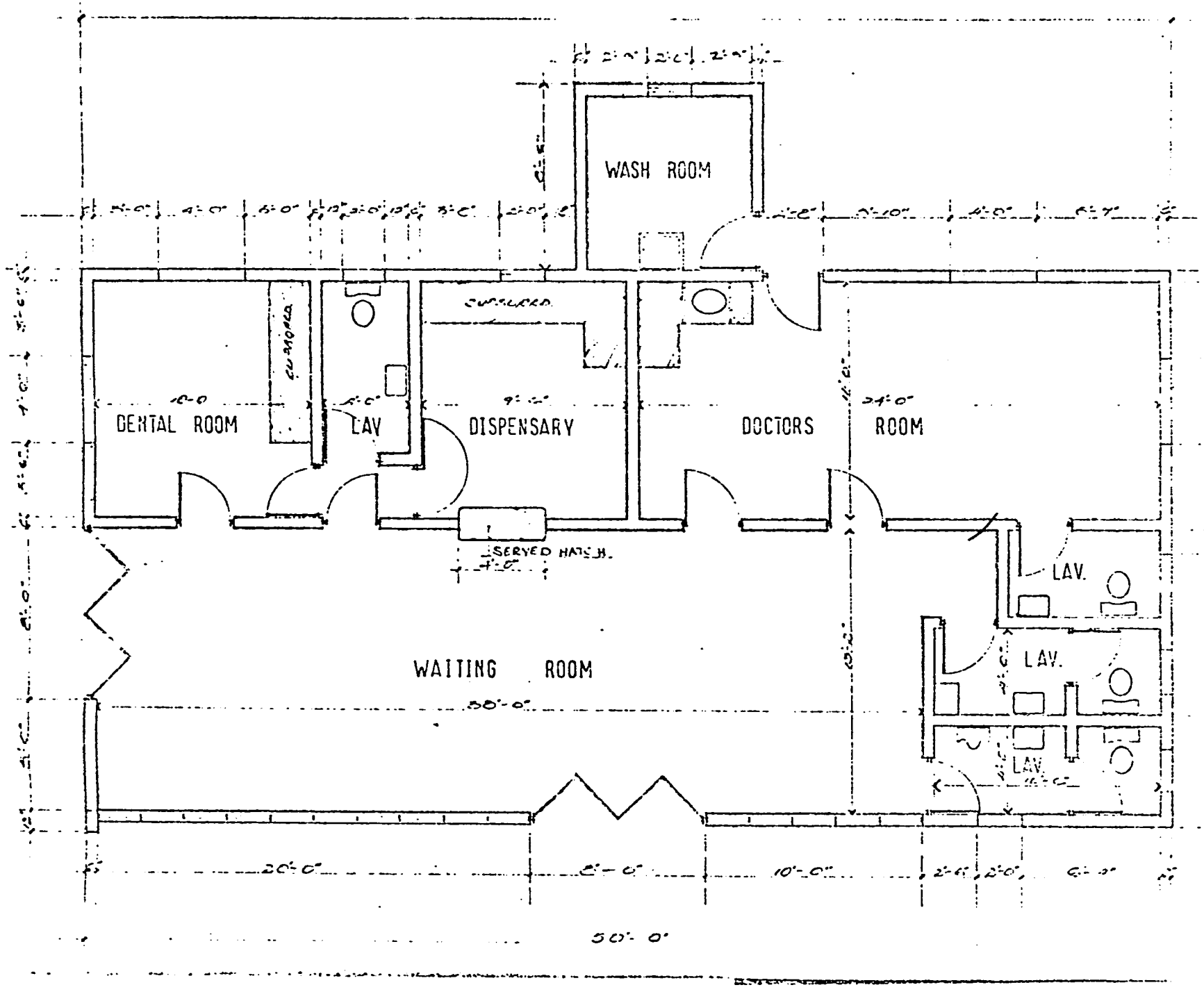
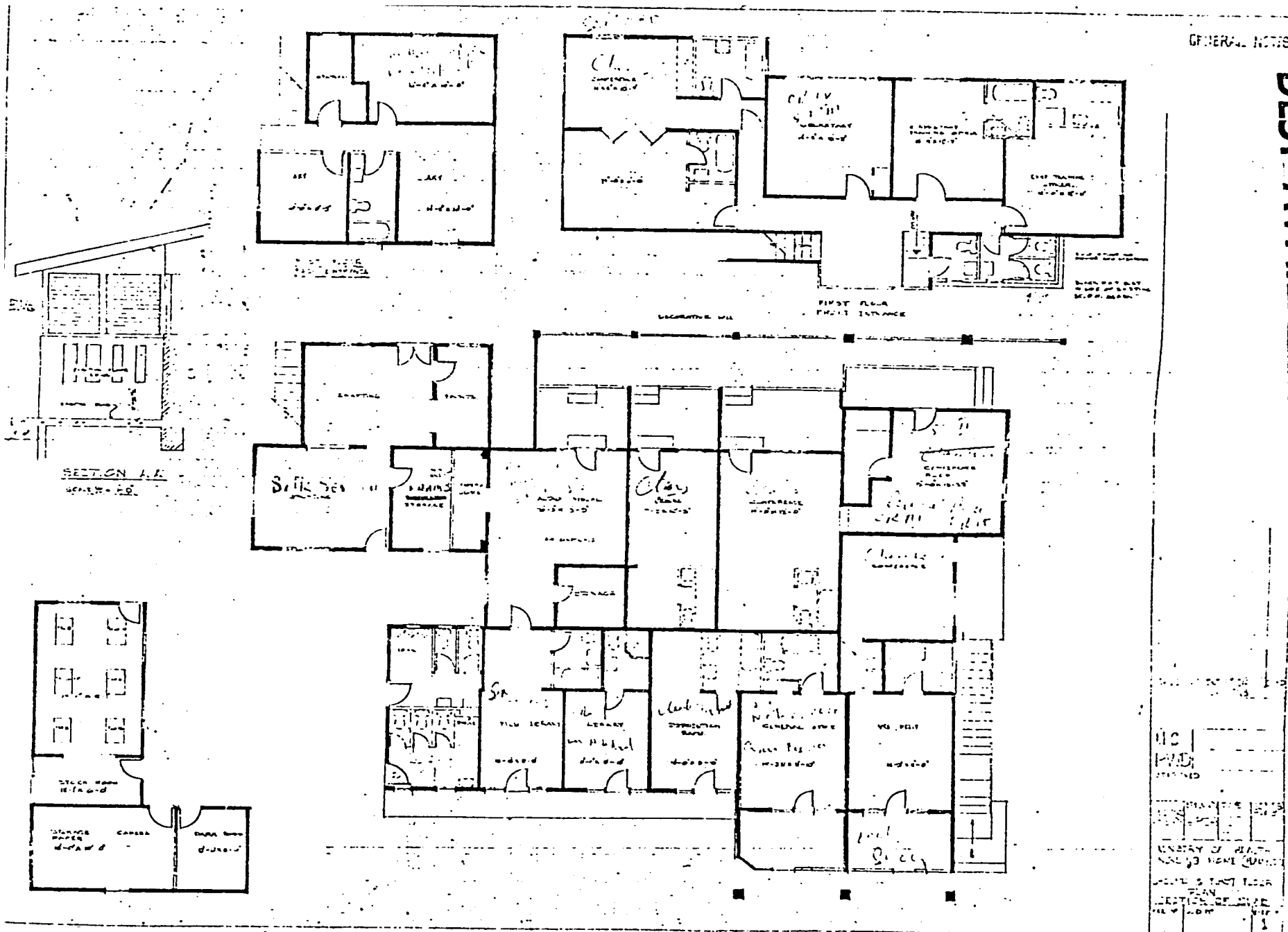


FIGURE 1. HEALTH CENTER PLAN

4

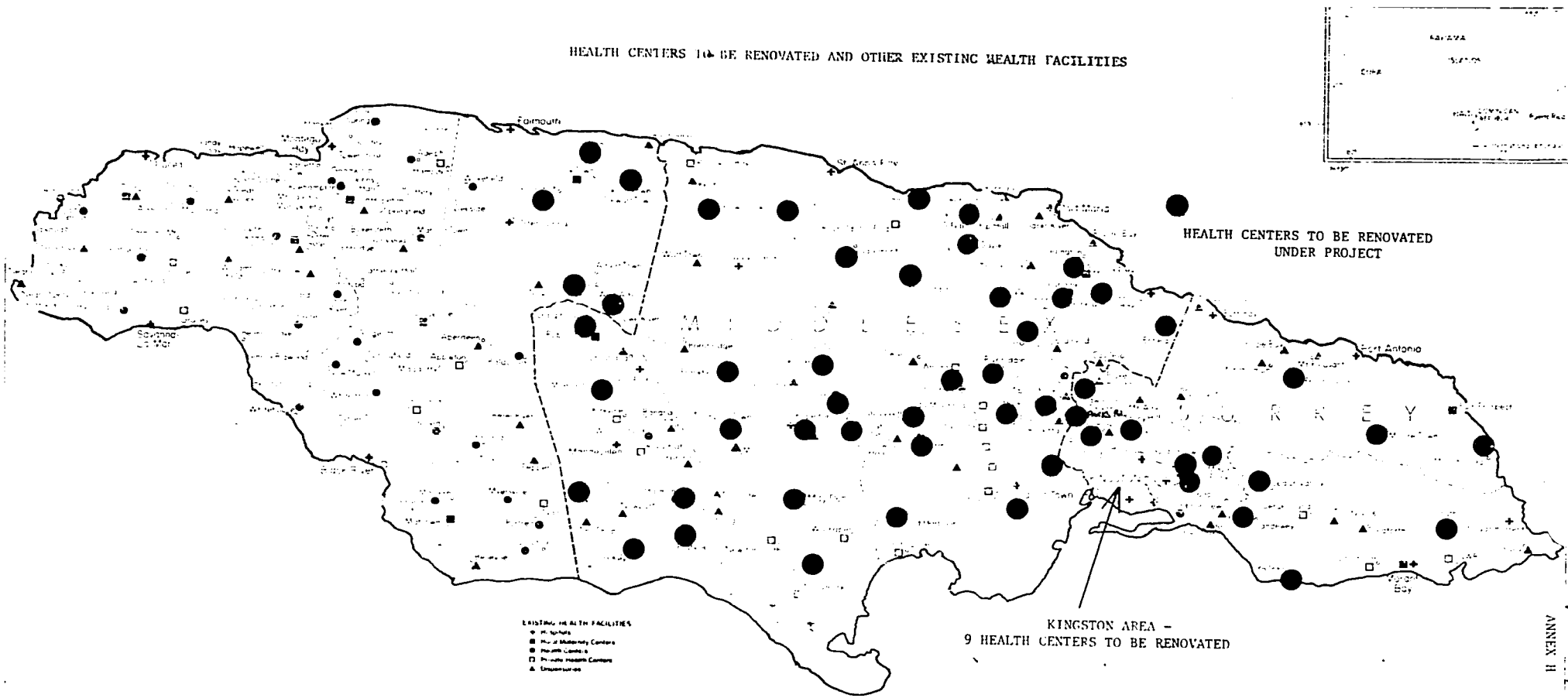
BEST AVAILABLE DOCUMENT

ANNEX G



TRAINING CENTER.

HEALTH CENTERS TO BE RENOVATED AND OTHER EXISTING HEALTH FACILITIES



Annex H

ANNEX H

ANNEX H

MINISTRY OF HEALTH

Names of Health Centres to be Renovated

Kingston

1. Rollington Town Health Centre
   37A Giltress Street,
   Kingston 2.
   Tel. 928 -1310.

2. Olympic Gardens Health Centre
   Corner Olympic Way & Seaward Pen Road,
   Kingston 11.
   Tel. 923-7474.

3. Trench Town Health Centre,
   West Road,
   Kingston 14.
   Tel. 923-6459.

4. Denham Town Health Centre,
   19 Wellington Street,
   Kingston 14.
   Tel. 923-8643.

5. Norman Range Health Centre
   Range Crescent,
   Kingston 2.
   Tel. 928-1133.

6. Edna Manley Health Centre
   35 Grants Pen Road,
   Kingston 8.
   Tel. 924-1120.

7. Hagley Park Health Centre
   118 Hagley Park Road,
   Kingston 11.
   Tel. 923-6688.

8. Waltham Park Health Centre
   25 Alexander Road,
   Kingston 13.
   Tel. 933-7568.

9. Glen Vincent Poly-Clinic
   3 Trevennion Park Road,
   Kingston 5.

St. Andrew

10. Dallas Health Centre.

11. Lawrence Tavern Health Centre.

12. Mavis Bank Health Centre.

13. Parks Road Health Centre.

14. Red Hills Health Centre.
    Tel. 944-2492.

15. Stony Hill Health Centre.
    Tel. 942-2356.

16. Gordon Town Health Centre.
    Tel. 937-7926.

Port Antonio

18. Moore Town Health Centre (Portland

19. Fruitvale Health Centre

20. Manchioneal Health Centre

St. Thomas

21. Bath Health Centre

22. Cedar Valley Health Centre

23. Yallahs Health Centre

24. Llandeway Health Centre

ST. MARY

25. Enfield Health Centre

26. Islington Health Centre

27. Highgate Health Centre
Tel. 992-2282.

28. Gayle Health Centre.

29. Retreat Health Centre.

30. Guys Hill Health Centre

31. Belfield Health Centre.

ST. ANN

32. Ocho Rios Health Centre

33. Moneague Health Centre

34. Bamboo Health Centre

35. Claremont Health Centre
Tel. 972-3231.

36. Brown's Town Health Centre
Tel. 975-2338.

TRELAWNY

37. Dewar Health Centre
(Duncans)
Tel. 954-3420.

38. Duavale Health Centre.

39 Worsop Health Centre

40. Wait-a-Bit Health Centre.

41. Jackson Town Health Centre.

MANCHESTER

42. Craighead Health Centre

43. Lincoln Health Centre

44. Harmons Health Centre

45. Crofts Hill Health Centre

46. Cross Keys Hill Centre.

MANCHESTER Cont'd.

47. Pratville Health Centre

48. Mile Gully Health Centre

CLARENDON

49. Frankfield Health Centre

50. Thompson Town Health Centre

51. Kellitts Health Centre

52. May Pen Health Centre
Tel.986-2289.

53. Chapelton Health Centre.

54. Hayes Health Centre.

ST. CATHERINE

55. Point Hill Health Centre

56. Watermount Health Centre

57. Old Harbour Health Centre

58. Sligoville Health Centre

59. Linstead Health Centre
Tel. 985-2203.

60. Glengoffe Health Centre

61. Harker's Hall Health Centre

62. Riverdale Health Centre

63. Troja Health Centre

64. Connor's Health Centre
(Ginger Ridge).

65 Caymanas Park Health Centre

JOB DESCRIPTION

MEDICAL SUPPLY EXPERT

QUALIFICATIONS:

At least five years direct experience in public sector commodity procurement with substantial work in international procurement and transactions, experience with AID-financed host country procurement strongly preferred; minimum of three years direct experience in the procurement of medical equipment and supplies and in the design or administration of major multi-unit medical supply systems; significant experience in setting up training programs in supply management and in providing training; overseas experience, particularly in less developed countries, strongly preferred; minimim of bachelor's degree academic qualifications in a relevant field, such as, health administration or management, business administration, public administration, accounting, law, etc.

DUTIES:

Assure preparation of AID-approved documentation, procurement and delivery of first major commodity package and assure delivery and installation of equipment and supplies as necessary;

Assure preparation of AID-approved documentation for second major commodity package;

Co-ordinate, monitor and assist with off-shelf and ad hoc procurement and continuously refine list of commodities to be procured under the Project;

With maximum practicable consultation with GOJ officials, study, evaluate and prepare a written report on the MOH supply management system, including procurement storage, inventory control, record keeping and distribution, with report to contain recommendations for improvement to be developed for GOJ concurrence and actively assist in implementing such improvements;

Design and assist MOH in implementing a supply management training program for all supply personnel and for all other staff having a need for familiarity with the supply system, conduct short courses for supply specialists, intensive training of four trainers, and several pilot short courses for other categories of MOH personnel;

Through on the job training refine skills of two MOH officers to enable them to assume his responsibilities upon his departure, including procurement, supply system design and management, and operation of the training program.

Through the Project Manager sumbit to the MOH and AID summary monthly status reports on all activities and in-depth quarterly reports.

Approximate Duration: 12 PM.

JOB DESCRIPTION

MANPOWER DEVELOPMENT PLANNING & TRAINING SPECIALIST

QUALIFICATIONS:

At least five years direct experience in the development and use of manpower inventories, development of health training plans and the development and conduct of inservice health training programs; overseas experience particularly in less developed countries is preferred; minimum of master's degree academic qualification in a relevant field, such as Manpower Development & Training, Health Education, Curriculum Development, Health Planning, Education etc..

DUTIES:

Assist and advise the Chief and Training Staff of the Training Branch and the Chief and planning staff of the Planning and Evaluation Unit in the refinement and interpretation of the manpower inventory and in performing 'needs assessments' to determine manpower training needs and necessary recruitments;

Provide guidance and assistance to training organizations in the development of long term manpower training programs to encompass all levels and categories of MOH staff.

Assist in the development and performance of inservice training programs;

Through the Project Manager submit to the MOH and AID summary monthly status reports on all activities and in-depth quarterly reports.

Approximate Duration: 12PM

JOB DESCRIPTION

SUPPLEMENTARY FEEDING PLANNER

QUALIFICATIONS:

At least 3 years experience in the field of nutrition and supplementary feeding programs with substantial experience in logistics and distribution; minimum academic qualifications of a bachelor's degree in a relevant field, such as, nutrition, public health management or administration, etc.

DUTIES:

Design the evaluation of the national supplementary feeding program to take place in the first year of the Project; the evaluation will include interviews with beneficiaries to provide information for re-design of outreach techniques, ration size and composition; structured group interviews among parish level personnel involved in the program will also be conducted as part of the evaluation;

Assist in the re-design of the supplementary feeding program based on the first evaluation's findings;

Suggest and design pilot level program innovations;

Design the second evaluation which is to take place in the fourth year of the project to determine the effect of the re-design and innovations;

Conduct in-country training for MOH personnel involved in supplementary feeding program planning and management, training will focus on food logistics and record-keeping;

Through the Project Manager submit to the Ministry of Health and AID regular status reports on all activities.

Approximate Duration

5 PM. (Year 1, 3 pm; Year 2, 1 pm; Year 4, 1 pm).

JOB DESCRIPTION

EDUCATIONAL MATERIALS DEVELOPMENT SPECIALIST

QUALIFICATIONS:

At least three years experience in the field of public health education with a special familiarity with mass media techniques, including print, radio and slides; minimum academic qualification of a bachelor's degree in a relevant field such as public or health education, communication, etc., experience in health or nutrition mass media campaigns is essential;

DUTIES

Assist the Nutrition Unit in development of materials for the nutrition education campaign; the campaign will have four themes or messages (breast-feeding, proper weaning practices, nutrition for pregnant and lactating women, and child feeding practices); types of materials will include radio, flip charts, brochures, slides, posters, and photonovels;

Advise the Nutrition Unit in the pre-testing, revision and final production and distribution of the materials;

Assist the Nutrition Unit in the preparation of instructional guides for nutrition personnel on each of the four themes;

Design a pilot activity for community-based educational materials production and propose other community based activities to supplement the national program;

Submit a final report of activities through the Project Manager to the MOH and AID outlining the status and progress on all activities.

Approximate Duration:

3 PM

JOB DESCRIPTION

MATHEMATICAL STATISTICIAN & SAMPLE DESIGN SPECIALIST

QUALIFICATIONS:

At least five years direct experience in mathematical statistics and sample design activities; minimum three years experience in survey design and methodology with specific reference to the health field; ability to conduct inservice training in sample designs is essential; overseas experience particularly in less developed countries strongly preferred; minimum of Bachelor's Degree academic qualifications in a relevant field such as mathematics, statistics, economics research etc.

DUTIES

Develop the design for "inclinic surveys" of Medical Records;

Develop sample design and associated procedures for the conduct of surveys;

Develop estimation procedures relevant to surveys;

Through on-the-job training prepare selected members of the H.I.S. Division to gain skills in estimation procedures associated with surveys;

Assist in arranging for anticipated 2.25 person years of loan financed overseas training for 5.5 personnel;

Through the Project Manager submit to Ministry of Health and AID summary monthly status reports on all activities and in depth quarterly reports.

APPROXIMATE DURATION: 7 PM.

JOB DESCRIPTION

DATA PROCESSING, PROGRAMMER AND SYSTEMS ANALYST SPECIALIST

QUALIFICATIONS:

At least five years direct experience in data processing and systems analysis with minimum of three years direct experience in statistics and management information systems; ability to conduct training in data processing and systems analysis is essential; overseas experience particularly in less developed countries strongly preferred; minimum of bachelor's degree academic qualification in a relevant field, such as, computer science or in the social sciences which provided data processing and systems analysis as a supplement to studies in business administration, public administration, statistics, etc.

DUTIES

Advise and assist in the development of a model for Health Information Systems;

Assist in the examination of the existing Health Information System to determine usefulness and limitations and to relate it to the information needs of management;

Participate in identification of management information needs and develop information system procedures for achieving those needs;

Advise on the development of data collection procedures, data analysis procedures and data processing components of the Health Information System;

Through on-the-job training prepare selected members of H.I.S. Division to perform above functions;

Through the Project Manager submit to Ministry of Health and AID summary monthly status reports on all activities and in depth quarterly reports.

APPROXIMATE DURATION: 14 PM.

JOB DESCRIPTION

SURVEY & QUESTIONNAIRE DESIGN SPECIALIST

QUALIFICATIONS:

At least three years experience in questionnaire design and survey implementation; overseas experience particularly in less develcped countries strongly preferred; minimum of bachelor's degree academic qualifications in a relevant field such as sociology or statistics, etc.

DUTIES

Advise and assist the staff of the H.I.S. Division in the development of questionnaires for inclinic surveys of medical records;

Develop procedural manuals for data collection for health information system;

Develop coding and editing procedures relevant to surveys;

Through on the job training prepare selected members of the H.I.S. Division to equip them to assume his responsibilities upon his departure;

Through the Project Manager submit to the Ministry of Health and AID summary monthly status reports on all activities and in depth quarterly reports.

APPROXIMATE DURATION: 6 PM

JOB DESCRIPTION

DATA ANALYST & INTERPRETATION SPECIALIST

QUALIFICATIONS:

At least five years experience in data analysis and interpretation for public health information systems; minimum of bachelor's degree academic qualification in a relevant field, such as, research sociology, public administration, health administration, statistics, etc.

DUTIES

Develop procedures for analyzing results of inclinic survey of medical records, including development of specifications for tabulating results;

Coordinate, monitor and assist staff of the H.I.S. Division in the analysis and interpretation of data;

Train selected members of staff in data analysis and interpretation;

Through the Project Manager submit to Ministry of Health and AID summary monthly status reports on all activities and in depth quarterly reports.

APPROXIMATE DURATION: 8 PM.

JOB DESCRIPTION

HEALTH MANAGEMENT ADVISOR

Qualifications

At least five years senior level experience in health management and organization, some of which has been in lesser developed countries. Overseas experience required. Masters degree required in health planning and administration, medical care organization, public health administration on related field, demonstrated ability to work well with foreign nationals in a complex organizational environment.

Duties

To advise the Project Director (Principal Medical Officer for Primary Care) and Permanent Secretary on all aspects of health management and organization as it relates to improving the efficiency and effectiveness of the primary health care delivery system.

To advise and support the project coordinator on the development of effective systems and approaches to project management and implementation.

To coordinate all external project technical assistance inputs, and serve as chief technical external advisor for the Project.

To assist the Project Director in preparing reports, training schedules, and other documents as required for submission to USAID.

To advise other component heads on management issues as they affect project implementation in their divisions.

To assist the staff of the Project Implementation Unit and other Ministry Units in assuming timely procurement of goods and services under the project.

ANNEX I

JOB DESCRIPTION

HEALTH PLANNER

Qualifications

At least five years senior level experience in national health planning evaluation and management. Such experience should includd demonstrated competence in intra-organizational development. Overseas experience in less developed countries required; minimum of a master's degree academic qualification in health planning or a related field is required.

Duties:

To advise, assist and support the Chief and staff of the Planning and Evaluation Unit in the development, implementation and evaluation of health policies and plans.

To advise on the utilization of data generated from the health information system for both long-range planning purposes and ongoing program management.

To advise on strategies for optimum use of scarce manpower resources.

In close consultation with the Implementation Unit, to assist in the identification and design of special studies and surveys which will provide information relevant to planning and evaluation of the Health Management Improvement Project.

To assist in the evaluation of the JPP II project to determine lessons learned of importance to the implementation of the Health Management Improvement Project.

To advise Parish Medical Officers of Health and other Parish and central Ministry Personnel responsible for ongoing program planning in their divisions on planning methods and applications and to assist in the development of appropriate mechanisms for coordinating planning at all levels in the MOA.

To assist in the coordination of health planning with the National Planning Agency to ensure consistency with national goals and priorities.

Preliminary Data for an Assessment of MOHSS's Supplementary Feeding Program[1/]

A. Planned Objectives, Targets:

1. Provide a supplement of 4 lbs. per month to the diets of seriously malnourished children (Gomez scale, Grades II and III);
2. Provide a supplement of 2 lbs. per month to marginally malnourished children (Grade I) and those of normal status who are losing weight;
3. Provide a supplement of 4 lbs. per month to all under nourished nursing mothers.

B. Organizational Structure

1. Administrative. The Nutrition Division is responsible for determining and aggregating requirements for supplementary foods by clinic and parish. The national level aggregations are used as the basis for MOHEC's annual submission to the Ministry of Finance requesting procurement of foods. Breakdowns are used by the Child Feeding Service (of MOHEC) to program deliveries.

1/ Format followed here is that suggested by Nancy Fox in the annex to her report

Food shipments are arranged by the Ministry of Finance. When the food arrives at the port, the Central Food Organization handles the receiving, arranges for inspection and moves the commodities from the wharf to its three central warehouses. From these, food is distributed to all requesting agencies, the primary recipients being MOHEC and the Ministry of Education. MOHEC allotment is transported by the Child Feeding Services to its manual packaging center or to the Jamaica Nutrition Holdings' mechanical packaging plant where food is re-packaged into 2 or 4lb bags. The mechanical plant has about four times the capacity of the manual operation. The re-packaged food is then transported by the Child Feeding Services to MOHEC's regional warehouses in Williamsfield, Falmouth and Port Antonio From these warehouses (and for some locations, directly from the Child Feeding Service's central plant) the food is delivered to clinics. Child Feeding Services currently has two of its own trucks but also routinely contracts additional transport. Clinic personnel are responsible for clinic-level storage and distribution to beneficiaries.

2. Financial. Funds are allotted in the national budget for the purchase of imported food commodities and for the logistical support (primarily packaging and transport) for food distribution. The Ministry of Finance handles disembarkation, inspection and wharf storage processes and costs. The Child Feeding Program, which has its own line item in the National budget, handles

repackaging, storage and transport costs and procedures.

C. Actual Program Inputs

1. Types of food used: Currently all food used in the MOHEC program is imported, either through PL480 Title I purchases or donations from the European Economic Community (for which the GOJ pays international transport costs as well as provide for internal logistics).

Title I foods include CSB, Bulgher and dry soy fortified flour (SFF). EEC provides dry skim milk (DSM) and cornmeal and buttermilk.

2. Ration per beneficiary:

a. Clinics provide the rations in dry form and in bulk (i.e., a month's ration) to the beneficiaries.

b. Depending on the category of beneficiary (See A), each participant receives either 2 lbs. or 4 lbs. of food per month, packaged in two-pound bags. Ration composition depends on available stock in the clinic which is very irregular; guidelines state that a mix should be provided when available.

A two pound ration per month represents 30 grams per day; four pounds represents 60g per day.

c. Using an average value (for CSM, WSB, DSM) of 360kcal/100g and 15g protein 100g, the 2 lbs. monthly ration provides 108 calories/day and the 4lb. ration, 216 calories. The two rations represent 4.5 and 9 grams of per day respectively.

d. All food is given out in dry form and taken home for preparation and consumption.

e. The following table illustrates the percent each ration represents of daily requirements for calories and protein for different types of beneficiaries. (Values and requirements are taken from CFNI calculations and recommendations for the Caribbean region.

Age Group	2lb Ration		4lb. Ration	
	Calories	Protein	Calories	Protein
6 mo. - 3 years	11%	20%	22%	40%
4 - 6 years	8%	19%	16%	38%
pregnant women	4%	9%	8%	18%

f. Two and four pound rations are to be given out monthly to each beneficiary according to criteria explained in Section A of this annex. In practice, the norms are not always followed, ad hoc decisions on ration size based more on food availability, subjective perception of need, etc. rather than the criteria outlined above.

3. Clinics generally do not have special areas or equipment for storing the supplementary food. Transportation needs fluctuate with arrival and processing of shipments. At peak times it is totally inadequate for effecting timely deliveries island-wide. Non-delivery due to mechanical problems are not uncommon, however, personnel problems, also have a negative impact.

For many clinics located on non-major roads, deliveries simply are not made; someone in the public health system must pick up food supplies from a more

convenient (from the trucking perspective) place such as a neighboring clinic.

On the otherhand, it is reported that when other divisions in MOHEC need to "borrow" transportation, Child Feeding Service trucks are often available, due to slack delivery periods in the food program

D. Description of Target Groups Reached

Since records are not kept on either number or types of beneficiaries, actual figures are not available.

1. Projected beneficiary levels for 1980 are as follows:

Children 5, Grade II or III malnourished	9,185
Children 5, Grade I malnourished or normal	105,625
Pregnant women	38,170
Total	152,980

2. Target age groups are the under five population, pregnant and lactating women. Economic need is commonly cited by field staff as a criteria for recipients and ration size but no established norms exist; decisions are subjective and vary according to individuals and locality.

3. A complete list of clinics is not being attached. Nutrition Department files have listings as of March, 1979, detailing requested monthly deliveries by clinics. The number of clinics per parish in the thirteen parishes varies from 8 to 32.

(In the Cornwall region, deliveries for all five parishes are made to a central location; the Nutrition

Division files do not have clinics delivery lists for Westmoreland and Trelawney).

No recent statements of actual deliveries by Child Feeding Services are available for 1979. Files do indicate that such statements were available for some earlier years.

E. Financial Analysis

1. Cost data thus far available is illustrative rather than comprehensive. Using figures for 1977-79, MOHEC's supplementary feeding program costs are estimated at $1,143,000; over one-half of that amount is expended for food commodities paid for in foreign exchange (a fact of no minor importance for Jamaica given its current precarious Balance of Payments status). The Child Feeding Service's budget is approximately $200,000, the remaining expenditures is for administrative and operational expenses of the program. Specific figures for transportation, storage, and other categories were not readily available.

2. Assuming a similar cost structure for 1980 program expenditures [1/] and the estimated number of beneficiaries, 152,980, cost per participant would be $7.47. The determination of how expensive or inexpensive that cost is depends on what the expenditures brings in terms of benefits. Cost per beneficiary is a slippery notion, varying with the

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[1/] See, for example, Selowsky and Taylor "The Economics of Malnourished Children" and Selowsky "An Attempt to Estimate Rates of Return to Investment in Infant Nutrition Programs"

definition of the term beneficiary: the total number who receive food aid; only actual participants who are also intended participants (i.e., who meet the age, nutrition and physical status criteria for program participation) or "benefitted" participants, defining an ecceptable measure for nutrition status improvement.

3. Food, as well as packaging, is provided free of charge to to all beneficiaries of MOHEC's program.

F. Cost Benefit and Cost-Effectiveness Analysis

Cost benefit analysis is problematic for maternal child feeding programs. Some researchers have attempted to quantify benefits in terms of increased future earnings of children protected from irreparable impairment of their mental and physical development.[1/]

In the case of Jamaica, currently available data would permit neither cost/benefit nor cost-effectiveness analysis. However the issue of cost-effectiveness provides a very useful framework for examining some program design issues related to costs.

As discussed earlier, cost per beneficiary depends on how the latter term is defined; in strict terms, a beneficiary would be someone who 1) met program criteria, 2) actually participated in the program and 3) improved or maintained his/her nutritional status. The cost-effectiveness of the program should then be calculated in terms of unit cost per target

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1/ Selowsky and Taylor "The Economics of Malnorished Children" and Selowsky "An Attempt to Estimate Rates of Return to Investment in Infant Nutrition Programs"

recipient whose nutrition status was positively affected rather than unit cost per person receiving food supplementation. The unit cost of the first, except in an unusually well-designed and executed program, is likely to be several times the unit cost in the latter case.

Two phenomena significantly affect program cost-effectiveness and need to be accounted for in program design. The first is the "substitution" effect, that is when food supplements are used as a replacement rather than an addition to the recipient's normal diet. The second is the "dilution" effect, the not uncommon case where the recipient's ration may be shared by one or several other persons. Therefore a daily ration intended to provide 216 calories to the target child, if shared with his 4 siblings, would mean an increased intake of 43 calories for that child (and be far less meaningful as a contribution to closing the "calorie gap" in the child's diet).

ESTIMATED IMPLEMENTATION SCHEDULE:

MAJOR ACTIONS	ESTIMATED MONTH	RESPONSIBLE ORGANIZATION(ε)
Project authorized and funds allotted	0	AID/W
Project Agreement Signed	1	USAID/J: GOJ
MOC and NDA begin A&E work	2	GOJ
Implementation Letter No. 1 Issued	2	USAID/J
Baseline Survey Initiated	2	USAID/J; GOJ
RFTP for Training Center A&E prepared and approved	2	GOJ, USAID/J
Procurement Documentation for Initial HIS T.A., Health Systems Management Expert/Medical Supply Expert Completed	3	GOJ
Proposals received for Training Center A&E	3	
C.P.'s to Initial Disbursement satisfied	3	GOJ
Training Center A&E Contract Awarded	4	
Project Implementation Unit established and staffed	4	GOJ
Arrival of Health Systems Management Advisor	5	
A&E Design and Tendering Work Completed	6	
Procurement Documentation for Health, Manpower Specialist and Nutrition Planner completed	6	GOJ
Training Center A&E Contract Awarded	6	
Procurement and documentation for first group of commodities prepared and approved	6	GOJ, USAID/J
IFB issued for 17 HC, CMW and TC	7	
System for development of Training Plan established	7	GOJ
Initial HIS T.A. personnel and Medical Supply Expert begin work	7	GOJ

MAJOR ACTIONS	ESTIMATED MONTH	RESPONSIBLE ORGANIZATION(s)
Bids/Offers received for first group of commodities	8	
Health Manpower Specialist and Nutrition Planner begin work	9	GOJ
Bids received and contracts awarded on initial IFBs	9	
Contracts awarded for first Commodity Procurement	9	GOJ, USAID/J
PIO/T's for short term overseas training completed	9	USAID/J
Procurement documentation for Educational Materials Specialist, local artist and radio script preparation completed	9	
Manpower Inventory institutionalized	12	GOJ
Training, Committee functioning	12	GOJ
15 HC's completed	12	
CP for multi-year building maintenance plan satisfied	12	
Contracts awarded for 22 additional HCs	12	
First evaluation (internal) completed	12	USAID/J
Educational Materials Specialist begin work	13	GOJ
Monthly Clinic Summary reporting system operating in all PHC service areas	14	GOJ
Local artist and radio script preparation begin work	14	GOJ
First Group of Commodities received	14	
Sample Surveys 1 and 2 of Health Center Patient Records conducted	15	GOJ
Supplementary feeding evaluation redesign completed	16	USAID/J, GOJ
Special Project Evaluation Initiated	16	USAID/J, GOJ
Procurement Documentation prepared and approved for Second Group of Commodities	18	GOJ

MAJOR ACTIONS	ESTIMATED MONTH	RESPONSIBLE ORGANIZATION(S)
Major nutrition public education campaign started	18	GOJ
All required SIS and Training Branch personnel on staff	18	GOJ
Special Project Evaluation Completed	18	USAID/J, GOJ
2 HC's, CMW and TC completed	19	GOJ

MAJOR ACTIONS	ESTIMATED MONTH	RESPONSIBLE ORGANIZATION(S)
Bids/Offers received for Second Group of commodities	20	
Contracts awarded for Second Group of commodities	22	GOJ/USAID/J
22 Additional HC's completed	24	GOJ/USAID/J
Contracts awarded for 26 additional HC's	24	
Nutrition Education Themes 1 and 2 completed and distributed	24	GOJ
Second Annual Evaluation (external) completed	24	USAID/J
Procurement documentation for Third and Final Group of commodities prepared and approved	25	GOJ, USAID/J
Second Group of commodities received	27	
Bids/Offers received for Third Group of commodities	27	
Contracts awareded for Third Group of commodities	28	
Multi-purpose manual in nutrition for MOH Public Health personnel developed, tested, produced and distributed	30	GOJ
Third Group of Commodities Received	33	
All construction/renovation work completed (26 additional HC's)	36	GOJ
Nutrition education themes #3 and #4 developed, tested, produced and distributed (multi-media)	36	GOJ
Third annual evaluation	36	GOJ
Decision on whether to prepare PID for follow-on project	36	USAID/J
All HIS training completed (in-country and overseas)	40	GOJ
Completion of End of Project Report (evaluation)	48	USAID/J
PACD	48	

PROCUREMENT PLANNING

A. Commodity Procurement.

AID-financed commodities will be procured in accordance with the host country contracting procedures and requirements set forth in detail in Chapter 3 of AID Handbook 11 (HB 11). The MOH and the Supply Division, the GOJ central purchasing organization attached to the Ministry of Finance, have worked with this AID guideline in the past and have recently reviewed its application to this particular project. Copies of Chapter 3 will be formally provided to the MOH and Supply Division as an attachment to Implementation Letter No. 1, the text of which will also explain the application of AID requirements.

Standard GOJ procurement procedures, which are not substantively at variance with AID requirements except as to such special concerns as source/origin, cargo preference, AID approvals, etc., will be followed.

The Project Implementation Unit (PIU) principally through its procurement specialist, accounting personnel, and staff engineers, will coordinate, schedule and arrange for the general initiation of commodity procurement. Following standard GOJ practice it will issue requisitions to the Supply Division for the initiation of procurement actions.

The Supply Division will carry out formal bidding procedures and negotiated procurement as permitted by HB 11 for particular transactions. In addition to preparing requests for quotation and conducting negotiation, it will prepare IFB packages including terms and conditions and specifications using the technical personnel, e.g., pharmacists, on its staff. Technical expertise not available in-house will be obtained from the Ministry of Health and the engineering staff of the Ministry of Construction.

Procurement publication procedures and content, contract and IFB packages, bid analyses and proposed contract awards will be submitted by the Supply Division to AID for advance approval as required under HB 11. The Supply Division and PIU will consult and communicate regularly on procurement activity.

To the maximum practicable extent imported commodities to be procured in the first, second and third years of the Project, as indicated in Annex B-1, will be consolidated, respectively, into packages to enable the preparation of a major IFB in each of those years. The IFB packages will be sub-divided into commodity groups and suppliers will be permitted to bid on one or more groups. The Supply Division has already developed preliminary commodity groups for bidding purposes. The estimated dates for this preparation of IFB packages, the award of contracts and the receipt of the major commodity packages are contained in the estimated implementation schedule in Annex K.

Transactions in the categories of small value and off-shelf procurement will be negotiated by the Supply Division subject to and as permitted by HB 11.

The Supply Division will arrange for port clearance of imported commodities and for direct delivery of commodities to the MOH Island Medical Stores.

The medical supply expert who will provide one year of training and technical assistance in supply management early in the Project will also be responsible for assisting with initial AID-financed commodity procurement and the preparation of AID approved procurement documentation, as specified in the draft job description in Annex I.

B. Procurement of Renovation, Construction and A&E Services

AID-financed construction and engineering services will be procured in accordance with host country contracting procedures set out in detail in Chapter 2 of HB 11 and with standard GOJ procedures. The PIU, principally through its engineering assistant, and the MOH staff engineer will have a general management, over-all monitoring and motivational role. This will not be a detailed management, administrative or procurement role.

(i) The major renovation of the Spanish Town and Trench Town PHC Centers and the construction of the Central Maintenance Workshop (CMW) are expected to be completed prior to the 19th month of the Project.

A&E design services and IFB (tendering) services will be provided by the Technical Services Directorate of the Ministry of Construction (MOC). This organization is described in the Engineering Analysis.

A&E designs, publication procedures and content, prequalification, contract and IFB packages, bid analyses and proposed contract awards will be submitted to AID for advance approval as required by HB 11.

Construction supervision, including quantity survey services and approval of payments, will be provided by the Construction Directorate of the MOC, which is also described in the Engineering Analysis.

It is estimated that contracts will be awarded for the physical works prior to or in the 9th month of the Project. Code 941 and local firms will be eligible for the contracts. However, as indicated in the Implementation section, eligibility of Code 941 firms may be limited to those operating in Jamaica, if appropriate for the estimated size of the contracts and if consistent with current AID policy.

(ii) Renovation of the Training Branch/Materials Production Center is scheduled for completion prior to the 19th month of the Project.

A&E design services will be provided by a private firm under contract with the MOH.

A subsequent contract for IFB (tendering) services and construction supervision will be awarded to a private A&E firm. With the concurrence of AID and subject to compliance with applicable AID rules and procedures, this contract may be awarded on a non-competitive basis to the firm which performed the A&E design.

As in the case of the renovation of the Spanish Town and Trench Town Centers and the construction of the CMW described above, the MOH will submit documentation and procedures for the procurement of renovation services for the Training Branch for advance AID approval as required by HB 11. Local and Code 941 firms will be eligible for contract awards with the possibility that Code 941 eligibility may be limited to firms operating in Jamaica.

It is estimated that a contract will be awarded for the physical renovation of the Training Branch prior to or in the 9th month of the Project.

(iii) The minor renovation of 63 PHC Centers is scheduled for completion by the 36th month of the Project. The Centers are in varying stages of deterioration and the work required at the different sites varies considerably. The renovation and refurbishing work to be performed by local contractors will generally require limited or no technical engineering design but will call for substantial management and procurement services for the large number of small contracts among the 63 dispersed sites.

The GOJ's National Development Agency, a very effective organization in the Mission's view which is described in the Engineering Analysis, will provide such A&E design services as may be necessary and will otherwise manage this activity in terms of procurement of services, construction supervision, approval of payments, etc. Where economies of scale can be obtained, the NDA will package work at several sites for contracting purposes.

Advance AID approval of procurement documentation will be obtained where required under HB 11. It is expected that advance AID approval of every small contract will not be required or appropriate, and that AID will approve a small value procurement procedure using purchase orders for selected work and thereafter monitor compliance by the NDA.

It is estimated that 15 PHC Centers will be started and finished in the first year of the Project, 22 in the second and 26 in the third.

C. Procurement of Technical Assistance Services

Except for the possibility of a PASA arrangement for technical assistance for the Health Information system and possibly the grant-funded health systems management expecialist, techical assistance personnel will be procured under host country contracting procedures in accordance with Chapter 1 of HB 11. Consistent with MOH desires to reduce costs through avoiding overhead and fee payments individual contracts with expatriate advisors will be utilized to the maximum practicable extent. Some preliminary identification of candidates for certain positions has now been performed my the MOH and AID. Draft job descriptions for the technical assistance positions are contained in Annex I.

Twelve person months (PM) of services of a Health Manpower Planning and Training Specialist are to start in or prior to the 9th month under an individual contract with an expatriate expert.

Forty-two person months (PM) of technical assistance for the health information system will be provided by a 5 person team starting in the 7th month of the

Project. These services will be provided under a competitively awarded contract with a health management consulting firm or institution or possibly under a PASA with the U.S. Bureau of the Census.

These services include:

Mathematical Statistician and Sample Design Specialist	6 PM
Data Processing Programming and Systems Analysis Specialist	10 PM
Survey and Questionnaire Design Specialist	5 PM
Data Analysis and Interpretation Specialist	6 PM

Twelve person months of services of a Medical Supply Expert are to start in the 7th month of the Project under an individual contract with an expatriate advisor.

The following services under individual contracts with advisors will be provided for the Nutrition Component:

Supplementary Feeding Planner (expatriate 5 PM), 3 PM starting in or prior to the 9th month and 1 PM in both the second and third years of project;

Educational Materials Development Specialist (expatriate), 3 PM starting in the 13th month;

Radio Script Preparation (local 8 PM) 4 PM starting in the 14th month, 2 PM in the third year, and 2 PM in the fourth year;

Educational Materials Artist (local 8 PM), 4 PM starting in the 14th month, 2 PM in the third year, 2 PM in the fourth year.

AID where necessary will act as disbursing agent for technical assistance contracts.

INITIAL ENVIRONMENTAL EXAMINATION

A. Project Location : USAID/JAMAICA

Project Title : Health Management Improvement Project

Funding (FY and Amount) : $7,200,000 Loan - FY 81

Life of Project : Four Years (FY80 - 83)

IEE Prepared by : William D. Jones/CRDO

Date : January 10, 1981

ENVIRONMENTAL ACTION RECOMMENDED : That this project receive a negative determination and that no additional environmental examinations be carried out in respect to it.

MISSION DIRECTOR'S CONCURRENCE : Glenn O. Patterson

Glenn O. Patterson
USAID/DIRECTOR/JAMAICA

ASSISTANT ADMINISTRATOR'S DECISION: APPROVED _____

DISAPPROVED _____

DATE _____

B. Description of the Project

The project is designed to strengthen the ability of the Ministry of Health (MOH) to plan, implement, and evaluate health care delivery programs and nutrition action programs in order to increase the efficiency, effectiveness, and equity of the health care delivery system in Jamaica. This will be accomplished through a comprehensive systems approach to institutional development. The project will provide support for training, technical assistance, facilities improvement, additional staff, supplies, and equipment to the MOH in (1) four key functional areas: manpower development and training; health information system development; equipment maintenance and supply management system development, renovation of PHC centers and (2) one priority program area: nutrition. Whereas all service programs within the MOH will benefit from the Project, the focus will be on primary health care. Emphasis will be placed on activities which upgrade and expand the provision of primary health care and nutrition improvement services to the rural population of Jamaica through the MOH integrated Primary Health Care system.

Five divisions/units within the MOH will play a major role in the Project: (1) Personnel (including the MOH Training Branch); (2) Statistics; (3) Health Services Administration: (4) Nutrition; and (5) Primary Health Care Services. Both short-term and long-term technical assistance will be provided to these divisions over the four years of the Project. Both long-term and short-term overseas training opportunities will be provided for personnel of the MOH in specialized courses. Almost all MOH staff will, in addition, participate in one or more in-service training courses to be conducted during the life of the Project. A large amount of supplies/equipment/vehicles will also be provided to the Divisions to assist them in carrying out the Project. A small number of staff will also be provided under the Project. In particular, a Project Implementation Unit consisting of a project manager, administrative assistant, financial officers, engineering assistant, procurement assistant and two secretaries will have full-time responsibility for the Project to ensure timely and efficient implementation. A major part of the Project is the renovation of 65 primary health care clinics, in addition to construction of the Central Maintenance Workshop and renovation of a Training Center.

C. Identification and Evaluation of Environmental Impacts

As an institutional development exercise, the Project will have no direct impact on the environment. The construction activities to be carried out in connection with the project, other than the substantial expansion of an existing structure to house the Central Maintenance Workshop, will consist of rehabilitating existing facilities, rather than engaging in new construction. The renovation work will be performed within the confines of existing structures and physical operations, and existing activities will not be altered in physical or environmental terms.

Construction of the Central Maintenance Workshop will not alter environmental patterns or have any presently identifiable environmental effect. A two story storage shed, 120' x 60', of simple reinforced concrete block construction is now located on the site, which is several hundred yards from an oil refinery in the Kingston port area. The shed is open in that there is a steel grill, rather than a wall, along one of the 120' sides. On two sides the shed abuts a gravel and earth yard on which building materials, e.g. concrete blocks, plastic pipe, etc., are stored. Two additional bays, comparable in size and construction to the existing shed, will be constructed on the storage yard to adjoin the existing structure.

The indirect environmental impact of other Project activities will be wholly beneficial in that improvement of the planning, implementation, and evaluation capability of the MOH will enable environmental considerations to be weighed more accurately in the design and examination of health sector programs and projects. To this end, the training and technical assistance elements of the Project will, to the extent possible, be designed to maximize environmental benefits and minimize environmental damage from activities relating to the delivery of primary health care and nutrition improvement services.

It should be noted that the overall GOJ attitude toward environmental considerations is strongly positive. In addition to the activities of the MOH in the areas of health and sanitation, the Ministry of Mining and Natural Resources has an active department of environmental concerns in the area of natural resources.

IMPACT IDENTIFICATION AND EVALUATION FORM

Impact Areas and Sub-Areas	Impact Identification and Evaluation [1]
A. LAND USE	
1. Changing the character of the land through:	
a. Increasing the Population	N
b. Extracting Natural Resources	N
c. Land Clearing	N
d. Changing Soil Productive Capacity	N
2. Altering Natural Defenses	N
3. Foreclosing Important Uses	N
4. Jeopardizing Man or His Works	N

1

N - No environmental impact.
L - Little environmental impact.
M - Moderate environmental impact.
H - High environmental impact.
U - Unknown environmental impact.

B. WATER QUALITY

1. Physical State of Water ..... N
2. Chemical and Biological States ..... N
3. Ecological Balance ..... N

C. ATMOSPHERIC

1. Air Additives ..... N
2. Air Pollution ..... N
3. Noise Pollution ..... N

D. NATURAL RESOURCES

1. Diversion, Altered Use of Water ..... N
2. Irreversible, Inefficient Commitments ..... N

E. CULTURAL

1. Altering Physical Symbols ..... N
2. Change of Cultural Traditions ..... N

F. HEALTH

1. Changing a Natural Environment ..... N
2. Eliminating an Ecosystem Element ..... N

G. GENERAL

1. International Impacts ..... N
2. Controversial Impacts ..... N
3. Larger Program Impacts ..... N

5C(1) - COUNTRY CHECKLIST

Listed below are, first, statutory criteria applicable generally to FAA funds, and then criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 116. Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights?

Portions of the contemplated Assistance will benefit the needy directly, other portions indirectly. The Department of State has no determination of gross human rights violations in Jamaica.

2. FAA Sec. 481. Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the United States unlawfully?

NO

3. FAA Sec. 620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement?

The Government of Jamaica is not controlled by the International Communist Movement

4. FAA Sec. 620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?

NO

5. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?

NO

A.

6. FAA Sec. 620(a), 620(f); FY 79 App. Act, Sec. 108, 114 and 606. Is recipient country a Communist country? Will assistance be provided to the Socialist Republic of Vietnam, Cambodia, Laos, Cuba, Uganda, Mozambique, or Angola?	NO
7. FAA Sec. 620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?	NO
8. FAA Sec. 620 (j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?	NO
9. FAA Sec. 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason?	An Investment Guaranty Agreement is in effect
10. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters:	N.A
a. has any deduction required by the Fishermen's Protective Act been made?	
b. has complete denial of assistance been considered by AID Administrator?	
11. FAA Sec. 620; FY 79 App. Act, Sec. 603. (a) Is the government of the recipient country in default for more than 6 months on interest or principal of any AID loan to the country? (b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds?	NO
12. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget which is for military expenditures, the amount of foreign exchange spent on military equipment and the	Percent of total budget for military expenditure is 7% and includes domestic police force.

A.12.

amount spent for the purchase of sophisticated weapons systems? (An affirmative answer may refer to the record of the annual "Taking Into Consideration" memo: "Yes, as reported in annual report on implementation of Sec. 620(s)." This report is prepared at time of approval by the Administrator of the Operational Year Budget and can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

13. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? NO

14. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? NO

15. FAA Sec. 620A, FY 79 App. Act, Sec. 607. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism? NO

16. FAA Sec. 666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA? NO

17. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards? Has it detonated a nuclear device after August 3, 1977, although not a "nuclear-weapon State" under the nonproliferation treaty? NO

B. FUNDING CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria

a. FAA Sec. 102(b)(4). Have criteria been established and taken into account to assess commitment progress of country in effectively involving the poor in development, on such indexes as: (1) increase in agricultural productivity through small-farm labor intensive agriculture, (2) reduced infant mortality, (3) control of population growth, (4) equality of income distribution, (5) reduction of unemployment, and (6) increased literacy?

Yes the criteria have been established and demonstrate both a high degree of commitment and a satisfactory rate of progress in all six (6) cases.

B.1.

b. FAA Sec. 104(d)(1). If appropriate, is this development (including Sahel) activity designed to build motivation for smaller families through modification of economic and social conditions supportive of the desire for large families in programs such as education in and out of school, nutrition, disease control, maternal and child health services, agricultural production, rural development, and assistance to urban poor?	Motivational material for family planning is built into all appropriate AID programs in Jamaica.
2. Economic Support Fund Country Criteria	
a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights?	NO
b. FAA Sec. 533(b). Will assistance under the Southern Africa program be provided to Mozambique, Angola, Tanzania, or Zambia? If so, has President determined (and reported to the Congress) that such assistance will further U.S. foreign policy interests?	N.A.
c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	N.A.
d. FY 79 App. Act, Sec. 113. Will assistance be provided for the purpose of aiding directly the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?	NO
e. FAA Sec. 620B. Will security supporting assistance be furnished to Argentina after September 30, 1978?	N.A.

5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable generally to projects with FAA funds and project criteria applicable to individual fund sources: Development Assistance (with a subcategory for criteria applicable only to loans); and Economic Support Fund.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE?
HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PRODUCT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 79 App. Act Unnumbered; FAA Sec. 653 (b); Sec. 634A. (a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than $1 million over that figure)?	Project included on page 113 of the FY 80 Congressional Presentation for LAC and in the FY81 program description in the FY82 CP. Separate Congressional Notification required as loan amount exceeds that stated in CP.
2. FAA Sec. 611(a)(1). Prior to obligation in excess of $100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?	YES
3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?	N.A.
4. FAA Sec. 611(b); FY 79 App. Act Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per the Principles and Standards for Planning Water and Related Land Resources dated October 25, 1973?	N.A.
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?	A 611 (e) certification is included in the Project Paper.
6. FAA Sec. 209. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.	Project is not susceptible of execution as part of regional or multilateral project.

A.

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	The Project is one of institutional development. The improved MOH implementation and planning capacity will increase their ability to move toward the listed goals, all of which are also the stated GOJ goals.
8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	Any such effect would be indirect, except insofar as US private firms will do technical assistance or provide commodities under the project.
9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.	The GOJ is contributing 25.9 % of the total cost of the project in local currency. The US does not own any Jamaican currency.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	NO
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	YES
12. FY 79 App. Act Sec. 608. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar, or competing commodity?	N.A.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(b); 111; 113; 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained	The project is one of institutional development. The improved MOH implementing and planning capability will increase their ability to move toward the listed goals all of which are also stated GOJ goals.

B.1.a.

basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: (include only applicable paragraph which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.)

(1) [103] for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; [103A] if for agricultural research, is full account taken of needs of small farmers;

(2) [104] for population planning under sec. 104(b) or health under sec. 104(c); if so, extent to which activity emphasizes low-cost, integrated delivery systems for health, nutrition and family planning for the poorest people, with particular attention to the needs of mothers and young children, using paramedical and auxiliary medical personnel, clinics and health posts, commercial distribution systems and other modes of community research.

Both by GOJ policy and as a particular result of the structuring of this project the improved MOH planning and implementation capability created will primarily benefit the rural poor.

(3) [105] for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development;

N.A.

(4) [106] for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is:

N.A.

(i) technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;

(ii) to help alleviate energy problems;

(iii) research into, and evaluation of, economic development processes and techniques;

(iv) reconstruction after natural or manmade disaster;

B.1.b.(4).

(v) for special development problem, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance;	N.A.
(vi) for programs of urban developme especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economi and social development.	N.A.
c. [107] Is appropriate effort placed on use of appropriate technology?	Technology selected is based on extensive project analysis.
d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?	Jamaica is contributing over 25% of total project costs.
e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to the Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"?	N.A.
f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental and political processes essential to self-government.	Project was jointly conceived and developed by AID and the MOH and will provide inputs to increase the administrative capacity of the MOH to provide basic health services when AID assistance has terminated.
g. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase or productive capacities and self-sustaining economic growth?	The improvement of institutional capability of the MOH is a necessary precondition to further progress in the health sector.
2. Development Assistance Project Criteria (Loans Only)	
a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan, including reasonableness of repayment prospects.	Repayment performance to date indicates reasonable repayment prospects.
b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U.S. with U.S. enterprise, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?	N.A.

B.

3. Project Criteria Solely for Economic Support Fund

a. FAA Sec. 531(a). Will this assistance support promote economic or political stability? To the extent possible, does it reflect the policy directions of section 102?

The development of institutional capability within the MOH is a necessary precondition to further progress in the health sector. The PP has concluded that the project is technically and economically sound.

b. FAA Sec. 533. Will assistance under this chapter be used for military, or paramilitary activities?

NO

Certification Pursuant to Section 611 (e) of the Foreign Assistance Act of 1961, as Amended

SUBJECT: Jamaica, Capital Assistance, Health Management Improvement Project

I, Glenn O. Patterson, as Director of the United States AID Mission to Jamaica, having taken into account inter alia, the maintenance and utilization of projects in Jamaica, previously financed or assisted by the United States, do hereby certify that, in my judgment, Jamaica has both the financial capability and the human resources to maintain and utilize effectively the proposed Health Management Improvement Project.

This judgment is based primarily on the facts developed in the Project Paper for the proposed project and A.I.D.'s review of the financial assistance previously provided to Jamaica.

Glenn O Patterson
Glenn O. Patterson
Director

3/18/81
Date

ANNEX P

CHRON

Department of State INCOMING TELEGRAM

American Embassy Kingston

UNCLASSIFIED

DATE REC.D: 9/26
ACTION OFFICE: HNP
INFO. TO:
DOM ✓
EA
PROG/RS.
CAP ✓
MGT
CONT ✓
C & R
PER/GSO
DUE BY:
ACTION TAKEN:
ON NO.: 8925
REC'D: 9.26.79

TO	ACT	INF	INT
AMB		1	
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AID	8		
PC			
DEA			
HF		1	
CHRN		1	

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FM SECSTATE WASHDC
TO AMEMBASSY KINGSTON 9702
BT
UNCLAS STATE 252540

AIDAC

E.O. 12065: N/A

TAGS:

SUBJECT:HEALTH/NUTRITION DEVELOPMENT PID

1. THE DAEC REVIEWED AND APPROVED THE SUBJECT PID ON SEPTEMBER 6, 1979. IN DEVELOPING THE PP, THE USAID/J SHOULD ADDRESS THE FOLLOWING ISSUES DISCUSSED AT THE DAEC MEETING:

--(A) OTHER DONORS - THE PP SHOULD OUTLINE THE NATURE AND EXTENT OF OTHER DONOR ACTIVITIES IN JAMAICA (E.G. BRIEF ACTIVITY DESCRIPTION, ACTIVITY BUDGET, GOJ EXECUTING ENTITY) TO DEMONSTRATE THAT THESE ACTIVITIES ARE COMPLEMENTARY TO COMPONENTS/ACTIVITIES SUPPORTED BY THE PROJECT. DURING PP DEVELOPMENT, THE MISSION SHOULD COORDINATE WITH THE OTHER DONORS AND ENCOURAGE THEIR SUPPORT OF PROJECT COMPONENTS (E.G. FACILITIES RENOVATION AND TRAINING) WHICH COULD RESULT IN SIMPLIFYING THE PROJECT DESIGN AND IN REDUCING THE PROJECT'S GRANT ELEMENT -- IMPORTANT FACTORS GIVEN BUREAU'S EXPECTATION OF REDUCED GRANT FUND AVAILABILITIES IN FY 80. AT PRESENT, NO GRANT FUNDS AVAILABLE FOR THE PROJECT.

--(B) PROJECT STRATEGY - THE PID DESCRIBES THE PROJECT AS BASICALLY AN INSTITUTION BUILDING PROGRAM. NONETHELESS, THE PP SHOULD FULLY DISCUSS THE IMPACT OF THE PROJECT ON THE PLIGHT OF JAMAICA'S POOR MAJORITY. FOR EXAMPLE, THE PP SHOULD DISCUSS HOW AND OVER WHAT TIME FRAME THE INSTITUTIONAL IMPROVEMENTS ENVISIONED FOR MOHEC WILL IMPROVE THE EFFICIENCY OF HEALTH AND NUTRITION DELIVERY SERVICES TO THE POOR MAJORITY. THE PROJECT LOG FRAME SHOULD INCLUDE EOPS MEASURES REFLECTING IMPROVED SERVICE DELIVERY AS WELL AS IMPROVING HEALTH STATUS INDICATORS. THESE MEASURES, OUTLINED IN GREATER DETAIL BELOW, WOULD BE USED AS THE BASIS FOR THE IMPACT EVALUATION DISCUSSED IN F.

UNCLASSIFIED

--(C) INSTITUTIONAL ANALYSIS - AT DAEC DISCUSSION, MISSION REPRESENTATIVES INDICATED THAT THE PROJECT CAN BE SUCCESSFULLY IMPLEMENTED AS DESIGNED. IN THIS CONTEXT, THE PP SHOULD CAREFULLY ANALYZE THE INSTITUTIONAL CAPABILITY OF THE UNIT WITHIN THE MOHEC TO BE CHARGED WITH IMPLEMENTING/COORDINATING THE PROJECT. AS A RESULT OF THIS ANALYSIS, THE PP SHOULD DESCRIBE THE MIX OF INPUTS (E.G. TA, TRAINING, EQUIPMENT AND SUPPLIES) NECESSARY TO ENABLE THE IMPLEMENTING UNIT TO SUCCESSFULLY EXECUTE THE PROJECT. IN ADDITION, GIVEN PROJECT COMPLEXITY AND APPARENT NEED FOR CONTINUOUS TECHNICAL SUPPORT TO MOHEC, THE MISSION SHOULD CONSIDER THE ADVISABILITY OF PROVIDING A LONG-TERM, AID-FUNDED ADVISOR (TOGETHER WITH SHORT-TERM ADVISORS AS NEEDED) TO THE IMPLEMENTING UNIT.

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--(D) FACILITIES RENOVATION - THE PP SHOULD CAREFULLY ANALYZE THE COSTS ASSOCIATED WITH NECESSARY RENOVATION OF THE JAMAICAN HEALTH FACILITIES SYSTEM. SINCE RENOVATION COSTS ARE LIKELY TO EXCEED PROJECT FUNDING AVAILABILITY, THE MISSION SHOULD EXPLORE WITH OTHER DONORS (E.G. IBRD AND IDB) THEIR WILLINGNESS TO FINANCE THE BALANCE OF THESE RENOVATION/RECONSTRUCTION COSTS. THE RESULTS OF THESE DISCUSSIONS SHOULD BE PROVIDED IN THE PP. PROJECT SHOULD INCLUDE ASSURANCE THAT GOJ WILL PROVIDE YEARLY MOHEC OR MPW BUDGETARY ALLOCATIONS SUFFICIENT TO PROVIDE FOR ADEQUATE MAINTENANCE OF FACILITIES CONSTRUCTED OR RENOVATED UNDER THE PROJECT.

--(E) TRAINING - THE GENERAL PROBLEM OF OUTWARD MIGRATION OF JAMAICAN PROFESSIONAL PERSONNEL AND THE SPECIFIC IMPACT OF THIS PROBLEM ON THE TRAINING COMPONENT OF THE PROJECT WAS DISCUSSED. AS WITH THE RECENTLY REVIEWED TRAINING FOR DEVELOPMENT PID, THE MISSION IS REQUESTED TO DISCUSS THIS MATTER WITH APPROPRIATE GOJ OFFICIALS IN THE CONTEXT OF THIS PROJECT'S DEVELOPMENT AND DESIRED IMPACT. THE MISSION SHOULD ENCOURAGE THE ADOPTION OF POLICIES AND INCENTIVES GEARED TO REDUCE THE EMIGRATION OF PROFESSIONALS AND

IMPROVE RETENTION RATES OF QUALIFIED MANAGERS AND TECHNICIANS, PARTICULARLY IN THE PUBLIC SECTOR. THE PP SHOULD ADDRESS THIS ISSUE EXPLICITLY.

--(F) EVALUATION - WHILE AGREEING TO THE NEED FOR YEARLY MOHEC EVALUATIONS AS A MANAGEMENT TOOL, THE PP SHOULD ALSO PROVIDE FOR PERIODIC IMPACT EVALUATIONS TO ASSESS THE EFFECTS OF THIS PROJECT ON THE TARGET GROUP AND ON THE EFFICIENCY OF MOHEC. THE PP SHOULD INDICATE CURRENT LEVELS OF SERVICE DELIVERY (E.G. NUMBER OF CLINIC VISITS, IMMUNIZATIONS GIVEN, OUTPATIENT VISITS) AND CURRENT HEALTH STATUS INDICATIONS (E.G. LOWER INFANT MORTALITY AND NEONATAL TETANUS RATES) BY WHICH IMPROVEMENTS CAN BE MEASURED. FURTHER, THE PP SHOULD DESCRIBE CURRENT MANAGERIAL CAPACITY OF MOHEC SO THAT INCREASED EFFICIENCY CAN BE MEASURED.

MISSION MIGHT CONSIDER UTILIZING DS/RAD AUPHA CONTRACT FOR MANAGERIAL CAPACITY ASSESSMENT AS DISCUSSED IN DAEC. IMPACT EVALUATION WOULD BEST BE CARRIED OUT BY A THIRD PARTY, AND ADEQUATE FUNDING SHOULD BE BUDGETED IN PP TO COVER THESE EVALUATION COSTS.

3/3
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--(G) RECURRENT COSTS - THE MISSION TOGETHER WITH THE GOJ SHOULD CAREFULLY ANALYZE THE RECURRENT COSTS WHICH WILL RESULT FROM UNDERTAKING THIS PROJECT AND BE BORNE BY THE GOJ. THIS ANALYSIS SHOULD BE REFLECTED IN THE PP, AND THE GOJ SHOULD PROVIDE ASSURANCES THAT IT WILL COMMIT ITSELF TO FINANCING THESE RECURRENT COSTS BY THE END OF PROJECT.

2. GIVEN THE RATHER SIGNIFICANTLEVEL OF PROCUREMENT CONTEMPLATED UNDER PROJECT, THE PP SHOULD INDICATE WHICH HOST COUNTRY INSTITUTION WILL BE RESPONSIBLE FOR PROJECT PROCUREMENT AND PROVIDE A PROCUREMENT PLAN FOR THE TA, EQUIPMENT, AND MATERIALS TO BE PURCHASED UNDER THE PROJECT. CHRISTOPHER
BT

ANNEX Q

MINISTRY OF FINANCE AND PLANNING
30 NATIONAL HEROES CIRCLE.
P.O. BOX 512.
KINGSTON.
JAMAICA

ANY REPLY OR SUBSEQUENT REFERENCE TO THIS COMMUNICATION SHOULD BE ADDRESSED TO THE FINANCIAL SECRETARY AND THE FOLLOWING REFERENCE QUOTED:—

No. 480/033

TELEPHONE No. 92-28600-16

8th October, 1980

Mr. Terrence Tiffany
Health Nutrition & Population Office
USAID/Jamaica
c/o Embassy of the United States of America
2 Oxford Road
KINGSTON 5

Dear Mr. Tiffany:

Re: USAID/Jamaica Health /Nutrition Sector Development Project

The Government of Jamaica requests the assistance of the United States Agency for International Development in a Health/Nutrition Sector Development Project in Jamaica.

It is understood that the project document is being refined by consultations between officers of the U.S.A.I.D. Mission in Jamaica and officials from the Ministry of Health, and other agencies of the government.

This request is without prejudice to, any further discussions and negotiations needed prior to the signing of any loan or grant agreement by the Ministry of Finance for, and on behalf of the Government of Jamaica.

Yours faithfully,

H.G. Barber
Financial Secretary

DRAFT

PROJECT AUTHORIZATION

Name of Country: Jamaica

Name of Project: Health Management Improvement

Number of Project: 532-0064

Loan Number:

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Health Management Improvement project for Jamaica, involving planned obligations of not to exceed Seven Million Four Hundred Thousand United States Dollars ($7,400,000) in loan funds ("Loan") and Three Hundred Fifty Thousand United States Dollars ($350,000) in grant funds ("Grant") over a three-year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to assist in financing foreign exchange and local currency costs of goods and services for the project.

2. The project ("Project") consists of health manpower development, renovation and construction works, the provision of medical equipment and supplies and the improvement of management systems to enable the Ministry of Health of the Government of Jamaica ("Cooperating Country") to adequately plan, implement and evaluate primary health care and nutrition programs, with particular regard to the network of Primary Health Care Centers which are vital to extending care to the low income rural population.

3. The Project Agreements, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

a. Interest Rate and Terms of Repayment

The Cooperating Country shall repay the Loan to A.I.D. in U.S. Dollars within twenty (20) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A.I.D. in U.S. Dollars interest from the date of first disbursement of the Loan at the rate of (i) two percent (2%) per annum during the first ten (10) years, and (ii) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

b. Source and Origin of Goods and Services (Loan)

Goods and services, except for ocean shipping, financed by A.I.D. under the Loan shall have their source and origin in Jamaica or in countries included in A.I.D. Geographic Code 941, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Loan shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of Jamaica or countries included in A.I.D. Geographic Code 941.

c. Source and Origin of Goods and Services (Grant)

Goods and services, except for ocean shipping, financed by A.I.D. under the Grant shall have their source and origin in Jamaica or in the United States, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Grant shall be financed only on flag vessels of the United States, except as A.I.D. may otherwise agree in writing.

d. Conditions Precedent to Initial Disbursement (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

(1) the Project Implementation Unit (PIU) has been established, initial staff has been assigned and a time-phased staffing plan has been prepared; and

(2) a Project Director and a Project Coordinator with adequate authority have been appointed and are working in those capacities.

e. Condition Precedent to Disbursement for Procurement (Loan and Grant)

Prior to any disbursement, or the issuance of any commitment documents under the Project Agreements, to finance the procurement of goods and services, the Cooperating Country shall have obtained written approval from A.I.D. of the respective procurement procedures and such procurement and contracting documentation as A.I.D. may specify in Implementation Letters.

f. Condition Precedent to Disbursement for Renovation and Construction (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, to finance renovation and construction, including engineering services, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a plan for renovation and construction to be provided under the Project, delineating the necessary engineering and construction actions, the estimated schedules for completion and the responsible organizations and individuals. The required plan shall present the foregoing particulars in detail for the first year of renovation and construction activities and in more general terms for the succeeding years of such activities under the Project.

g. Condition Precedent to Subsequent Disbursement for Renovation and Construction (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, after one year from the date of the Project Loan Agreement, to finance renovation and construction, including engineering services,

the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a five year Maintenance Plan for all Primary Health Care Centers in Jamaica, whether or not renovated or constructed under the Project, and other facilities renovated or constructed under the Project.

h. Condition Precedent to Disbursement After Eighteen Months (Loan)

Prior to any disbursement, or the issuance of any commitment documents under the Project Loan Agreement, after eighteen (18) months from the date of the Project Loan Agreement, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that the Cooperating Country has:

(1) completed a Special Project Evaluation that examines experience up to that time in implementing the Project, such evaluations of the World Bank-financed Jamaica Second Population Project as may have been completed up to that time, and the results of the baseline survey undertaken under the Project; and

(2) examined Project design in light of the above Special Project Evaluation, prepared such changes in Project design as may be advisable as a result thereof and modified Project implementation plans in accordance therewith.

i. Covenants

The Cooperating Country will, except as A.I.D. may otherwise agree in writing:

(1) revise and refine annually the engineering and construction plan and the health facilities maintenance management plan, furnished pursuant to Sections 3.f. and g. above, and will submit such revised plans to A.I.D. annually during the life of the Project;

(2) improve and maintain the physical quality of the government-rented health centers during the life of the Project in a manner satisfactory to A.I.D.; and

(3) budget funds adequate to maintain and support the Primary Health Care Centers and to finance other recurring costs after the end of the Project.