

PD-HEK-658

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QUARTERLY PROGRAM PERFORMANCE REPORT

GRENADA

USAID COOPERATIVE AGREEMENT NO. LAC-0000-A-00-4008

FOR THE PERIOD

OCTOBER 1, 1985 THROUGH DECEMBER 31, 1985

Project HOPE  
Millwood, Virginia 22646

January 15, 1986

QUARTERLY PERFORMANCE REPORT

PROJECT HOPE/GRENADA

USAID COOPERATIVE AGREEMENT No. LAC 0000-A-00-4008

In accordance with the Project HOPE-USAID Agreement, Section F, Item 2 (Program Performance Reporting), the following covers Project HOPE program activities for the period beginning October 1, 1985 and ending December 31, 1985.

GENERAL

During the report period, Project HOPE responded to the need expressed by Grenada for the support of health services with:

1 family practice physician	3 person months
1 nursing tutor	3 person months
1 psychiatric nurse educator	2 person months
1 clinical nurse educator	2.5 person months
1 community pediatrician	3 person months
1 general surgeon	3 person months
3 anesthesiologists	3.5 person months
1 pathologist	3 person months
1 orthopedic surgeon	1 person month
1 materials manager	3 person months
1 sanitarian	3 person months
1 solid waste manager	3 person months
1 cytologist	3 person months
1 medical records administrator	3 person months
4 UWI registrars	9 person months
1 program director	3 person months
1 administrator	3 person months

The Project HOPE personnel supplemented the Ministry of Health staff listed below who are working in the following areas:

1 cytologist	General Hospital
record room staff	General Hospital

nursing staff	General Hospital
1 general surgeon	General Hospital
1 anesthesiologist	General Hospital
chief pharmacist and staff	Ministry of Health
environmental health staff	Ministry of Health
2 nursing tutors	School of Nursing
psychiatric staff	Richmond Hill
1 district medical officer	Carriacou
district nursing staff	Grenada/Carriacou

During this report period a Project HOPE cytologist returned to work with the Grenadian cytologist (trained last year) in the preparation of the regional cytology program which will bring students from Barbados, St. Vincent, St. Lucia, Dominica and St. Kitts to Grenada beginning January 6; a University of the West Indies registrar in community medicine joined the team in Carriacou; and a psychiatric nurse arrived to mobilize nursing educators and service personnel for activities to be included in the new mental health facilities.

#### MEDICAL/NURSING SERVICES

General Surgery The Project HOPE general surgery activities included in-patient care, weekly clinic and alternate weeks on-call with the local surgeon. HOPE fellows continue to work as consultants with University of the West Indies general surgical registrars on three month rotations. The second operating room is used for emergency cases avoiding interruption of the routine surgery list.

Orthopedics Full-time services of a HOPE orthopedic surgeon have been phased over. Routine orthopedics are being done by the UWI surgical registrar with the HOPE general surgeon. Because of HOPE/USAID orthopedic equipment supplied to Grenada, the Trinidadian orthopedic surgeons consider Grenada to have the best equipped orthopedic unit in the Caribbean and

three have agreed to have clinic/operating sessions on alternate weeks with the possibility of weekly visits.

Anesthesia HOPE participation continues as daytime coverage with alternating nights and weekends. During the vacation of the local anesthesiologist, Project HOPE provided two anesthesiologists. With her return, greater time is being spent by both anesthesiologists in the operating room allowing more professional interchange.

Pathology Anatomic pathology services are on-going with a long-term HOPE pathologist and Grenadian technician trained in tissue/slide preparation. Specimens are being processed from other islands as well as those from Grenada. Autopsy room equipment has arrived and a new blood procurement officer has been hired. Routine electrolytes are now available under the supervision of the pathologist.

Family Practice The long-term HOPE family practice physician, University of the West Indies community registrar and the local district medical officer are working in Carriacou to develop a baseline record system in the community clinics with disease indexing. A study of health care delivery is being carried out and a screening of all school children in Carriacou and Petit Martinique completed (vision, anemia, sickle). The survey will be computerized. In addition, during this report a basic laboratory was established, medical record room initiated and a room for X-ray completed.

Pediatrics The first University of the West Indies community pediatric registrar completed his 4 month rotation in Grenada with the long-term HOPE pediatrician. Referral clinics continued at health centers where emphasis is on increasing the pediatric skills of the nurse practitioners and public health nurses. Increased amounts of lab work are being done

at the health centers during these clinics with the introduction of hemoglobinometers and a microscope for stool and urine exams. An initial investigation of malnutrition in the Rose Hill area was completed (Appendix A). With the arrival of a replacement registrar, interventions will be introduced.

Nursing During the report period, the director of the school of nursing returned from receiving her university degree in Jamaica (UWI) and resumed leadership at the school. Classroom teaching and clinical supervision in the hospital by the long-term HOPE nurse continued. Project HOPE introduced a clinical nurse educator to the system whose base of operations was the hospital where she did staff work as well as assisted students with procedures. An affiliation with the school was maintained with her doing occasional classroom teaching. Based on the perceived value of the Project HOPE clinical nurse educator, the chief nursing officer at the Ministry of Health is budgeting for selected Grenadians to become clinical nurse educators in the 1986 budget year.

Psychiatric Nursing A Project HOPE psychiatric nurse began work in this report period to mobilize nursing educators and service personnel for activities to be included in the new mental health facilities. She has worked with the chief nursing officer (who has a background in psychiatric nursing), a nursing tutor (with interest in psychiatric care) and the staff at Richmond Hill institutions to plan an initial training program for the community mental health workers to begin in January, 1986.

#### TECHNICAL SUPPORT SERVICES

Environmental Health The food service workshop was given to environmental health officers by two Grenadian environmental health officers by two Grenadian environmental health officers

under the coordination of the Project HOPE EHO (Appendix B). To follow will be a similar workshop for hotel managers. A 12 week pre-service training program was outlined (Appendix C) to be given to four newly recruited EHO students once they are all processed through the public service commission. The course is 55% practical and 45% tutorial and will be monitored by a Grenadian EHO. In addition, long and short term solutions for sewage disposal were outlined for the Ministry of Health (Appendix D).

Solid Waste Management Refuse pick-up with a frequency of six days per week has been achieved in the two areas of population concentration (St. George's and Grenville). The pick-ups have been changed to evenings when there is less heat and traffic. In addition, the volume of refuse which is picked-up has increased from 19 tons to, in some instances, 40 tons per day. The second dumpsite has now been upgraded to landfill status and a seawall constructed at the site to improve coastal water quality. With preparation of a new landfill site, plans for closure of the second site have begun.

Medical Records During this report period, monthly statistics were organized at the General Hospital and circulated to the various authorities (Appendix E), in-service for disease indexing was begun and staff were trained for initiation of the admitting office. Training was given at General Hospital for a clerk from Carriacou following which a record room was begun at Princess Royal Hospital (Carriacou).

Materials Management Grenadian personnel in medical stores, under the supervision of the Project HOPE long-term supplies manager, have completed the computerization of pharmaceutical inventory. Usage can be demonstrated and for the first time purchase can be made based on demand in advance of acute shortages.

Cytology The Project HOPE cytologist arrived in October to work with the Grenadian cytologist trained last year by HOPE. Activities have included familiarization with the Grenadian system and preparation for the regional training program to begin in January, 1986. The latter included coordination with the other islands re potential students, preparation of a curriculum and classroom space with teaching materials. It is expected that students will attend from St. Kitts, St. Lucia, Dominica, St. Vincent and Barbados. Two additional Grenadians will participate in the course.

Administration As the second year of Project HOPE/USAID involvement in Grenada ends, there has been a shift from the provision of emergency services to the development of infrastructure, training, re-introduction of West Indian professionals as well as continued service (Appendix F). During this report period, a proposal was written for Project HOPE coordination of training in the USAID mental health program. This would add a psychiatric nurse, social worker, occupational therapist and short-term pharmacist and medical records person to the existing Cooperative Agreement.

Based on the impact of the UWI registrars (residents), the next quarter will be used to increase the participation of the University of the West Indies.

Appendix A

Investigation of Malnutrition in  
Rose Hill

## Appendix A

### Pediatrics:

Attached is a summary of data collected at Rose Hill in St. Patrick's on children less than 5 years. Rose Hill was chosen because of the large number of sick children seen at the weekly Sauteurs clinic. Rose Hill community represents a pocket of poverty.

20% of the children were less than the 5th percentile weight for age and 28% less than the 5th percentile height for age. The discrepancy is probably due to stunted children. On October, 1985, survey of 600 growth charts throughout Grenada found the expected 5% of children less than the 5th percentile weight for age.

50% of the children ages 0 - 5 and 75% of those less than 3 years were anemic, presumably iron deficiency.

Only 33% of the children had up to date immunizations recorded on their local visiting station charts.

Further screening (sickle parasites) and interventions (sanitation, small scale gardening) are planned with the participation of the next UWI pediatric registrar.

NUTRITIONAL STATUS\* - ROSE HILL

November, 1985

	<u>Percentile</u>	<u>Weight</u>	<u>%</u>	<u>Height</u>	<u>%</u>
School Age (3 - 5)	5%	6	16	5	15
	10%	9	24	7	21
	25%	13	35	8	24
	50%	7	20	11	34
	75%	2	5	2	6
	90%	0	0	0	0
	95%	0	0	0	0
		TOTAL	<u>37</u>	<u>100</u>	<u>33</u>
Pre - School	5%	11	24	16	40
	10%	10	21	3	8
	25%	9	19	6	15
	50%	10	21	7	18
	75%	5	11	6	15
	90%	1	2	1	2.5
	95%	1	2	1	2.5
		TOTAL =	<u>47</u>	<u>100</u>	<u>40</u>

Percentiles determined by National Center for Health Statistics Standards.

NUTRITIONAL STATUS\* - BY AGE GROUPS - ROSE HILL

November, 1985

	<u>Percentile</u>	<u>Weight</u>	<u>%</u>	<u>Height</u>	<u>%</u>
0 - 6 MOS. N=8	5%	1	12.5	4	57
	10%	2	25		
	25%	1	12.5	1	14
	50%	3	37.5		
	75%	1	12.5	2	29
	90%				
	95%				
	TOTAL =	<u>8</u>	<u>100</u>	<u>7</u>	<u>100</u>
6 - 12 MOS. N=6	5%	1	17	2	50
	10%	2	33	1	25
	25%	2	33		
	50%				
	75%	1	17		
	90%			1	25
	95%				
	TOTAL =	<u>6</u>	<u>100</u>	<u>4</u>	<u>100</u>
1 - 2 YRS. N=12	5%	3	23	3	30
	10%	4	31	2	20
	25%	3	23	3	30
	50%	2	15	1	10
	75%			1	10
	90%				
	95%	1	8		
		<u>13</u>	<u>100</u>	<u>10</u>	<u>100</u>

	<u>Percentile</u>	<u>Weight</u>	<u>%</u>	<u>Height</u>	<u>%</u>
2 - 3 YRS. N=19	5%	4	21	6	33
	10%	4	21	1	6
	25%	3	16	2	11
	50%	4	21	6	33
	75%	4	21	3	17
	90%				
	95%				
	TOTAL =	<u>19</u>	<u>100</u>	<u>18</u>	<u>100</u>
3 - 5 YRS. N=38	5%	8	21	6	16
	10%	9	24	7	18
	25%	12	32	9	24
	50%	7	18	15	39
	75%	2	5	1	3
	90%				
	95%				
	TOTAL =	<u>38</u>	<u>100</u>	<u>38</u>	<u>100</u>

\* Percentiles determined by National Center for Health Statistics Standards.

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ANEMIA PREVALENCE - ROSEHILL IN CHILDREN

(AGES - BIRTH - 3 YRS.)

Anemia defined as PCV (Hct) of less than 33, collected by finger prick method and micro-haematocrit measurement at General Hospital Laboratory.

<u>HCT (%)</u>	<u>NO.</u>	<u>%</u>
> 33	4	20
33	1	5
32	2	10
31	2	10
30	2	10
29	1	5
28	1	5
28	7	35
TOTAL =	<u>20</u>	<u>100%</u>

Total of 75% of children age 0-3 yrs. with PCV(Hct) less than 33%.

ANEMIA PREVALENCE - ROSE HILL IN CHILDREN+

(AGES - BIRTH - 5 YRS.)

Anemia defined as PCV (Hct) of less than 33, collected by finger prick and micro-hematocrit measurement at General Hospital Laboratory.

<u>Hct (%)</u>	<u>NO.</u>	<u>%</u>
> 33	19	43
33	3	6
32	6	13
31	5	11
30	2	4
29	2	4
28	2	4
28	7	15
	<u>46</u>	<u>100</u>
TOTAL =		

Total of 51% of children ages (0-5 yrs.) with PCV(Hct) less than 33

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IMMUNIZATION STATUS - ROSE HILL

November, 1985

Immunization status is based on the following Ministry of Health immunization schedule:

3 months	DPT, OPV #1
4 months	DPT, OPV #2
5 months	DPT, OPV #3
12 - 15 months	Measles
3 - 5 years	DPT, OPV #4
(When entering school)	

A review of vaccine records from River Sallee visiting station for the Rose Hill children was performed. Overall, only 27/83 (32.5%) had up to date immunization. None of the 0 - 6 month age group had up to date records nor had any received their first DPT. A breakdown of the soecific problems in vaccine records is as follows:

0-6 mos.	<u>UTD</u>	<u>None</u>	<u>OPV #1</u>	<u>Not to start</u>	<u>Total</u>	
	0	2	2 (6mos)	4	8	
7-12 mos.	<u>UTD</u>	<u>OPV #1</u>	<u>OPT.OPV #1</u>	<u>DPT #2/OPV #3</u>	<u>Measles</u>	<u>Total</u>
	2	1	1	1	1	6
1-2 Yrs.	<u>UTD</u>	<u>DPT/OPV #1</u>	<u>None</u>	<u>Need measles</u>	<u>Total</u>	
	5	1	1	6	13	
2-3 Yrs.	<u>UTD</u>	<u>None</u>	<u>Need measles</u>	<u>Total</u>		
	14	2*	3	19		
3-5 Yrs.	<u>UTD</u>	<u>Need DPT/OPV #4</u>	<u>Need Measles</u>	<u>Total</u>		
	6	32	3	38		
				<u>83</u>		

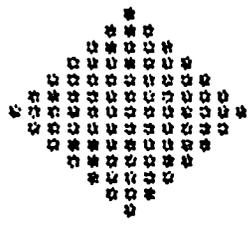
\* No records of immunizations available.

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Appendix B

Environmental Health Officer  
Food Service Workshop Program

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AGENDA

ENVIRONMENTAL HEALTH OFFICER

FOOD SERVICE SANITATION WORKSHOP

CHAIRPERSON:

Mr. Curtis Edwards  
Chief Environmental Health Officer

October 22, 1985:

9:00 AM - 9:15 AM

9:15 AM - 9:25 AM

9:25 AM - 9:30 AM

9:30 AM - 10:15 AM

10:15 AM - 10:30 AM

10:30 AM - 11:30 AM

11:30 AM - 12 Noon

12 Noon - 1:00 P.M.

1:00 PM - 2:00 PM

2:30 PM - 2:45 PM

2:45 PM - 3:30 PM

3:30 PM - 4:00 PM

- Opening Remarks  
The Honourable Mr. Danny Williams  
Minister of Health
- Importance of Food Service Protection  
- Mr. Edward Mazuroski  
Environmental Health Advisor - Project HOPE
- Vote of Thanks
- Food Service Inspection Form - Review and  
discussion  
- Mr. Edward J. Mazuroski
- B R E A K
- Food Care - Food Supplies, Protection and  
Storage  
- Mr. Collin Gardener - E.H.O.
- DISCUSSION
- L U N C H
- Food Service Personnel - Employee Health,  
Personal Hygiene and Practices  
- Collin Gardener
- B R E A K
- Equipment and Facilities - Cleaning and  
Storage, water supply, sewage, rodents,  
good repair  
- Selby DaBreo - SEHO
- DISCUSSION - Standards  
e.g. looking for cleaning  
schedules

October 23, 1985:

- 9:00 AM - 10:00 AM - Guidelines for Food Service Establishments  
Model Food Service Code  
Mobile Food Service Units  
Temporary Food Service Units  
Street Vendors - C. Edwards - CEHO
- 10:00 AM - 10:30 AM - DISCUSSION - Standards for all Food  
Service Establishments
- 10:30 AM - 10:45 AM - B R E A K
- 10:45 AM - 11:30 AM - Guidelines for Liquor licenses  
- Collin Gardener - EHO  
- Selby Da Breo - SEHO
- 11:30 AM - 12:00 Noon - DISCUSSION - Standard for Liquor Licenses
- 12 Noon - 1:00 P.M. - L U N C H
- 1:00 PM - 2:00 PM - Discussion groups - 3  
Food Service Establishments  
Liquor Licenses  
Group Leaders - Curtis Edwards  
- Selby Da Breo  
- Collin Gardener
- 2:00 PM - 2:30 PM - Presentation of conclusions on standards  
for Food Service Establishments and Liquor  
licenses
- 2:30 PM - 2:45 PM - B R E A K
- 2:45 PM - 3.30 PM - Bakery Inspection  
- Selby Da Breo - SEHO
- 3:30 PM - 4:00 PM DISCUSSION

October 24, 1985:

- 9:00 AM - 11:00 AM - Food Service Inspection  
- Collin Gardener - EHO  
- Edward J. Mazuriski - Project HOPE
- 11:15 AM - 12:00 Noon - DISCUSSION
- 12 Noon - 1:00 PM - L U N C H
- 1:00 PM - 2:00 PM - DISCUSSION - Application for registration  
and cost  
- Curtis Edwards - CEHO, S. Da Breo - SEHO
- 2:00 PM - 2:30 PM - DISCUSSION - Port Sanitation  
- Mr. A. James - SEHO
- 2:30 PM - 2:45 PM - B R E A K
- 2:45 PM - 3:30 PM - Food Service Sanitation Films  
General Discussion - Medical Certificates  
Other items
- 3:30 PM - 3:50 PM - Review and Evaluation  
- Curtis Edwards - CEHO
- 3:50 PM - 4:00 PM - Vote of Thanks  
- Dr. Murray - M. O.

Appendix C

Student EHO Training Program

STUDENT EHO  
TRAINING PROGRAM

CONTENTS:

- I. Orientation to Environmental Health:
- Orientation
  - Public Health in Grenada
  - Organization of Ministry of Health
  - Organization of Environmental Health Division
  - Role of Environmental Health Officer
  - Field visits to various components of Division
  - Introduction to Health Plan and Primary Health Care
  - Introduction to Public Health Nurse and Nurse Practitioner
- II. Personal Hygiene:
- Introduction
  - Care of the body
  - Physical Fitness
  - Mental Fitness
  - Diseases
  - Field Visits
- III. Health Education:
- Introduction and Aspects
  - Community Health Education
  - Health Services
  - Role Model Playing
- VI. Household and Environmental Sanitation:
- Introduction
  - Aspects - e.g. Excreta disposal, selection and design of disposal systems. Construction, maintenance and inspection of systems. Ventilation, Hazards around the home Inspection
  - Discussions
  - Diseases
  - Field Visits

V. Water:

Introduction  
Collection and Storage  
Socio-economic considerations  
Water Purification  
Conservation  
Sampling and Analysis  
Field Visits  
Discussions

VI. Introduction to Human Anatomy:

General Structure of the body  
General Organization of the body

I. Aspects of Important Diseases in Grenada:

Common Disease in Grenada  
Field Visits  
Discussions

II. Vector Control:

Introduction  
Insects  
Helminths  
Rodents  
Rabies Program  
Field Visits  
Discussions

IX. Solid Waste - Management:

Introduction  
Solid Waste Issues in Grenada  
Methods, Collection and Disposal Practices and Techniques  
Field Visits  
Discussions

Fundamentals of Food Hygiene:

Introduction  
Applied Food Service Sanitation  
Regulations and Inspections  
Milk and Milk Products  
Meat Hygiene and Inspection  
Field Visits  
Discussions

XI. Institutional Sanitation:

Introduction  
Schools  
Hospitals  
Nursing Homes  
Prisons  
Retail Stores  
Field Visits  
Discussions

XII. Port Sanitation:

Introduction  
Airport Sanitation  
Port and Ship Sanitation

III. Introduction to Microbiology:

Fundamentals of Microbiology  
Infection and Control  
Application to Food Service Sanitation

XVI. Epidemiology:

Introduction  
Infectious Disease Review  
Survey Techniques  
Investigative Techniques

**XV. First Aid:**

Care of Minor and Severe Wounds

Care of Shock

Care of Burns

Poisoning

**XVI. Diaster Planning and Sanitation**

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Appendix D

Long and Short Term Solutions  
for Sewage Disposal - Ministry  
of Health - Grenada

## Short-Term Solutions

PHASE I:Problem 1:

The existing marine outfall and associated pumping equipment is inoperable. See Diagram 1.

Solution 1:

Pumping equipment need not be replaced. Sewage can be gravity flow at 0.08 ft/100 ft. to maintain a velocity of 2 ft/sec in 12" dia. PVC. Gravity flow discharge would eliminate recurrent costs associated with pumping equipment and maintenance. This could be achieved by connecting the outfall pipe to the existing manhole. See diagram 2.

Funding 1:

The current sewage agreement with USAID will cover the above. We are presently awaiting cost estimates from Mr. G. Steiner USAID/Contract engineer to finalize this cost.

Problem 2:

The Carenage lift station contains 2 shone pneumatic ejections which were installed in 1939.

The ejector pumps do not work efficiently due to leaking seals, etc. This causes sewage to overflow to the harbour during higher flow periods. Also, due to electrical outages, the ejector pumps frequently do not operate. This situation also causes raw sewage to be discharged into the harbour. There is a standby generator to operate the compressors for the ejector pumps, but it is undersized and cannot pump the total sewage flow.

Solution 2:

Replace the lift-station with a new lift-station and provide standby diesel electric generator sized to meet the requirements of the new lift-station. The generator should be sized by the manufacturer of the lift-station.

Funding 2:

The current USAID Sewage Agreement covers the above items. We are currently awaiting cost estimates and specifications from the TVA and Mr. Steiner.

Problem 3:

No sewer system plan exists. Knowledge of pipe locations exists only in the memory of experienced, long-time personnel. A design layout is required to repair existing pipe and plan replacement and system expansions.

### Solution 3:

Survey (topographical) existing system in phases.

### Funding 3:

A portion of the topographical survey is provided for in the USAID Sewage Agreement.

### Problem 4:

The force main extending from the existing lift-station to Scott Street requires extensive repairs:

### Solution 4:

Install a new force main (8") from the proposed lift-station to Scott Street. This line can run parallel to the old line, on show a new route depending upon the proposed survey.

### Funding 4:

The USAID Agreement covers this cost. We are presently awaiting cost estimates and specifications from Mr. Steiner and the TUA.

This concludes Phase I:

- 1 - Construct and install new sewage outfall
- 2 - Replace carenage lift station
- 3 - Survey sewage system in sections
- 4 - Replace force main from proposed lift-station to Scott Street

## PHASE II:

### Problem 1:

The main collection lines along the Carenage and Esplanade are undersized and probably have a too low slope. This is evidenced by the frequent plogging of lines with sand and other materials, and the subsequent overflow from manholes during heavy rains into the harbour. Accepted engineering design principles require that no gravity sewer conveying rain sewage shall be less than 8 inches. The slope of the pipes should provide a mean velocity of at least 2.0 feet.second to keep sand travelling through pipe.

### Solution 1:

Install new (collection) main lines along the Carenage and Esplanade.

### Funding 1:

A funding source needs to be identified. At this time we are awaiting cost estimates from local contractors through USAID.

This concludes Phase II:

- 1 - Install new main lines on Carenage and Esplanade

PHASE III:

Problem 1:

An adequate sewer maintenance team with associated support equipment, ordinances and procedures does not exist.

Solution 1:

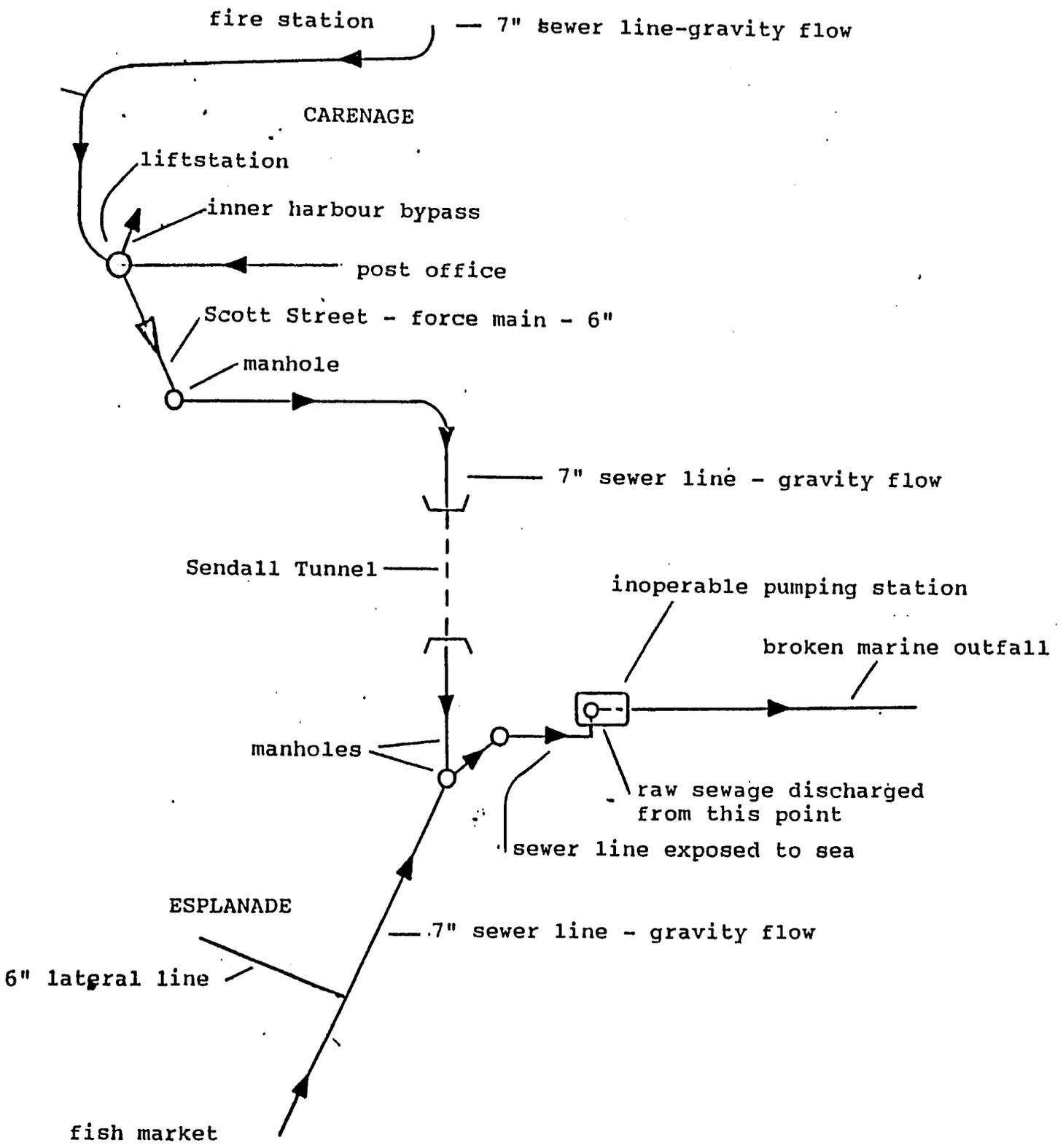
Establish sewer maintenance team to maintain existing and proposed collection system. The 'team' would also maintain proposed pumping equipment and inspect and repair damaged pipes to limit infiltration (overloads) to the system. Also, adopt a working sewer ordinance. Presently nothing exists.

Funding 1:

A proposal for the above has been written, but needs to be modified to include a sewer ordinance.

A Donal agency has not been identified.

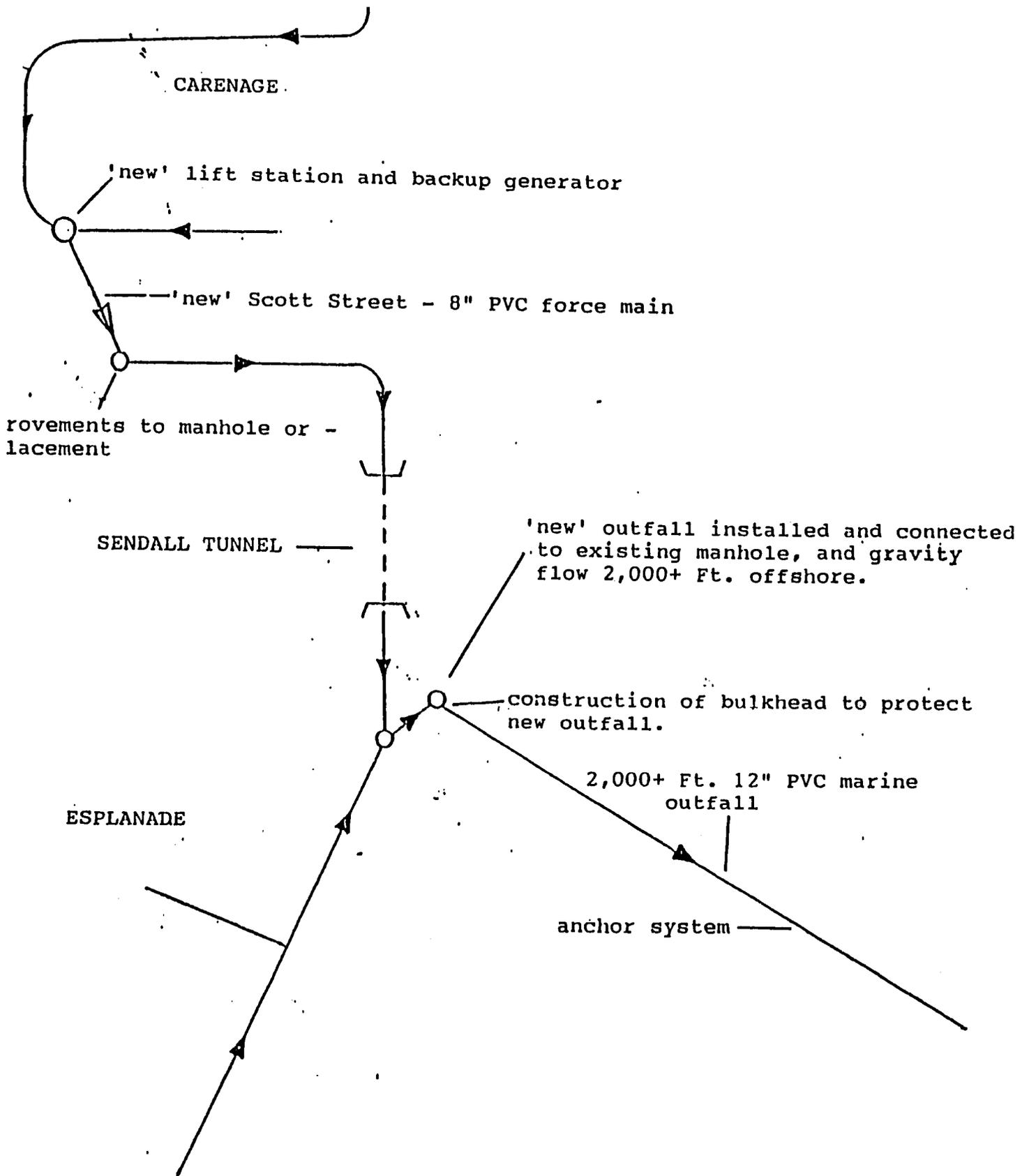
Figure 1. Existing Sewage System for St. George's: Note - only the main collection lines are shown.



- △ - force main line.
- ▲ - gravity flow line.



Figure 3. Proposed marine outfall and additions to system.



Appendix E

General Hospital Monthly Statistics  
October 1985

App E

GENERAL HOSPITAL  
MEDICAL RECORDS STATISTICAL REPORT

OCTOBER, 1985

BED COMPLEMENT    ---    ---    ---    ---    ---    222

ADMISSIONS

SERVICES	MALE	FEMALE	TOTAL
MEDICAL	58	40	98
SURGICAL	84	79	163
PEDIATRIC	64	48	112
PSYCHIATRIC	1	7	8
OPHTHALMIC	2	8	10
OBSTETRICS	--	206	206
	<u>        </u>	<u>        </u>	<u>        </u>
TOTAL =	209	388	597
NEWBORN =	-	-	172

DISCHARGES

SERVICES	MALE	FEMALE	TOTAL
MEDICAL	59	45	104
SURGICAL	88	79	167
PEDIATRIC	69	48	117
PSYCHIATRIC	4	6	10
OPHTHALMIC	--	9	9
OBSTETRICS	--	211	211
	<u>        </u>	<u>        </u>	<u>        </u>
TOTAL =	220	398	618
NEWBORN =	-	-	166

PATIENT DAYS

<u>SERVICES</u>	<u>DAYS</u>
MEDICAL	1,020
SURGICAL	1,430
PEDIATRIC	872
PSYCHIATRIC	92
OPHTHALMIC	72
S	842
TOTAL =	<u>4,328</u>
NEWBORN =	408

DEATHS

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MEDICAL	8	OVER 48 HRS	9
SURGICAL	3	UNDER 48 HRS	6
PEDIATRIC	4	STILLBIRTHS	5
OBSTETRICS	-	PERINATAL DEATHS	6
<hr/>			
TOTAL	=	15	
NEWBORN	=	6	
		GROSS DEATH RATE	2.4
		PERINATAL DEATH RATE	3.6
		STILLBIRTH RATE	2.9

AVERAGE LENGTH OF STAY

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SERVICES	DAYS
MEDICAL	9.8
SURGICAL	8.6
PEDIATRIC	7.5
PSYCHIATRIC	9.2
OPHTHALMIC	8.0
OBSTETRICS	4.0
<hr/>	
HOSPITAL AVERAGE LOS	= 7.0
NEWBORNS	-- -- = 2.5

AVERAGE DAILY CENSUS

BED COMPLEMENT	SERVICES	AVG. CENSUS
132	{ MEDICAL }	32.9
	{ SURGICAL }	46.1
42	PEDIATRIC	28.1
7	PSYCHIATRIC	3.0
11	OPHTHALMIC	2.3
30	OBSTETRICS	27.2
<u>222</u>	HOSP. AVERAGE DAILY CENSUS	<u>139.6</u>
	NEWBORN	13.2

PERCENTAGE OF BED OCCUPANCY

SERVICESZ	% RATE
MEDICAL } SURGICAL }	59.9
PEDIATRIC	67.0
PSYCHIATRIC	42.4
OPHTHALMIC	21.1
OBSTETRICS	90.5
	<u>HOSPITAL OCCUPANCY RATE</u>
	62.9

PREPARED BY: MEDICAL RECORDS DEPARTMENT  
 GENERAL HOSPITAL  
 ST. GEORGE'S  
GRENADA

1985 NOVEMBER 11

- > -  
DEATH LISTING  
OCTOBER, 1985

RECORD NO:	SERVICE	AGE	±	48 HRS	DIAGNOSIS	DATE OF DEATH
0-41-85	SURG.	78	-		Diabetesmellitus; diabetic vesopathy	3-10-85
6-57-81	MED.	37	+		Massive right pulmo- nary metastasis, secondary to ovarian carcinoma	8-10-85
6-76-95	SURG.	58	+		Pulmonary embolism, deep venous thrombosis; marked exogenous obesity, arterio nephro- sclerosis	9-10-85
5-85-22	MED.	14	+		Nephrotic Syndrome	10-10-85
6-55-26	PED.	1	+		Cardiorespiratory arrest; sickle cell crisis	11-10-85
B.B.R.	NEWBORN	NB	-		Cerebral anoxia; perinatal asphyxia	15-10-85
6-53-56	MED.	79	+		Pneumonia, hepatic decompensation cirrhosis of the liver	15-10-85
B.B.Y	NEWBORN	NB	-		Perinatal asphyxia	16-10-85
6-73-51	MED.	67	+		Lung cancer, tobacco use disorder	17-10-85
6-73-98	MED.	66	-		Intracerebral hemorrhage	18-10-85
B.G.H.	NEWBORN	NB	-		Prolonged 2nd stage;	20-10-85
B.B.M.	NEWBORN	NB	-		Perinatal asphyxia	20-10-85
5-78-09	SURG.	61	+		Diabetic vesopathy; gangrene of (L) foot; arteriosclerosis	23-10-85
B.B.L.	NEWBORN	NB	-		Perinatal asphyxia	21-10-85
3-52-36	MED.	40	+		Not Available	22-10-85
6-74-71	PED.	7/12	-		Perinatal asphyxia	24-10-85
6-72-24	MED.	73	+		Meningitis; Diabetes Mellitus	25-10-85
1-33-39	MED.	75	-		Heart block, tobacco use disorder alcohol abuse	26-10-85

OCTOBER, 1985

X-RAY DEPARTMENT:

	<u>NO. OF PATIENTS</u>	<u>NO. OF EXAMS</u>
IN-PATIENTS -	187	194
OUT-PATIENTS -	586	602
TOTAL =	<u>773</u>	<u>796</u>

GENERAL HOSPITAL  
MEDICAL RECORDS STATISTICAL REPORT

NOVEMBER, 1985

BED COMPLEMENT    --    --    --    --    222

ADMISSIONS

SERVICES	MALE	FEMALE	TOTAL
MEDICAL	51	65	116
SURGICAL	84	67	151
PEDIATRIC	71	43	114
PSYCHIATRIC	4	10	14
OPHTHALMIC	10	10	20
OBSTETRICS	-	195	195
TOTAL	220	390	610
NEWBORN	-	-	159

DISCHARGES

SERVICES	MALE	FEMALE	TOTAL
MEDICAL	45	58	103
SURGICAL	84	62	146
PEDIATRIC	57	48	105
PSYCHIATRIC	2	10	12
OPHTHALMIC	8	10	18
OBSTETRICS	-	187	187
TOTAL	196	375	571
NEWBORN	-	-	161

...../2

PATIENT DAYS

<u>SERVICES</u>			<u>DAYS</u>
MEDICAL			1,064
SURGICAL			1,587
PEDIATRIC			710
PSYCHIATRIC			124
OPHTHALMIC			94
OBSTETRICS			<u>912</u>
	TOTAL	--	4,491
	NEWBORN	--	432

...../3

DEATHS

MEDICAL	14	OVER 48 HRS	12
SURGICAL	3	UNDER 48 HRS	9
PEDIATRIC	4	STILLBIRTHS	5
OBSTETRICS	0	PERINATAL DEATHS	4
TOTAL	= 20		
NEWBORN	= 4	GROSS DEATH RATE	3.8
		PERINATAL DEATH RATE	2.5
		STILLBIRTH RATE	3.0

AVERAGE LENGTH OF STAY

SERVICES	DAYS
MEDICAL	10.3
SURGICAL	10.9
PEDIATRIC	6.8
PSYCHIATRIC	10.3
OPHTHALMIC	5.2
OBSTETRICS	4.9
HOSPITAL AVERAGE LOS	= 7.8
NEWBORN	-- -- -- 2.7

AVERAGE DAILY CENSUS

BED COMPLEMENT	SERVICES	AVG. CENSUS
132	(MEDICAL ) (SURGICAL )	35.5 52.9
42	PEDIATRIC	23.7
7	PSYCHIATRIC	4.1
11	OPHTHALMIC	3.1
30	OBSTETRICS	30.4
<u>222</u>	HOSP. AVERAGE DAILY CENSUS -	<u>149.7</u>
	NEWBORN	14.4

PERCENTAGE OF BED OCCUPANCY

SERVICES	% RATE
MEDICAL ) SURGICAL )	66.9
PEDIATRIC	56.4
PSYCHIATRIC	59.1
OPHTHALMIC	28.5
OBSTETRICS	107.3
	<u>HOSPITAL OCCUPANCY RATE = 67.4</u>

PREPARED BY: MEDICAL RECORDS DEPARTMENT  
GENERAL HOSPITAL  
ST. GEORGE'S  
GRENADA

NOVEMBER 1985

X-RAY DEPARTMENT:

	<u>NO. OF PATIENTS</u>	<u>NO. OF EXAMS</u>
INPATIENTS -	143	152
OUTPATIENTS -	<u>604</u>	<u>618</u>
TOTAL -	<u>747</u>	<u>770</u>

ANATOMICAL PATHOLOGY

	<u>INPATIENT TISSUES</u>	<u>OUTPATIENT TISSUES</u>
GENERAL HOSPITAL	42	17
PRINCESS ALICE HOSPITAL	1	
PRINCESS ROYAL HOSPITAL	<u>1</u>	
TOTAL -	<u>44</u>	

AUTOPSIES:

POLICE -	7	HOSPITAL AUTOPSY RATE: 1.1%
INPATIENTS -	<u>6</u>	
TOTAL -	<u>13</u>	

OVERSEAS SURGICAL SPECIMENS - 13

DEATH LISTING

NOVEMBER 1985

RECORD NO:	SEX	AGE	SERVICE	DIAGNOSIS	+ - 48 HRS	DATE OF DEATH
0-18-05	F	58	MED.	Purulent Meningitis	-	1-11-85
	F	NB	NB	Prematurity	-	1-11-85
6-24-78	M	75	SURG.	Cancer of Larynx	+	6-11-85
6-68-01	M	6	PED.	Chronic Myeloid Leukemia	+	8-11-85
1-59-39	M	72	MED.	Cardiac Failure Ischemic Heart disease	+	8-11-85
5-41-15	F	85	MED.	Stroke, Infection	+	9-11-85
6-71-37	F	80+	MED.	Stroke, Atrial Fib UTI	+	9-11-85
	M	7/12	PED.	Respiratory Distress Bronchiolitis	-	9-11-85
	F	51	MED.	Polyserositis secondary to Rheuma- toid Arthritis	-	10-11-85
	M	3	PED.	Multiple Ileal intussusception mucosal lymphoid	-	11-11-85
6-74-63	M	83	MED.	Recurrent infection; pacemaker failure, stroke	+	12-11-85
	M	41	MED,	Tracheobronchial aspiration of gastric contents	-	13-11-85
6-52-83	M	76	MED.	Sepsis gangrene leg, diabetic ulcer	+	13-11-85
6-75-68	F	52	MED.	Hyperosmolar Coma, Diabetes mellitus, meningitis	-	14-11-85
6-70-30	F	92	MED.	Stroke, Recurrent infection Inonition	+	14-11-85
	M	NB	NB	Perinatal asphyxia with sepsis due to prolonged 2nd stage	-	18-11-85
6-75-12	F	75	MED.	Stroke, Pneumonia UTI	+	19-11-85
6-72-59	M	76	SURG.	Prostate Hypertrophy, Renal failure, uremia	+	19-11-85
2-79-91	F	63	MED.	Cardiac Failure, Paroxysmal Tachycardiac UTI	-	20-11-85
	M	NB	NB	Perinatal asphyxia and sepsis	-	21-11-85

## Appendix F

Project HOPE Activities and  
Accomplishments Through End  
of Second Year in Grenada

## Project HOPE

### ACTIVITIES and ACCOMPLISHMENTS

#### Reintroduction of the University of the West Indies (UWI) to Grenada

- three (3) month rotations of registrars/residents in general surgery, community pediatrics and community medicine
- improving quality of patient care
- exposing young West Indian specialists to Grenada as an alternative place to practice upon completion of their training

#### Dental

- provided dental service in community centers during 1984
- supervision of Grenadian dental auxiliaries
- replacement of dental equipment with newer units in four (4) health centers
- with Grenadian auxiliaries conducted school dental survey
- re-initiated fluoride mouthrinse program in all primary schools
- phased-over all activities to three (3) recently returned West Indian dentists

#### Pediatrics

- facilitated participation of UWI pediatric registrars in the community
- improved pediatric skills of nurse practitioners in community clinics
- extended lab services to community health centers for pediatric screening
- have seen fewer but more appropriate hospital admissions
- follow-up of pediatric cases in patient's community

### Orthopedics

- . development of orthopedic unit at General Hospital (provision of equipment)
- . provision of orthopedic surgeon services during 1985
- . facilitated phase-over of orthopedics to weekly rotation of West Indian orthopedic surgeons from Trinidad

### Internal Medicine

- . provision of service during 1984
- . phase-over by facilitating return of West Indian medical consultant (also to be coordinator of UWI registrar program)

### Anesthesia

- . provision of service
- . improvement of equipment
- . introduction of anesthesia records
- . sponsoring of two (2) Grenadian nurses to regional nurse anesthetist program in Jamaica (to return in July, 1986)

### General Surgery

- . with UWI surgical registrar, provision of service
- . equipping the second operating theatre

### Biomedical Equipment Maintenance

- . development of equipment maintenance shop
- . bench training and formal electronic course for three (3) Grenadian technician trainees
- . collaboration with the Ministry of Health to have one of trainees participate in more intensive 10 month program at CAST in Jamaica
- . phase-over of BME service to Grenadian technicians with intermittent continuing education in areas requested by technicians

### Pathology

- . provision of anatomic pathology service (surgical specimens/autopsies) alleviating the need for Grenada to send specimens off-island
- . some regional specimens now being sent to Grenada

### Medical Technology

- . bench training Grenadian staff in hematology
- . preparation of syllabus and teaching hematology component of laboratory in-service program

### Obstetrics and Gynecology

- . provision of service during 1984
- . facilitating the return of young Grenadian obstetrician in July, 1986
- . training of nurses in the community to do pap smears

### Family Practice

- . with UWI registrar and local district medical officer on the island of Carriacou:
  - provision of service
  - descriptive study of health care delivery in Carriacou
  - initiation of laboratory at the hospital
  - initiation of the school screening program
  - development of a computerized primary health care data base

### Cytology

- . during 1984, development of cytology service in the laboratory of General Hospital (pap smear screening)
- . trained two (2) Grenadians to screen pap smears during 1984
- . (1986) HOPE cytologist team teaching 6 month regional training program in Grenada for students from five (5) other islands in the Caribbean

### Nursing Education

- classroom teaching
- implementation of new Caribbean nursing curriculum
- supervision of student nurses in clinical settings
- instruction of Grenadian tutors in making video cassettes for teaching clinical skills
- sponsoring a Grenadian nurse to do 10 month operating room administration program in the USA

### Supplies Management

- centralization and computerization of procurement, storage and distribution of medical supplies and pharmaceuticals

### Environmental Health

- developed and implemented three (3) month pre-service program (2 of 4 students were enrolled in the certificate program at Barbados Community College)
- introduction of continuing education component in monthly EHO meetings
- technical assistance to the chief environmental health officer
- assisted in revision of environmental health codes
- developed short-term solutions for liquid waste disposal

### Solid Waste

- contracted a West Indian (recognizing regional expertise)
- upgraded dumps to landfill status
- design and implementation of solid waste program (introduction of compactor trucks, building of collection facilities, rescheduling of pick-up routes)
- training of Grenadian as solid waste manager

### Medical Records

- reorganization of record room at General Hospital
- compiling of statistics and accurate hospital census
- catalyzing initiation of an admitting office at General hospital and record rooms at the two smaller hospitals
- training of personnel to staff the two new record rooms

### Radiology

- provision of service in 1986
- evaluation of appropriate level of service for Grenada
- design and implementation of plan for improvement of the radiology department; continuing education for hospital and department staff

To add:

health economist  
information specialist  
health educator  
mental health team