

NATIONAL COUNCIL FOR INTERNATIONAL  
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HEALTH MANPOWER PROJECT: AN EVALUATION

Leonard S. Rosenfeld, M.D., MPH  
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National Council for International Health/Caribbean  
Community Secretariat

Health Manpower Project: An Evaluation

Summary of Recommendations

On the basis of a study of the Health Manpower Project, including review of records and reports, interviews with representatives of responsible agencies, participating governments and related programs and visits to two of the participating countries, a report and recommendations were prepared. The following summary provides the highlights of recommendations included in section V of the report. Supporting observations are presented in earlier sections.

- I. The USAID should extend the time of its agreement with NCIH for Health Manpower Development in the Caribbean, without additional funding, for a period of eighteen months following the termination date in the initial agreement, September 24, 1982.
- II. Program proposed in the event that this extension in time is granted.
  - A. Short-term volunteer assignment of health professionals to the Caribbean community should be continued, with early steps taken to transfer as much of the administrative responsibility as may be feasible to CARICOM.
  - B. Development of inventory of health manpower within a State/Regional cooperative health statistics system.

There is a serious deficiency of data on health manpower needed in monitoring, control and planning. It is recommended that a system for accumulation and analysis of basic health manpower data be developed in two stages:

1. Conduct an inventory of health manpower in the region.
2. Develop methods for a State/Regional cooperative system for accumulating current data on a uniform basis.

To plan and initiate work in both short and long range development of a statistical system, a qualified health statistician should be retained to work with CARICOM for a period of up to six months. Further, to assure continuation of the work after the consultant's departure, a qualified Caribbean National should be appointed to the CARICOM staff to work with him.

- III. Provision be made for development of an expanded program of regional organization of health manpower, building on the structure of the Health Section of CARICOM.

For this purpose, a task force should be constituted by CARICOM with representation from NCIH, the UWI Medical School and participating countries to formulate a health manpower plan within the context of a regional health services system. This plan would be used to inform the public and constituencies of CARICOM, and provide a basis for discussion with various potential supporting agencies. The organizational structure of such a program would provide a framework for development by CARICOM of a comprehensive program of regional organization of health services, concerned with resources and services in addition to manpower.

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Health Manpower Project: An Evaluation

I. Introduction

With the support of a grant from the U.S. Agency for International Development, a Health Manpower Project was jointly sponsored by the National Council for International Health (NCIH) and the Caribbean Community Secretariat (CARICOM). The Project Description, which is part of the agreement signed by USAID and NCIH, cites the following principal goals:

- "1. Improve the relevance and outreach effectiveness of CARICOM's programs and services related to regional primary health care needs; and,
2. Assist participating countries in health manpower planning by providing selected health personnel and related technical services."

The Project provides that the principal focus be placed on assisting those member countries which are less developed. Specific objectives are stated in detail in the Project Description. Emphasis is placed on organizing the program in a manner to assure continuation after the grant is completed.

Section E of the grant agreement between the Caribbean Regional Development Office of USAID and the National Council for International Health provides for evaluations at the end of the first Project year. On June 24, 1982, the undersigned was invited to conduct such an evaluation for the program in July. The schedule provided for briefing in Washington, D.C., July 1 and 2, 1982, and for visits to Barbados with representatives of member states and staff of CARICOM, and for visits to participating countries, July 6 through 22. A report on observations and recommendations was requested by August 16.

Program evaluation is designed to measure the degree to which projected goals are achieved and to suggest ways in which performance might be improved. The term describes a process rather than any specific approach or combination of measurements. Methods adopted depend on the particular purpose of the evaluation and the time and resources available. A wide variety of studies are subsumed under the rubric, "evaluation."

While it is beyond the scope of this report to discuss methodology of program evaluation in any detail, comment on categories of evaluation as described by Stanley would seem germane to make clear the approach taken in this study:

1. Assessment of experts based on visits, discussion and other forms of examination.
2. Presumptive - in which it is presumed that services are adequate because arrangements, such as personnel standards, maintenance of records and statistics in a prescribed manner and organizational structure, are consistent with current practice. Methods of the Joint Commission on Accreditation of Hospitals is an example of this approach.
3. Evaluation based on measurement of progress toward well-defined end results, using carefully controlled methods that have been tested for validity and reliability. Methods of outcome measurement may be applied in situations where the relationships of intervention and outcome have been clearly established and confounding factors have been adequately controlled. While use of outcome measurements is expanding, it is still restricted.

Because of the nature of the program and time constraints, the first approach to evaluation is used in this study. The length of experience under the program and the limited time allotted to the study would preclude pursuing either the second or third alternatives. Assessments are made on the basis of personal experience, and of accepted practice and current precepts in medical care and public health.

#### Scope of review

Accumulation of information and opinion included:

1. Review of reports and correspondence provided by NCIH, AID and PAHO in Washington, D.C., and of documents obtained in the course of the visits in the Caribbean.
2. Interviews with representatives of responsible agencies in Washington, D.C.
3. Interviews with Caribbean principals and representatives of related agencies during meetings of Ministers of Health, July 7-9, 1982. Participation in meeting of Permanent Secretaries, July 9.
4. Visits to St. Vincent and Saint Lucia, July 15 and 16.
5. Telephone interview with Carlene Nelson, Volunteer Nurse Midwife, Montserrat, July 20.

A list of persons interviewed appears in Attachment A.

In formulating observations and conclusions, an effort has been made to be conservative. The analyst is prepared to provide further documentation if necessary to support conclusions. Nevertheless, some of the limitations in the study are identified to facilitate the reader's own assessment:

- a. The program has been in operation for a limited time. Aggregate experience is therefore restricted and the several respondents have had varying degrees of involvement.
- b. Time for observation and interviews, originally limited to slightly more than two weeks, was further restricted by requirements that the evaluator remain in Bridgetown longer than had originally been planned to participate in discussions with program officials, including presentation of a preliminary report at a meeting of the staff of the Caribbean Regional Development Office of USAID on July 21.
- c. Visits to St. Vincent and Saint Lucia were rewarding. Nevertheless, timing of the visits and their limited duration at each site either precluded or curtailed discussion with some personnel involved in significant parts of the program or in related operations.
- d. Because of limited time, it was not possible to interview a systematic sample for a survey of experience and opinion. However, an active system of communication is maintained among these widely scattered communities. This results in a generally high level of information and common understanding among health officials. The relatively high degree of consensus - based probably on a combination of common experience resulting in similar inferences and, acculturation in the course of communication and discussion - suggests that generalization from the comparatively small number of interviews in which expression of opinion was invited is reasonably valid.

## II. Highlights of development

To provide a perspective for observations and conclusions, a review of highlights in the development of the NCIH/CARICOM Health Manpower Project is presented.

In mid 1979, on a visit to the Caribbean area, Ambassador Habib recommended, for social, economic and political reasons, increased assistance to the region, with special attention to health. Voluntary agencies were seen as the vehicle for such assistance.

Acting on this recommendation, Wallace and Gibson conducted a survey in 1979. They recommended initiating the program with one designed to meet health manpower needs in Saint Lucia. The USAID had uncommitted funds for Operating Program Grants that could be put to this purpose. These funds were restricted to support for Private Voluntary Organizations (PVOs). The National Council for International Health (NCIH), an established association of voluntary organizations with international health interests, was invited to submit a proposal. The NCIH responded with such a proposal in January 1980. This provided for a sub-agreement with the Caribbean Community Secretariat (CARICOM), an association of English-speaking states and territories, most of them until very recently, colonies of the United Kingdom. They continue as members of the British Commonwealth.

The CARICOM organization consists of 12 member states and several other Commonwealth countries as observers. The Secretariat of CARICOM, located in Georgetown, Guyana, is organized into Divisions of Economic Affairs, (with a section in sectoral plans and policy and a section in statistics); Functional Cooperation, including sections on Health, Education and Culture, and Technical Cooperation, a Division of General Services and Administration; and, a Division of Law.

The permanent staff of the Health Section includes a chief (Dr. Philip Boyd), a pharmacist, a nurse and an expert in environmental health. A Health Manpower Coordinator (Terence Goldson) was added to the staff of the Division under the provisions of the NCIH/CARICOM agreement signed on May 29, 1981.

The interval between the signing of the USAID/NCIH agreement, September 24, 1980, and the signing of the NCIH/CARICOM sub-agreement has created a dilemma for the three interested parties. The two agreements, which are interdependent, each covering a two-year term, are scheduled to terminate at different times, some eight months apart.

The delay in formulating and executing the sub-agreement was occasioned by, first, a delay in recruiting a CARICOM Health Manpower Coordinator and, secondly, by the time needed for negotiating terms of the agreement within the Caribbean Community. A qualified person was appointed, initially, as consultant to formulate the agreement in January 1981, and later, as Coordinator, June 1, 1981. A Health Manpower Specialist was appointed to the staff of NCIH June 1, 1981, with the understanding that she would devote approximately sixty percent of her time to work in the Caribbean region.

The NCIH requested an extension of the agreement with USAID to coincide with the date of termination of the NCIH/CARICOM agreement. USAID deferred decision pending receipt of the report on evaluation, and recommendations.

Partly out of concern for delay in initiation of assignment of short-term volunteers to the Caribbean, and partly in response to discussion of the desirability of placing primary emphasis on assignments of volunteers during the July 1981 meeting of the CARICOM Health Manpower Advisory Committee, USAID proposed changes in the NCIH/CARICOM agreement by:

- a. eliminating health manpower planning
- b. converting from short-term (2-3 months) to long-term (2-3 years) assignments of volunteers
- c. discontinuing effort to identify U.S.-based volunteer agencies that would sponsor health professionals for work in the Caribbean region.

Pending clarification of the issue and reflection of any changes in the two agreements under which the program was being developed, arrangements for the recruitment/placement of volunteers were delayed. This resulted in the withdrawal of two volunteers who had been recruited. In the Fall of 1981, the Health Manpower Specialist recruited by NCIH resigned.

The NCIH Board of Directors declined to limit the program to placement of volunteers, and offered to assist in transfer of responsibility to another organization. In September 1981, representatives of the eight Lesser Developed Countries (LDCs) declared their support of the original program design, with the proviso that the major emphasis be placed on short-term assignment of volunteers.

Dr. Curtiss Swezy was retained as consultant and later appointed to the NCIH staff to give special attention to mobilization of volunteers for work in the LDCs. Two volunteers were placed in February, 1982: a surgeon in St. Kitts/Nevis and a psychiatrist for Saint Lucia and St. Vincent. These were followed by other assignments. The work of volunteers is discussed in greater detail later in the report.

At meetings of the Conference of Health Ministers of CARICOM, from July 7 through 9, 1982, it was recommended that increased emphasis be placed on health manpower planning. This reflects a change in perception of the needs of the program. One may surmise that the constraints in short-term assignments of volunteers without a frame work of long-term development became apparent on the basis of experience under the program.

### III. Observations and assessments

The following observations and assessments are based on review of documentation and interviews with individuals involved in the Manpower Development Project and with representatives of related agencies. These are discussed under two major rubrics: "Performance" and "Opinions and Perceptions."

A. Performance

1. Short-term volunteer placement

Of 22 requests received, nine have been met by NCIH and four by the Health Manpower Unit of CARICOM on the basis of intergovernmental sharing. Three were filled by other international agencies. Three requests are pending; in three other instances, volunteers recruited by NCIH were, for varying reasons not accepted by the requesting governments. In one instance, the government was able to arrange a long term placement with assistance from the British Commonwealth Secretariat. The following shows the numbers of requests from LDCs and disposition, according to discipline until June 30, 1982:

Response By

Request	NCIH	CARICOM	Other Agencies	Unfilled	Not Accepted
Physicians					
anesthesiologist	3*			1	
ENT				1	
internal medicine			1		
OB/GYN					1
pathologist			1		
pediatrician	1				
psychiatrist	1			1	
radiologist	1				
surgeon	1				1
Non-Physicians					
dental nurse		1			
hospital adminis.					1
nurse-midwife	1				
nutritionist	1				
radiographer		1			
nurse anesthetist		1			
lab technician		1			
pharmacist			1		
TOTAL	9	4	3	3	3

\*One anesthesiologist was recruited by NCIH and assigned by Project HOPE

For persons recruited in the United States, the interval between receipt of request and the offer of services of a volunteer varied from less than one week to five months, the average being about four weeks. The interval was much shorter for placements arranged by the Health Manpower Unit within the Caribbean Area.

Following are estimated average costs of recruitment and assignment of volunteers:

a. Recruitment cost per volunteer (staff time, postage, telephone)	\$ 310
b. Placement cost (air fare, staff time, telephone, postage, xerox, cables, Washington, D.C. per diem)	\$1,296
c. Three months support cost for volunteers in the Caribbean (honorarium, food, incidental expenses)	\$3,146
	<hr/>
	\$4,752

## 2. Health manpower planning

The Health Manpower Unit was established in the Health Section of CARICOM in 1981, as noted above. The Health Manpower Coordinator helps countries document requests for volunteers and coordinate placement efforts with NCIH. He promotes sharing of health manpower resources among the several states. He provides staff service for the Health Manpower Advisory Committee. He is immediately responsible for coordinating arrangements for transfer of the PAHO Regional Allied Health Training Project to CARICOM, and provides liaison with the Caribbean Epidemiological Center.

Terence Goldson, Health Manpower Coordinator, is engaged in accumulating information for an inventory of distributions of health manpower resources in the Caribbean community. As part of this effort, in collaboration with Dr. Harold Drayton, Project Manager of the Regional Allied Health Training Project, Mr. Goldson participated in a study of health needs of a group of small states in the English-speaking Caribbean. On the basis of this study, recommendations were made on sharing of manpower resources among these islands.<sup>2</sup>

A second unit within CARICOM is concerned with training of health service managers, and with developing effective health teams. Margaret Price, Director of the unit, arranges one-to-two-week visits to each participating community to work with managers and supporting staff. Approximately four such visits to each country have been arranged over the past three years. Also, meetings of Country Coordinators of the project are held in Barbados. These programs are organized into courses involving readings and exercises in planning. About two months of training are spread over an 18-month period.

While this unit is funded independently of the Health Manpower Unit created under the NCIH/CARICOM agreement, the functions of the two units are coordinated by Dr. Boyd, Chief of the Health Section.

Health manpower planning under provisions of the NCIH/CARICOM Project should be viewed within the context not only of the economic, social and political status of the community, but also of related programs of other organizations. A number of manpower programs have been launched over the past decade. The more important among these are:

- The Commonwealth Caribbean Regional Project for the Education and Training of Allied Health Personnel. First conceived in 1969, the program was initiated in 1975, under the aegis of PAHO/WHO. Articulated with governments and universities in the region, the program has become a major resource for training personnel for a wide range of professional and technical roles. Among disciplines for which training programs have been mounted are nursing and nurse practitioner services, pharmacy, environmental health, physiotherapy and radiography. Substantial numbers have been trained, both for teaching in and management of health services. In keeping with the principles of the WHO program, emphasis is placed on strengthening manpower resources for primary care. The possibility of integrating this project into the structure of CARICOM is being explored.<sup>3</sup>
- Inter-island eye care service. With support for care received from USAID, the International Eye Foundation provides service and training in eye care, primarily in Saint Lucia, and to a more limited degree in other Eastern Caribbean islands. The project supports the development and distribution of paramedical training materials, and the development and organization of a training program in primary eye care. Through an arrangement with the Massachusetts General Hospital, a qualified ophthalmologist is stationed at Victoria Hospital, Castries, Saint Lucia. This two-year project is scheduled to terminate in 1982.
- Project Hope has invested significantly in manpower development in the region. With funds from philanthropic donations and government grants, it supports positions for pharmacists, sanitarians and dental hygienists in the several LDCs. Nurse educators have been assigned to Antigua and Jamaica. It also arranges for short-term assignments of physician volunteers.

Other organizations with established and potential future interest in health manpower in the Caribbean include the Canadian International Development Agency; the Commonwealth Secretariat of the United Kingdom; the European Development Fund; the British Overseas Development Agency; the Peace Corps; CARE; Project Concern; the University of Texas; Tulane University; the American Public Health Association in collaboration with the University of the West Indies and the University of Pittsburgh; and, the Kellogg Foundation.

It is beyond the scope of this study and beyond the capacity of this analyst in the time allotted to examine the specific goals, organization and interrelationships among the plethora of programs. One cannot but wonder whether there may be a danger of exceeding the organizational capacity of this group of small, newly independent countries to integrate these programs and the capacity of marginal national economies to continue them after termination of external sources of support. Another important question, and one that cannot be addressed without more adequate sources of social and economic information, is the degree to which the various programs are congruent with the status of technological development of the community, and the status of health service organization.

These comments are not designed to discourage the generous support from various international agencies. Rather, they are presented to underline the urgent need to strengthen the structure of health services and facilities for accumulating and analyzing health and related information in the Region, and for coordinating efforts of the multiple independent agencies with interests in the area.

#### B. Opinions and Perceptions

The perceptions of the various interested parties of a program of any complexity are bound to differ. In this section, an effort is made to summarize the observations and opinions of several interested groups: USAID; NCIH; CARICOM and participating countries; volunteers; and representatives of related organizations.

##### 1. USAID

Several concerns about progress under the Project emerged in discussions with members of the Regional Office staff in Barbados.

- a. Slowness in the development of the program
- b. What progress has been made in addressing long term needs?
- c. What have been country reactions to progress so far?
- d. Danger of creating long-term dependency

2. NCIH

Four concerns have been identified in discussion with staff of the National Council.

- a. The length of time to initiate operations, and the additional period required to resolve issues relating to goals and scope of program in 1981
- b. The unresolved discrepancy in time commitments provided in the two agreements: with USAID and with CARICOM
- c. Difficulties in obtaining adequate information from participating countries
- d. Limited progress in health manpower planning

3. CARICOM and participating countries

- a. Experience with short-term volunteers has been highly satisfactory. Dr. Stevens was able to upgrade clinical performance at mental hospital; initiated inservice training; improved administration of mental health service. Quality of care improved and community service initiated by training hospital nurses. Physical facilities were greatly improved. There were similar laudatory comments about other volunteers.
- b. There is wide support among country health officials for long-term as well as short-term assignments. The unlikelihood of recruiting volunteers for more than three months is recognized. They favor the practice of "topping off" (augmenting) salaries, to recruit and retain qualified professionals for longer periods (2-3 years). The difficulties of following this approach under the current grant were perceived, both because of the limited term of the grant and the magnitude of support that would be required.
- c. Question is frequently raised about the practice of recruiting U.S. nationals rather than Caribbean nationals or persons of Caribbean origin.

- d. It is widely recognized that short-term volunteer assignments alone are of limited value, and that this program should be accompanied by one for long range manpower planning and development as provided under the grant. This aspect of the program has received scant attention since the Fall of 1981.
- e. The "brain drain" represents a serious problem, since many physicians trained with state support either do not return upon completion of their education, or return for only a short period of service. These trends should be monitored so that strategies for training and for improvement of incentives to return to their communities of origin may be developed.
- f. There is a consensus among community health officials as well as among volunteers (see infra) about the need for more adequate facilities and equipment if full use is to be made of specialized staff. Much of the equipment that is in situ is not in working order. A Peace Corps volunteer with training in maintenance of medical equipment assigned to St. Vincent has been useful. It was suggested that a regional capability in this field would be an asset. Arrangements have been made for conduct by the National Institutes of Health of a course in Biomedical engineering in Barbados.
- g. Awareness that some of the individual countries are incapable of providing services in some of the basic specialties such as pathology. The need for a well organized central laboratory facility, capable of rapid processing and reporting was suggested. Radiology services could be provided on a subregional basis.
- h. There were several comments by country officials on the attitudes of and limited social responsibility manifested by island physicians. This observation was echoed in comments by volunteers. One may speculate on the reasons for this limited social concern: isolation and inadequate medical staff organization; marginal income; low physician to population ratios; low levels of consumer sophistication. A special study of this issue would be useful in formulating plans for manpower development.

- i. Questions were frequently raised about distribution of program expenditures between Washington and the Caribbean. This was discussed with NCIH staff, who felt that these data did not provide a true picture of the functional distribution of expenditures, since not all disbursements for operations in the Caribbean were clearly identified.

Following is a comparison of the allocation of major categories of expense under the original record of expenditures and as reallocated:

NCIH/CARICOM FINANCIAL STATEMENT  
(October 1, 1980 - May 31, 1982)

<u>Object</u>	<u>Amount</u>	<u>Percent</u>
NCIH	\$100,231	71%
CARICOM	40,619	29%
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TOTAL	\$140,850	100%

EXPENSES REALLOCATED by FUNCTION  
(October 1, 1980 - May 31, 1982)

<u>Object</u>	<u>Amount</u>	<u>Percent</u>
NCIH Expenses in Washington, D.C.	\$ 69,492	49%
NCIH Expenses in Caribbean	30,739	22%
CARICOM	40,619	29%
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TOTAL	\$140,850	100%

#### 4. Volunteers

Two volunteers were interviewed: Dr. John Isgreen, Radiologist at St. Vincent and Ms. Carlene Nelson, Nurse-midwife in Montserrat. Three written evaluations of their experiences, sent by volunteers at the end of their assignments, were reviewed: Dr. Janice Stevens, Psychiatrist in Saint Lucia and St. Vincent; Dr. Charles Livingston, Surgeon at St. Kitts; and Dr. Harry Zutz, Anesthesiologist in Belize. From accounts of health officials and of volunteers, all gave impressive service. With the exception of Dr. Zutz, who found that he was underutilized, volunteers carry a heavy workload. All are hampered by lack of equipment and supporting services. As an example, an automatic X-ray developer and two fluoroscopic units at the hospital in St. Vincent do not function. As a result, the one qualified radiographer spends much time developing film by hand, a costly procedure, and the radiologist is limited in the range of diagnostic procedures he can undertake.

At Montserrat, there is no ultraviolet light for treatment of jaundiced newborns, and no eye protectors for use in exposing such babies to the sun. Delivery room gowns have open sleeves which jeopardize sterile technique. Intravenous fluid equipment is not standardized, and frequently is not adapted to available intravenous equipment. There seems to be a universal lack of intravenous catheters for use in treatment of dehydrated children. There are no blood bank facilities. In general, casualty services are poorly designed and hospital organization in many sites is inadequate. The indifference of physicians is frequently cited. Nursing staff is generally well trained and responsible.

An important byproduct of volunteer assignments are the insights that these qualified professionals can provide concerning needed improvements in facilities and organization. Records of their experience could be of value to country health authorities and to CARICOM for planning. Consideration should be given to preparing an analysis of reports of volunteers for distribution to country health officials and for consideration by the Project Advisory Committee of CARICOM.

C. Related programs

As was indicated above, the writer learned of a number of related programs, with varying sponsorship, that operate in the region. Three are selected for discussion at this point because of their relevance to the NCIH/CARICOM program. If others of equal importance have not been identified, it is left to program principles to explore possible points of articulation and cooperation.

1. University of the West Indies:

The University, and its Medical School, with campuses in Jamaica, Barbados and Trinidad, constitutes a health resource of major importance to the region. In addition to the training of medical students and health administrators, it has forcefully addressed the development of health services in the region. The University has initiated the training of family practitioners, assumed leadership in mounting demonstration of primary health care centers for teaching and service and effectively proved the use of community health aides.<sup>4</sup>

Mona, Jamaica, is the site of the campus where the full medical school curriculum is given. Its Department of Social and Preventive Medicine represents the principal point of articulation with the developing health system. Since 1972, the Department has provided graduate training in public health and health services administration to some 33 physicians, who are now employed in a number of the islands. In 1974, similar training was organized for nonphysicians, some 150 having been trained during the interim. It collaborates in programs of health manpower training and research undertaken under the aegis of the American Public Health Association and the University of Pittsburgh. It is also a participant in a newly-announced grant by the Kellogg Foundation to expand training of family practitioners and to support administration of a primary health care program in Saint Lucia. There will be further discussion of the APHA and Kellogg programs below.

Established in 1967, the Barbados campus offers the last two years of the medical curriculum for 25 of the students who received their basic education in Jamaica. Barbados also offers a one-year rotating internship, and is expanding training in primary care, public health and emergency services. Some of the interns are assigned to other islands for part of their training. In addition, training is being developed in several medical specialties. These courses are accredited by the Commonwealth. Dean Walrond observes that the "brain drain" to the United States has constituted a serious problem.

Given necessary financial support, the Barbados campus could expand its outreach activities to other islands in the Eastern Caribbean. More clinical faculty would be required to arrange regular visits by representatives of the several departments to other islands, a possibility the faculty would be interested in exploring. One alternative strategy would be to affiliate with a U.S. medical school which could rotate senior residents in major specialty fields to Barbados, thus releasing members of the faculty for visits to member states, and to service locum tenens during periods of emergency absence of physicians from their posts.

In response to a request from the Seventh Conference of Ministers Responsible for Health, a special committee was established by the Faculty of Medicine to examine areas of further development of relevance to small states. At a meeting on April 16, 1982 in Trinidad, the Committee identified major problems which the University should address, and suggested strategies that are reasonable and, given appropriate support, are amenable to implementation. Committee discussions demonstrate an awareness among the faculty of the health needs of constituent communities and approaches that would assist the efficient use of resources in addressing these needs. It is urged that these faculty recommendations be brought to the attention of any CARICOM task force that may be established to formulate a master plan for the development of health services, such as this report describes (Section V.B.3). This would assure integration of educational elements of a regional program into the long-range plan for regional organization of health services.

2. American Public Health Association/UWI Program:

In 1981, the APHA received a grant from USAID to improve manpower in the Caribbean Community by means of:

- a. Short-term continuing education for government employees
- b. Degree training for selected individuals at the University of the West Indies

The APHA entered into a subcontract with the University of Pittsburgh to provide consultation in health manpower planning and development. The project is being coordinated with the PAHO Regional Allied Health Manpower Project.

3. The W.K. Kellogg Foundation Grants in Family Medicine and Primary Care:

The Foundation recently awarded two grants to the University of the West Indies, one for undergraduate, graduate and continuing education for physicians in primary care, and one for development of a center for training, research and services in primary care to be located in Saint Lucia. Brief notes on the two grants follow:

- a. Family medicine training: Some \$560,000 was granted to UWI in Jamaica, Barbados and Trinidad/Tobago. The project is designed to develop residency training in family medicine in the Department of Social and Preventive Medicine at Mona, Jamaica; to upgrade facilities in two health centers operated by the Department in Kingston; upgrade family practice sites in Barbados and Trinidad and to prepare teachers of family medicine. Nurse practitioners will be used at the sites to provide physicians with experience in working with them.
- b. A grant of \$782,500 was made to the UWI (Jamaica) to establish a primary care center for teaching, service and research in Saint Lucia. The old Morne Complex developed by the Rockefeller Foundation will be used.

The Center will provide a site for training in Family Medicine at all levels: undergraduate, graduate and postgraduate. It would also offer postgraduate education in nursing, child health, health planning and administration and continuing education for allied health personnel. An advisory committee will be constituted of representatives of PAHO, the Health Ministers conference, UWI and the Government of Saint Lucia.

It would appear that these are programs with which the CARICOM Health Division could collaborate in developing plans for regional organization proposed in Section V of this report.

IV. Conclusions

The health status and needs of any community derive from its social organization, its economy and resources and its political structure. The Caribbean Community consists of a number of English-speaking countries, mostly small island communities scattered over a large ocean area, extending from the Bahamas in the north to northern South America and from the Leeward islands to mainland Central America.

The communities vary significantly in virtually all social, economic and demographic dimensions, as well as in health status and resources. In population, they range from less than 12,000 in Montserrat to some

2.2 million in Jamaica. Recorded infant mortality varies from 16.2 in Jamaica to 59.4 in St. Vincent and the Grenadines. While there are .17 physicians per thousand population in Guyana, the ratio in Barbados is .79. Gross national product per capita varies from a low of \$520 (U.S.) in St. Vincent and the Grenadines to \$4,370 in Trinidad and Tobago.<sup>6</sup> With one or two exceptions, all of these countries established political independence from England during the past few years. In the creation of CARICOM, the countries wisely adopted a strategy of mutual assistance. Obviously, if the status of health and welfare among industrialized societies is established as a goal, these communities have a large gap to close.

In keeping with differences in supply of health resources of industrialized and lesser developed countries, utilization of services in the latter is much lower than in the former. Although there is paucity of health statistics from lesser developed countries, those that are available bear this out. Data from a survey conducted in Colombia in 1965-1966 showed the following levels of physician supply and utilization of physician services, compared to the United States.<sup>7</sup>

	Colombia	United States
MDs/100,000 population	50	145
Physician visits/person/year	1.6	4.5

Furthermore, there was a much greater differential in utilization of services between urban and rural areas. Similar observations were made in a WHO study in Tunisia.<sup>8</sup>

Achieving the even more modest WHO goal, as envisioned in its project "Health for All by the Year 2000,"<sup>9</sup> will require a carefully planned manpower strategy, and most prudent use of resources. Experience and economic realities indicate that much greater use should be made of nurse practitioners and other midlevel practitioners than has been true in the past. Working at strategically located health centers and in surrounding communities, nurse practitioners, under general medical supervision, could meet the need for primary care in a reasonably equitable manner.

A gradual approach to equitable access over time would be possible only by means of strategies that would assure optimum efficiency in use of resources. To arrive at this will require not only increases in health resources (which will depend to a large degree on improvements in basic economy), but also effective organization and planning. Although many people have reservations about the value of health planning, based in part on U.S. experience over the past 15 years, this skepticism should be examined critically. The United States, with its strongly held traditions and values of pluralism and private

enterprise provides a less fertile soil for planning than do most other countries, particularly those in which large proportions of the population depend on public funding of basic services.<sup>10</sup>

Health manpower constitutes an essential resource in a system of health services, but must ultimately be fitted into the system. Components of such a system are:

1. Resources
  - a. Manpower
  - b. Facilities and equipment
2. Organization adequate to assure efficiency in use of resources and maintenance of at least minimum standards
3. Adequate financing
4. Consumer competence: i.e. understanding of health needs and use of services; and, responsible participation in the regimen of care

Within this context, manpower constitutes a fragment. Organization and planning, monitoring and evaluation, financing are other critical elements.

In any jurisdiction, the system should be designed to realize the maximum possible returns for resources invested, in terms of access to health services, quality and efficiency. Within this framework, and based on observations summarized earlier, some comment may be made on the impact of the NCIH/CARICOM Health Manpower Development Program:

1. Assignment of short-term volunteers:
  - a. Those assigned have provided very useful service, both in filling vacuums in the spectrum of basic health services and in upgrading standards of care.
  - b. Both by means of formal training and percept volunteers have had an impact on the performance of indigenous health manpower, particularly among nursing personnel, and probably to a lesser degree among physicians.
  - c. At times, they have been able to raise the sights of health officials in regard to what may be achieved with existing resources, by improving organization of services and extending their scope.
  - d. The reports by volunteers are a valuable byproduct; they produce useful insights into the functioning of the system at the clinical level and reveal deficiencies that should be dealt with in planning, organization and administration of services.

- e. CARICOM and NCIH have, in general, responded promptly to requests for volunteers. Nevertheless, problems and deficiencies of this system in meeting needs have been evident.
- The pool of potential volunteers is limited, and it is not always possible to match the category of available professionals with local requirements. This may lead to frustration in the country where need may be urgent.
  - In several instances, when a suitable volunteer has been found, the requesting country had made other arrangements in the interim. Requesting countries should be asked to notify CARICOM immediately when vacancies are filled, so that the search process may be halted.
  - Need for manpower far surpasses the capacity of the Project's budget and staff. It is often not possible to provide another volunteer immediately on the conclusion of an assignment. This leaves a hiatus, and jeopardizes improvement in standards that may have been achieved.
  - Most volunteers have been U.S. nationals, with problems inherent in cultural differences between the volunteer and the community. The NCIH has not been able to provide volunteers of Caribbean origin because there have been few, if any, applicants of this background. CARICOM and Caribbean institutions have been able to meet some needs by arranging to share manpower and services with constituent countries. Dr. Mahy of UWI in Barbados has played an active role in developing and maintaining mental health services on other islands. The Medical School has provided pathology services, and CARICOM has arranged for temporary assignment of personnel from one jurisdiction to another. These practices should be encouraged.

It has not been possible to respond to local desires for long-term assignments by means of augmenting salaries paid by countries. While few would argue with the premise that, in most instances, long-term assignment of professionals for basic service would be preferable, the time frame of the Project and the magnitude of funding would preclude resorting to this strategy under the terms of the current grant.

## 2. Planning and development

Some progress has been made in this sector of the Program, but thus far it has been modest. Several reasons for this were explored earlier: effort to respond to the more immediate demands for manpower to meet emergency needs; difference in perception of the planning role. Of possible equal importance was the lack of specificity regarding the goals of planning in drafting basic project agreements. This will be discussed in the next section of this report.

Systematic accumulation of information on health needs and resources among CARICOM countries is not now being carried out. The development of current inventory of manpower and facilities appears crucial. The possibility of mounting a state/regional health information system for monitoring, planning and evaluation should be pursued. That this is not an easy task is evident from experience in the United States, with its much more sophisticated statistics facilities. Because of the deficiencies in basic statistics in the Caribbean Community, such a goal may deserve special effort.

## V. Recommendations

As described earlier (Section II page 1), there is a dilemma created by the fact that the basic AID/NCIH agreement is due to terminate September 24, 1982, while the sub-agreement between NCIH and CARICOM is scheduled to terminate May 31, 1983. The USAID Caribbean Mission has before it a request from NCIH to extend its agreement to at least the date of termination of the CARICOM sub-agreement, without additional funding. The Director of the Caribbean Development Office of USAID asked that the question of extension be considered in the course of this study and should extension be recommended, that work to be accomplished during this extended period be described. In the event that the extension is granted, an amended proposal and budget are to be submitted. The following recommendations deal with these issues:

- A. It is recommended that USAID extend the term of its agreement with NCIH for Health Manpower Development in the Caribbean without additional funding for a reasonable period, to allow advancing of elements of the program to a point that would permit continuing development by CARICOM. This organization has demonstrated its capacity for constructive leadership in the design of health services for the region. Extension would further strengthen this role. Extension for a period of 18 months, to March 31, 1984, should be considered. In support of this recommendation are the facts that:

1. Representatives of participating countries strongly support the idea of granting an extension of time, as does Dr. Boyd, Chief of the Health Section of CARICOM.
  2. Termination on September 24, 1982, would not leave time for reallocating responsibility for current operations.
  3. With such an extension, CARICOM and NCIH could formulate plans for long-range, continuing development, and take steps toward its implementation.
- B. Proposed program in the event the extension is granted:
1. Short-term volunteer assignment
    - a. Transfer as much responsibility as may be feasible to CARICOM for assessment of need and for recruitment of volunteers. This may entail bringing the CARICOM Health Manpower Coordinator to Washington for one to two weeks to study the organization of the NCIH Clearinghouse for Health Volunteers. In turn, the person responsible for managing the NCIH Clearinghouse for Health Volunteers should travel to Georgetown, Guyana, for a similar period to help adapt the system to that setting. For any continued recruitment of U.S. nationals, CARICOM may wish to continue an arrangement with NCIH for review of applications and initial orientation.
    - b. Continue program for short-term placement of volunteers for the period of any extension.
  2. Development of inventory of health manpower within a State/Regional Health Statistics System

An adequate data base is fundamental to planning and evaluation. This may be accomplished in two stages.

    - a. Short term: statistical information concerning the supply and distribution of health manpower and related resources required to assess the distribution of need and establish priorities. An initial inventory of manpower within the framework of the health services system should be undertaken to provide valid information about the availability of resources, including:

(1) Manpower

- medical, according to specialty
- nurses, according to qualifications, i.e. staff, public health, nurse practitioner, nurse midwife
- other categories

(2) Hospitals by category (i.e. general, short term, psychiatric, long term, other)

- capacity: beds, bassinets, premature facilities
- services offered and equipment needs
- utilization (i.e. occupancy, average length of stay, surgery, deliveries)

(3) - other facilities

Methods and definition may be adapted from those developed by the National Center for Health Statistics of the U.S. Department of Health and Human Services.<sup>11</sup>

- b. Long term: Concurrently, work should proceed in development of a State/Regional Cooperative Statistical System, for the periodic accumulation and analysis of uniform statistics on manpower and related resources. These would be collected according to standardized methods by each of the participating states and forwarded to the health statistics unit of CARICOM for tabulation and analysis, similar, in principle, to the Cooperative Health Statistics System being developed in the United States.<sup>12</sup>

Because of the time and effort required in developing and gaining acceptance of such a system, this would be a long range effort, but one that would be very worthwhile. Most of the individual countries are too small to initiate and maintain adequate statistical systems, but this undertaking could be justified as a regional activity. It might be inaugurated with one or more states and gradually expanded. The system should be greatly simplified from that being developed in the U.S.

To develop both the short and long range statistical systems, a health statistician should be retained by the Project for assignment to CARICOM for a period of six months to help get the work organized. A Caribbean National, with training in health statistics, should be appointed by CARICOM to work initially with the consultant and carry on after he leaves.

3. Plan for expanded regional organization of health services

The developing program of the Health Division of CARICOM provides a basis for expansion into a more comprehensive regional organization of health services. While the current NCIH/CARICOM Project is addressed to improvement of manpower resources, efforts under the Project would fit into a broader regional program concerned with other resources and services as well. CARICOM should take this concept into account in planning for continuing development.

Regional organization of health services constitutes a system of relationships among medical care and public health facilities and services within a "medical trading area" surrounding a medical center. By articulating general services and facilities in the local community with increasingly specialized services at district and regional levels, it is designed to improve availability, quality and efficiency of services throughout the geographic area. The organization may be adapted to the requirements of clinical care for the individual, education and training in the several health disciplines and development of certain central services that lend themselves to more economic delivery in this manner. The concept of regional organization has been extensively applied throughout the world. Among the services that have been adapted to operate on a regional basis are:

- Consultation services, both clinical and organizational
- Education:        Formal, professional and technical  
                     Graduate, rotation of interns and residents  
                     Continuing
- Central services:    Purchasing  
                         Statistics and accounting  
                         Specialized diagnostic services  
                         Blood banking

In 1948, with support from the Commonwealth Fund, the principle was applied to organization of some 40 hospitals in an eleven county area surrounding Rochester, New York. The Rochester Medical School was responsible for many of the educational programs.<sup>13</sup>

In Puerto Rico in 1956, the island's health services were organized into three regions under provision of the grant from the Rockefeller Foundation. Developed under the aegis of the Department of Health, community hospitals and health centers were linked to regional hospitals, which, in turn, were articulated with the University of Puerto Rico Medical School in Rio Piedras, and operated effectively for two decades.<sup>14</sup>

It is proposed that a task force be constituted by CARICOM with representation from NCIH, the UWI Medical School and participating countries to formulate a plan and seek financial assistance in launching the program. The task force would be responsible for preparing a detailed report setting forth a plan for development of health manpower, within the framework of a comprehensive program of regional organization of health services. The interests of one or more U.S. medical schools in affiliating with the University of the West Indies Medical School for the purpose of exchange of clinical faculty and residents should be explored. A summary of this report would be published for public distribution to promote understanding and discussion of the proposal prior to final adoption by the Conference of Ministers of CARICOM. The report could also serve as a basis for exploring sources of support for the regional program.

It is recommended that the USAID extend the Project 18 months beyond the current date of termination in order to accomplish the above tasks. This would place CARICOM in a stronger position to coordinate and give direction to continuing efforts at improving health manpower in the Eastern Caribbean region and would assure efficient use of available resources.

Leonard S. Rosenfeld, M.D.  
August 12, 1982

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NCIH/ CARICOM Evaluation: Persons interviewed by Dr. Rosenfeld

Washington, D.C.

USAID

Dr. Clifford Pease, Deputy Director, Office of Health  
 Mr. George Hill, Director, Office of Caribbean Affairs  
 Ms. Paula Feeney, Public Health Advisor  
 Mr. Paul McGuire, Program Analyst

PAHO

Dr. S. Paul Ehrlich, Deputy Director  
 Dr. Betty Lockett, Division of Human Resources and Health

NCIH

Dr. Russell Morgan, Executive Director  
 Dr. Curtiss Swezy, Program Manager  
 Mr. Graeme Frelick, Clearinghouse Coordinator

Caribbean

CARICOM

Dr. Philip Boyd, Chief, Health Section  
 Mr. Terrence Goldson, Coordinator, Health Manpower Development Project  
 Ms. Margaret Price, Project Manager, Basic Health Management Development

USAID , RDO

Mr. William B. Wheeler, Director  
 Mr. Ted Morris, Deputy Director  
 Mr. Mark Laskin, Regional Health Advisor  
 Mr. Darwin Clark, Program Analyst  
 Mr. Allen Randlov, Program Analyst  
 Mr. Peter Cross, Consultant

PAHO/WHO

Dr. Harold Drayton, Director, Regional Project for Education and Training  
 of Allied Health Personnel

St. Lucia

Mr. Cornelius Lubin, Permanent Secretary, Ministry of Health and Housing  
 Dr. A.J. DSouza, Director of Health Services

Montserrat

Mrs. Carlene Nelson, Nurse Midwife, Volunteer

St. Vincent

Mr. Owen Cuffy, Permanent Secretary, Ministry of Health  
 Dr. H.A. Jesudason, Senior Medical Officer  
 Dr. F.M. Ballantyne, Medical Superintendent, Kingston General Hospital  
 Mr. John McBride, Health Services Administrative Advisor  
 Dr. Angela Child, Physician, St. Vincent Mental Hospital  
 Dr. John Isgreen, Radiologist, Volunteer

## Persons interviewed by Dr. Rosenfeld (continued)

University of the West Indies

Dr. E.R. Walrond, Vice Dean, Medical School, Barbados

Sir Kenneth Standard, Head, Department of Social and Preventive Medicine

Representatives of other organizations

Sir Kenneth Stuart, Medical Advisor, Commonwealth Secretariat

Dr. Richard Meltzer, Chairman, Health Sciences Faculty, Project Hope

Dr. John Cutler, Professor, University of Pittsburgh School of Public Health

Mr. Gilmore Rocheford, Training Coordinator, Peace Corps, Barbados

Dr. Jack Reynolds, Director, Health Care Operations Research, Chevy Chase, MD.

Dr. Thomas Bacon, Executive Director, Mountain AHEC, Asheville, NC

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