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Annual Report

of the

Howard University

Institutional Development - 122(d) Grant

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FOREWORD

As pointed out in the Foreign Assistance Act (FAA) of 1961, the onus of LDC development resides with the people of the particular LDC itself. However, the FAA also implies that the impetus for development can be augmented by way of outside assistance. As a result, many traditional and conventional approaches to development have taken place over the years since 1961 with modest successes and a multitude of failures. An abundance of well meaning universities and learned scholars have invested millions of tax dollars and scores of man hours hypothesizing, analyzing, and synthesizing developmental issues and constraints. All too often these well meaning universities, endowed with adequate manpower and money, overlooked the fundamentals of development via the optics of those for whom the developmental activities were designed to assist. I am talking about educational activities within the cultural parameters of those who are supposed to be the beneficiaries of any development plan by western strategists - not the acquisition of foreign technologies and culturally bias, sterile, futile, semirelevant and easily forgotten stuff. The reference point here is focused on the grasping and comprehending of feelings of trust and empathy through mutual institutional linkages and sharing. A successful institutional linkage can generate the reciprocity of genuine concerns which fosters the cross-fertilization of ideas, including technology transfer and development.

The 122(D) grant at Howard as a management center, reflects the total administration of the center for the Health Sciences in miniature. University systems and procedures, financial settlements, travel regulations, work matrixes, program analysis, curricula development, new initiatives, completion of forms, strategy sessions, office management, and day-by-day decisions, comprise the very heart of the 122(D) grant's operation. Therefore, the Office Manager of Project Director at Howard, has a responsibility far beyond being a good program monitor. He or she is required to be knowledgeable of the grantor and grantee's modus operandi, the international health mosaic generally, host country conditions and infrastructure, and academia specifically. Administrators/Project Directors must get office production out efficiently, economically, accurately, and qualitatively.

The collective wisdom within the center for Health Sciences at Howard University allows the International Health Project Director this wizardry and forward progress with realistic pragmatism; despite the fact that initial plans, assumptions, and priorities have evolved somewhat differently than expected.

This annual report reflects that forward progress, taking into account the many variables which influence the outcome of any concept between its inception and conclusion.

CUSS REVIEW

A significant portion of grant year 02 was utilized reviewing various components of the University of Yaounde's Center for Health Sciences (CUSS). It was felt that it was necessary to conduct such a review to better understand the variables operating within the Center to which Howard University has a formal linkage. The basic assumption being that the expansion of Howard's capabilities to address international health problems must be analyzed in the milieu where such problems exists. An adequate knowledge of the CUSS infrastructure is vital to the existing linkage. Information obtained from such a review would better allow Howard to refine areas of collaboration between the two Universities.

The review required an evaluation of the CUSS academic calendar/school year cycle; an analysis of commonly used terminology e.g. Primary Health Care, Environmentalist, etc.; relationships between the Ministry of Health (MOH) and the Ministry of Education (MOE) as they relate to the training of health professionals in Cameroon; educational resources materials available at CUSS; the educational approach utilized by the CUSS Faculty; Cameroonian health needs as perceived by their University officials; and finally the methodology being used to integrate, at the community level, those activities for which CUSS students are being trained.

Ordinarily, a review of those items listed above should not have taken long to grasp. However, a great deal of mutual understanding and trust was necessary to clarify the cultural and institutional differences which exist between the two Universities. This was further complicated by a degree of confusion between the concept of a grant versus that of a contract. It was assumed by CUSS officials that Howard University was acting as a contractor rather than an institutional grantee. A few salient points from the review will be included in this report because they form the bases of the assistance which Howard intends to offer to CUSS.

The CUSS Educational Approach

In CUSS, the approach utilized to favorably alter health conditions in Cameroon revolve around the training of teams of health professionals. The Medical Student (EM) is considered the team leader and as such is the primary individual in the educational process. It is expected that the Medical Students will have the following background upon completion of the CUSS medical course of study:

1. A good scientific educational foundation;
2. Broad clinical abilities;
3. A strong public health orientation;
4. Team leadership skills;
5. Hospital administration acumen;
6. Adaptability to varying physical and cultural environments; and
7. A well developed social conscience.

Other members of the health team fall under the post-basic nursing (CESSI) and the health technician programs; the former is two years and the latter is three years in duration. Greater details are considered unnecessary for this report.

The field programs in community medicine at CUSS are arranged by academic year as follows:

COMMUNITY MEDICINE

EM-3	3 January - 15 March
CESSI II	15 April - 15 June

EM-4	3 January - 31 January
CESSI I	

EM-5	
CESSI II	1 March - 30 April
TECHNICIANS III	

EM-6	January - April - Integrated Medicine - District Hospital
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EM-1	
EM-2	15 June - 15 October
EM-3	

EM-4	15 July - 15 September
EM-5	

EM-6	Thesis - 1 thru 15 October (Presentations)
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The CUSS educational strategy is predicated on the belief that students fare best if their work is partially in large groups, part in small groups and part individualized. This multi-dimensional approach is viewed by CUSS officials as unique and appropriate for Cameroon.

In this regard, an examination of the CUSS educational resources center or library was carried out. The paucity of movies, filmstrips, tape recorders and other audio-visual aids was immediately apparent. Graphs, charts, journals and books for the most part were old and in need of replacement or proper binding. Therefore, these supportive educational resource materials, are under utilized. This limits the teaching flexibility to chalkboards, lectures, displays and demonstrations; all requiring the presence of an instructor. Extra tutorial assistance without audio-visual aids tends to further burden the small and already overburdened professional faculty. Therefore, the current team teaching technique is a manpower intensive pedagogical approach. Though well planned, University health demonstration projects often suffer because of lack of support. They are designed to take place in a comparatively small community within easy reach for both CUSS Faculty and students. Many of the successful projects, more often than not, are supported by a benevolent foundation or external donor agencies. Additionally, these demonstration projects tend to point out the lack of community sewage disposal systems, consistent drug supplies, inadequate referral systems, poor disease surveillances, and inadequate community education; problems about which most of the students and faculty can do nothing.

The evaluation of demonstration projects appears to be another very difficult task for the CUSS Faculty. Recording, collecting and retrieving of health data is encouraged but almost impossible to do consistently. The size and types of family structure, occupations and socio-economic status of individuals, religions, age-sex distributions and local resources are seldom catalogued.

Howard University's International Health Program intends to provide as much assistance to CUSS as possible in the areas of library resource materials, faculty manpower support, and training techniques via demonstration projects. However, supplementary funds will be needed to undertake such activities.

Institutional Linkage

The institutional linkage agreement between Howard University and the University of Yaounde/CUSS was signed September 13, 1979. This institutional linkage was but one of the two proposed in the 122(d) grant award. In order to bring the second linkage to fruition, a visit was planned to East Africa to communicate Howard's desire for a second linkage with the University of Nairobi in Kenya. However, prior to traveling to Kenya, contact had been made with officials from the Indian Ocean State of Mauritius. It was evident that from these contacts, the government of Mauritius is interested in having Howard University's Center for the Health Sciences, consider development of a program of health care assistance for the people of Mauritius. Therefore, as a part of the institutional linkage visit to Kenya, a stop in Mauritius was made. A general summary of these East Africa visits are enclosed as Appendix A.

Due to our perceived need to maximize Howard's contacts with the CUSS, it was deemed appropriate to re-visit Cameroon. Additionally, the Vice President of the Division of Health Affairs, Dr. Carlton Alexis, had not had an orientation visit to the University to which Howard is linked.

The first order of business on Monday June 30, 1980 was a meeting with the USAID Mission Director, Mr. James Williams. After this brief meeting with Mr. Williams, Drs. Alexis, Gaston and Sinnette met with the Chancellor of the University of Yaounde, Mr. Bella Mbappe and with the Vice Chancellor, Professor Victor A. Ngu. The meeting was cordial and centered on the theme of our mutual institutional linkage. The presence of Dr. Alexis reinforced the commitment of Howard University to the concepts of our linkage agreement.

Subsequent meetings were held with Professors Eben-Moussi (Director of CUSS) and his deputy, Professor Dan Lantum. The agenda items of the meetings related primarily to the proposed Bi-Institutional Linkage Seminar, to be held at Howard University; the refinement of various didactic and logistical considerations of the forthcoming involvement of the grant Nutritionist during her stay in Cameroon; a review of CUSS for Dr. Alexis; and the delineation of future linkage activities between Howard and CUSS.

Future Linkage Activities

The future Howard/CUSS programmatic activities under consideration are as follows:

1980-1981

- (A) A Bi-Institutional Linkage Seminar at Howard University.
- (B) A Howard University Faculty will teach at CUSS in the area of Nutrition for one semester.
- (C) A visit to CUSS by a Howard University faculty member in the Department of Community Medicine and Family Practice and;
- (D) A summary report of the first faculty exchange.

1981-1982

- (A) A Bi-Institutional Linkage Seminar at CUSS.
- (B) Soliciting the support of the Basic Science Faculty for candidates to provide short term lectures in specific disciplines at CUSS.
- (C) A delineation of new linkage activities as seemed mutually appropriate.
- (D) A review of all health related activities for programmatic expansion.

Seminar Planning

As mentioned above, a bi-institutional seminar was planned to be held at Howard University. This activity, as expected, consumed a great deal of time. The seminar was designed to be a multi-purpose affair covering the following general areas:

1. To provide an opportunity for selected members of the administration and faculty of the University of Yaounde (CUSS) to participate in a collegial exchange with their counterparts at Howard University;
2. To permit the representatives of the United Republic of Cameroon, both foreign and domestic, to meet with the central administration of Howard University and the Deans of the academic units at Howard that are involved with the linkage to the University of Yaounde;
3. To allow the representatives of the United Republic of Cameroon an opportunity to visit the campuses of Howard University;

4. To foster amongst the representatives of the University of Yaounde, a greater understanding of the capacity and capabilities of Howard University; and

5. To stimulate discussions between the responsible individuals at both institutions around the possibility of new health initiatives for consideration in the future.

The seminar was originally scheduled to take place prior to the end of grant year 02. Because of other commitments at CUSS, however, the University officials from Cameroon were unable to leave their post until early November of grant year 03. This change required extensive revisions in the arrangements previously agreed upon, e.g., place, dates, seminar presentors, publicity, etc.

INTERNATIONAL HEALTH CURRICULA DEVELOPMENT

Curricula development in internationally related health issues continues to be a major activity of the 122(d) grant faculty. This activity is designed to provide Howard students with more course options in international health, thus adding to their knowledge of world-wide health issues. It should be reemphasized that any course developed by the 122(D) faculty must obtain approval of the curriculum committee within the school or college in which the course is to be taught. Specifically, curricula planning and course designs are tailored to the teacher's competence areas and the needs of the colleges for such course options.

<u>COURSE NO.</u>	<u>COLLEGE/DEPT</u>	<u>COURSE TITLE</u>	<u>CREDIT HOURS</u>	<u>INSTRUCTOR</u>
AH-570-100	Allied Health Sciences	International Health Perspectives & Health Delivery Systems	3	Dr. Ahmed Moen
HA-570-200	Allied Health Sciences	Comparative Health Health Perspectives Training & Utilization of Health Manpower	3	Dr. Ahmed Moen
HE-186-192-01	Human Ecology	International Nutrition	3	Dr. Allan Johnson
HE-186-192-02	Human Ecology	Nutrition Problems in Africa-Causes Effects & Solutions	3	Dr. Allan Johnson
HE-193-199-02	Human Ecology	Environmental Health in Developing Countries	3	Dr. Kunle Kassim
PH-655-100-02	College of Medicine	Introduction to International Health Care: Primary Care Delivery Services	3	Dis. Marilyn Edmondson, Allan Johnson, Kunle Kassim Ahmed Moen and John Karefa-Smart

<u>COURSE</u>	<u>COLLEGE/DEPT</u>	<u>COURSE TITLE</u>	<u>CREDIT HOURS</u>	<u>INSTRUCTOR</u>
HE-193-192-01	Human Ecology	Environmental Epidemiology	3	Dr. Kunle Kassim

Additionally, several courses have been developed that are awaiting college approval, e.g. Chemical and Biological Agents in Environmental Pollution, Environmental Epidemiology, and Environmental Health, Appropriate Technologies for Developing Countries.

An eight week competency based Health Planning course has been developed to take place during the summer for a limited number of third world nationals. The course has not been approved but it is designed to provide USAID-missions with a training announcement for their consideration. The course is enclosed as Appendix B.

FACULTY PARTICIPATION IN DEVELOPED COURSE

The 122(D) faculty members serve as a guest lecturers, advisors, or course coordinators in such courses as Global Epidemiology (909-218-01 College of Medicine); International Health Problems (909-233-01 College of Medicine); and Introduction to Patient Care II (950-102 College of Medicine).

SERVICE CAPABILITY

The overriding purpose of this activity is to make available a cadre of multidisciplinary health experts to serve other academic institutions, LDC's, and donor international agencies; while at the same time strengthening Howard University's utility in International Health. Additionally, the Vice-President for Health Affairs at Howard has identified the 122(D) Grant office as the administrative nucleus for all subsequent international health projects initiated and/or supported via grant personnel. Therefore, the USAID grant award is fulfilling its intentions of providing a center of excellence at Howard University in International Health.

The 122(D) grant has consistently provided services to the University since its inception. Faculty members have been engaged in a variety of services both domestic and foreign. The following represents a sample of such service during grant year 02.

1. Consultant Services to the Ministry of Health of Kuwait-Health Manpower Needs Analysis;
2. Consultant Services to the government of Ghana, West Africa;
3. Broadcast on the Voice of America;
4. Presentations at various organizational meetings, e.g. the Federation of American Society for Experimental Biology;
5. Public Relations Activities for Howard University - e.g. Howard University: A New Direction (A slide-tape presentation narrated by actor James Earl Jones). This Public Relations presentation for the total University, includes a segment on International Health designed by the 122(D) Grant;
6. University representation at various national and international conferences - e.g. the American Public Health Association, the National Council for International Health, the Ministers of Health for the Americas etc.;
7. Liaison activities with various International Agencies, Organizations, and Foreign Embassies - e.g. USAID, the Overseas Private Investment Corporation, the Nigerian Universities Commission, the Peace Corps, the Embassies of Mauritius, Cameroon, Kenya, Liberia, Senegal, etc.;

8. Receiving foreign visitors via various components of the Center for the Health Science at Howard - e.g. Howard University Hospital, The College of Medicine, The Center for Sickle Cell Disease;
9. Providing resource material and literature in International Health matters to both faculty and students at Howard and elsewhere; and
10. Assisting various Departments/Colleges and Schools within Howard University serving on committees, panels, and proposal review teams, e.g. the committee on Infectious Diseases & Immunology; developing training grant applications and grant proposals and service on student advanced degree committees or thesis panels.

This final aspect is elaborated upon in greater detail below since it provides an excellent example of the type of services provided by the International Health Program.

(A) ACTIVITIES OF THE IMMUNOLOGY AND INFECTIOUS DISEASES STUDY GROUP

In recognition of the need for research on international health problems at Howard University and with the support of the International Health Program, the Dean of the College of Medicine, Dr. Russell Miller, convened a meeting of selected faculty members on June 19, 1980. These members came from the Departments of Microbiology, Medicine, Community Health, Oncology and the International Health Program. The faculty members were invited on the basis of their interests and work in immunology and infectious diseases. The Dean charged the members, henceforth referred to as the Immunology and Infectious Diseases Study Group, to explore the area of tropical diseases for recommendations that would enable Howard University to undertake significant research activities in this area. Drs. Curla Walters of the Department of Microbiology and Floyd Malveaux of the Department of Medicine were elected co-chairpersons of the study group.

Subcommittees chaired by Drs. Karefa-Smart and Kassim of the 122(D) grant were appointed at a later meeting to make recommendations for specific research projects, and to identify donor agencies with interest in tropical diseases. The subcommittee on research priorities compiled a roster of members of the study group, listing the research interest and activities of each member, and also indicating one or more tropical diseases in which they had an interest. This roster is significant in the sense that it represents specific faculty interests in tropical diseases pooled for the purpose of collectively focussing diverse expertise on a major health problem - Appendix (C).

Taking into consideration the broad interests represented by the total group membership, the subcommittee on research priorities recommended schistosomiasis as a primary disease entity which offers the most likely opportunities for research. Following acceptance of this recommendation, the International Health Program was charged with the responsibility of establishing contacts with the government of Liberia for possible collaborative research efforts with the medical school in Monrovia. The choice of Liberia is a sound one, because of the country is typical of many developing countries where schistosomiasis and other communicable diseases are endemic. It is hoped that a linkage of the two schools would provide an opportunity for Howard faculty members and those of the Liberian medical school to join hands in exploring solutions to some of Liberia's health problems.

The study group's activities and deliberations have been productive, and the recommendations for the establishment of tropical diseases research activity at Howard, along with the proposed liaison with the medical school in Liberia, have now been forwarded to the Dean of the College of Medicine for his consideration.

(B) PANELS

To specifically illuminate the total spectrum of the services being provided by the international health - 122(D) program, one would need to examine each individual employee' activities. However, in the interest of brevity, categorial aggregates are listed in this report.

Public awareness of international health courses, generated by the 122(D) grant, is gradually becoming widespread throughout many Washington area universities. Several students, from areas schools that belong to the consortia of Universities of which Howard is a member, have taken credit courses in the College of Allied Health Sciences. As a consequence, the 122(D) grant faculty in Allied Health, has served on graduate thesis panels for students in American University.

122(D) grant personnel has been asked to serve as panelists on other 122(D) grant recipient institutional panels and panels in various intrauniversity units.

(C) PROPOSAL REVIEWS

A proposal draft was developed in the School of Communications of Howard University to address auditory acuity problems in a Less Developed Country. The proposal identified Cameroon as a possible candidate country for this activity and was submitted to the international health office for review. This review was conducted and specific revisions recommended. The proposal was also discussed with Cameroonian officials who in turn made additional suggestions for revision.

In addition, proposals relating to environmental health, anemia, and malaria have also been referred to the international health office for suggestions and recommendations. The reviews are not only a service to the Division of Health Affairs but also demonstrates a growing recognition of the needs for centralization of such services.

FINANCIAL SUMMARY

The Financial Summary disclosed below reflects actual operating and business expenses incurred by the faculty and staff of the 122(D) Grant during the 02 year. The expenditures herein reported may differ slightly from those in the subsequent report submitted by the Office of the Comptroller at Howard University. The Comptroller's office uses the Financial Accounting System (FAS) to record financial transactions submitted by the International Health Program. Such recordings do not occur until the program's submitted budget expenditures forms are received by the Office of the Comptroller. At that time, the funds are only encumbered by the Comptroller's Office for future disbursement. Final disbursement of funds to satisfy a requested service or expenditure, does not actually occur until three to six weeks later. On the other hand, the International Health Program records all expenditures and financial transactions as they occur. These two methods in effect, are complementary in terms of cross-references. However, regular reviews are necessary to reconcile the dual systems which exist.

FINANCIAL SUMMARY - FISCAL YEAR #2 - 9-22-79 thru 9-21-80

<u>CATEGORY</u>	<u>AMOUNT EXPENDED</u>
ADMINISTRATIVE SALARIES	\$ 66,615
FRINGE BENEFITS (Administrative)	13,323
FACULTY SALARIES	70,247
FRINGE BENEFITS (Faculty)	14,054
GRADUATE ASSISTANT	5,022
OFFICE SUPPLIES	1,261
MISCELLANEOUS	36
CONSULTANTS	600
EQUIPMENT-RENTAL	8,617
COMMUNICATION-DOMESTIC	344
TRAVEL - DOMESTIC-LOCAL	471
TRAVEL - DOMESTIC OUT-OF-STATE	4,532
TRAVEL - FOREIGN	9,465
OFFICE EQUIPMENT	891
SUNDRY ACCOUNT	1,741
	<u>\$197,219</u>

PROJECT PROBLEMS:

(A) It was agreed by Howard and CUSS that a faculty member from Howard would teach nutrition to CUSS students in Cameroon for one academic semester. One teacher from Howard could teach thirty or more students at CUSS and would be more cost effective than trying to send a much smaller number of students to Howard.

The 122(D) Nutritionist was identified to teach the course and agreed to do so in CUSS for the specified period of time. A course outline was developed and collectively agreed upon; a set of textbooks were reviewed, selected, and purchased; and approval for personal check cashing privileges for the Howard exchange faculty was obtained from the U. S. Embassy in Yaounde. As time approached for the scheduled departure for Cameroon, it was discovered that the Nutritionist had accepted a position with the Peace Corps as a Country Director. This information came as a complete surprise and created major difficulties with the faculty exchange agreement with CUSS.

After several conversations, it was understood that the Nutritionist opted to have an administrative and LDC experience simultaneously. The departure of the Nutritionist was understandable but programmatically disruptive in terms of both timing and commitment.

(B) The travel settlement reports for International Travel appear to be an area which will require clarification for the Howard University comptroller's office. The standard provisions of the 122(D) Grant, under Travel and Transportation, indicates that "Travel Allowances shall be reimbursed in accordance with the Federal Travel Regulations (FTR)". The USAID international per diem rates are currently being utilized by the 122(D) Grant for all international travel under the aegis of the grant. Therefore, all international travel by grant personnel has taken place under the FTR Regulations and the USAID per diem rates. However, questions have been raised by the Comptroller's office at Howard about such matters as reimbursement for the application of Subsection 157-2 of the FTR.

The standard provisions aforementioned also requires the grantee to obtain written concurrence from the cognizant technical office in AID prior to sending any individual outside the United States financed under the grant. This cognizant technical office (USAID/AFR) has identified a specific officer for all grant related liaison activities with the granting agency; who has in turn authorized the Howard Project Director to utilize the FTR - which includes Subsection 157-2. Hopefully, this matter will be resolved in the near future.

APPENDIX A

TRIP REPORT

Madagascar, Comoros, Mauritius and Seychelles are four island nations in the Western Indian Ocean. These Island Nations fall within the small program statement of the Indian Ocean States, funded by the Agency of International Development. Drs. Alonzo Gaston and Calvin Sinnette, on behalf of the International Health Program of Howard University, visited the Island of Mauritius.

Fortunately, an audience was granted with Sir Seewoosagur Ramgoolam who is currently the President or Prime Minister of Mauritius. Additionally, the Howard representatives were invited to visit a session of Parliament.

COUNTRY ANALYSIS

The nation of Mauritius consists of the main island of Mauritius and a number of small islands, islets and atolls the principal one being the island of Rodrigues.

The island of Mauritius lies at latitude 20 South and longitude 57 East, that is some 500 miles off the east coast of Madagascar. The area of the island is 716 sq. miles and the ground rises to an elongated central plateau, lying roughly North-South, the altitude above sea level is 1,800 ft. to 1,900 ft. The plateau is bounded on the North, East and South-West by abrupt and broken mountain ridges. On the South and South-East it slopes gradually to the sea. The highest mountain peak is 2,711 ft. The climate of Mauritius is subtropical and maritime and the mountainous nature of the island creates a wide range of rainfall and temperature. Humidity is rather high throughout the year with the rain falling mainly in summer. The western region known as Black River district is the driest part of the island. Cyclones may occur during the summer months, i.e. November to April with the highest frequency in January and February.

In March, 1968, Mauritius became independent and chose to stay within the Commonwealth and in April of the same year it became a full Member State of the United Nations.

The population at the 1972 census was 826,199 made up of 413,580 males and 412,619 females with 40.1% of the population under the age of 15 years, 56.1% in the age group of 15 to 64 years and 3.8% over 65 years; in 1976 these percentages changed to 36.9, 59.2 and 3.9 respectively. The estimated mid year population in 1977 was 881,761 and the mean annual rate of natural increase during the period 1973-1977 was 1.66%. Life expectancy at birth which was 58.7 years for male and 61.9 years for females during the period 1961-63 rose to 60.7 and 65.3 respectively during the period 1971-73. The estimated population of Port-Louis, the capital of the island, was 141,300 as at 31st December, 1976.

Mauritius is a diverse country which had over time been populated by immigrants from Europe, Africa, India and China. The three distinct ethnic categories registered in the 1971 census were Indians (Hindus: 52%; Muslims: 17%; predominantly European white 2%; and Chinese 3%. The remaining 28 percent of the population falls within the general heading of Creole, referring to mixed Indian, African or European. Occupations tend to be confined to members of certain groups which draw on kin ties and friendship networks for job recruitment. In this fashion, Chinese predominate as retailers, Gujerati Moslems are importers, and Franco-Mauritians own most of the sugar and run most hotels and importing houses: these areas require the most capital, are correspondingly remunerative, and are difficult of access by others. On the lower end of the scale, Indians are the agricultural laborers (some are craftsmen and artisans), and Creoles are the domestics, dockers, fishermen and the bulk of the artisans. The civil service is the major meeting ground for rival and upwardly mobile Indians, Creoles and Chinese.

Residential interspersion is a unifying feature of Mauritius's plural society but kinship ties are often paramount in organizing labor. Joint family residence arrangements are common within clans. Retailers and small-holders, for example, look first to the family and not to outsiders for additions to their labor pool. Even though Mauritians enjoy higher per capita incomes than their counterparts in most developing countries (1978 per capita GDP: U.S. \$949), and their standards of well-being are relatively high, poverty on both Mauritius and outlying islands is widespread. Incomes are sharply

skewed, and a large poor-population, rural or recently rural, is becoming increasingly disadvantaged as the structure of the economy shifts from one of sugar dominance to a more diversified one including technically sophisticated light industries.

Poverty can be found especially in rural areas and also in urban areas on the island dependency Rodrigues which lies some 350 miles East of Mauritius at latitude 19° South and 64° East has a total area of 40 sq. miles. Here 30,000 persons live at very low standards. The Rodrigian population survive on 27,000 acres of deteriorated crop land which produces maize and onions. This poverty of resources is reflected in the low per capita level of income \$120. The only cash crop is onions which are exported to the main island.¹

Ministry of Health

The activities of the Ministry of Health are coordinated by the Permanent Secretary, assisted by the Principal Assistant Secretary and four Administrative Officers on the administrative side and by the Chief Medical Officer, four Principal Medical Officers, one Chief Hospital Administrator and a Nursing Officer in chief with a deputy on the technical side.

The Principal Assistant Secretary is the Head of the Administrative Division. This division is concerned with the formulation of policy, and handling of all establishment and personal matters, the control of expenditure, the collection of revenue, office organisation and management and generally all administrative and executive matters.

The Chief Medical Officer is the Head of the professional and technical side of the Ministry. He advises the Minister and the Permanent Secretary on the formulation of health policies and programmes in the curative, preventive and promotive fields, directs and supervises implementation of health programmes. He is also responsible for the smooth discharge of the work of all professional and technical officers of the Ministry. He is assisted by:

1 USAID document

- (a) a Principal Medical Officer (Curative) who is in charge of all curative services, i.e. hospitals, dispensaries and all other institutions for the treatment of sick;
- (b) a Principal Medical Officer (Family Planning, Maternal and Child Health Services) who is responsible for the national family planning programme and the maternal child health services outside hospitals;
- (c) a Principal Medical Officer (Planning) who is responsible for framing development plans and health programmes in accordance with approved policy and their implementation, training of the health personnel both abroad and locally, collection and analysis of all health statistics;
- (d) a Principal Medical Officer (Preventive) in charge of all the environmental health services, port health services, school health services, immunization services and the public health laboratories.

As one might expect, the most expensive aspect of the Mauritius health structure falls within the curative services area:

Dispensaries

The dispensary is the first contact level in the government health care system. It is staffed by a Nursing Officer and an Attendant. It receives the visit of the Medical Officer three to five times a week depending on the work load. Its functions are limited to elementary care of minor injuries and ailment, diagnosis and treatment of common diseases, and referral of patients whose conditions require intervention to the nearest hospital.

Four new dispensaries have been opened, bringing a total of 49 static and 5 mobile dispensaries for the island of Mauritius. Rodrigues island has two static and one mobile dispensaries.

District Hospitals

There are three district hospitals in Mauritius, namely Flacq, Mahebourg and Souillac Hospitals. The medical and nursing staff have been strengthened in the three hospitals, which are now receiving regular visits by specialists from regional hospitals. Mahebourg Hospital has been equipped with an operating theatre so that minor operations are now performed locally.

Rodrigues has one district hospital - Queen Elizabeth Hospital at Port Mathurin and two cottage hospitals at Mont Lubin and La Ferme. The Queen Elizabeth Hospital is provided with an operating theatre, laboratory and x-ray facilities. The establishment of a regular air-link with Rodrigues has facilitated the transport of patients who need urgent care in specialized units.

Regional Hospitals

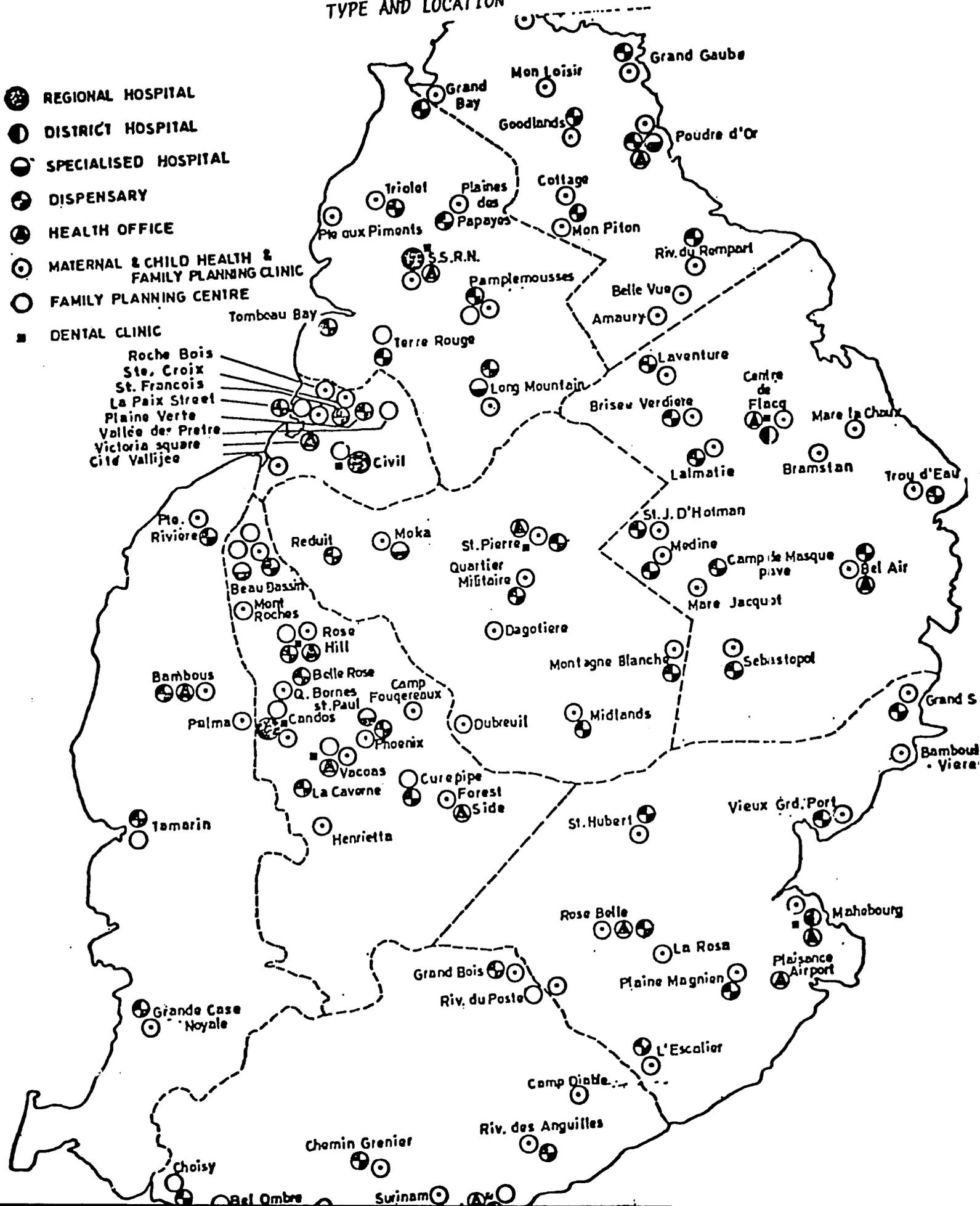
Victoria, Civil and Sir Seewoosagur Ramgoolam National Hospitals are the three regional hospitals. Each center has a well defined catchment zone, and offers multidisciplinary services under the direct attention and supervision of specialists. These hospitals are equipped and staffed to serve as centers of excellence for diagnosis and treatment. The activities include inpatient care, specialist outpatient services, accident and emergency services, rehabilitation of the disabled, advice and help to the district hospitals and supervision of dispensaries falling within the catchment area. The Radiotherapy Unit at Victoria Hospital and the Dermatology Unit at Sir Seewoosagur Ramgoolam National Hospital, also serve as national centers for treatment respectively of malignant diseases and leprosy. In 1976 both Civil and Sir Seewoosagur Ramgoolam National Hospitals were equipped with their own orthopaedic units.

MAURITIUS HEALTH FACILITIES BY

TYPE AND LOCATION

- REGIONAL HOSPITAL
- ⊙ DISTRICT HOSPITAL
- ⊙ SPECIALISED HOSPITAL
- ⊙ DISPENSARY
- ⊙ HEALTH OFFICE
- ⊙ MATERNAL & CHILD HEALTH & FAMILY PLANNING CLINIC
- ⊙ FAMILY PLANNING CENTRE
- DENTAL CLINIC

Roche Bois
Ste. Croix
St. Francois
La Paix Street
Plaine Verte
Vallée des Pretre
Victoria square
Cité Vallijee



**SUMMARY OF WORK PERFORMED IN HOSPITALS AND DISPENSARIES
IN THE ISLAND OF MAURITIUS**

<i>Year</i>	1973	1974	1975	1976	1977
1. Total No. of hospital beds ...	2,738	2,737	2,780	2,802	2,837
2. Total number of Admissions ...	60,042	67,106	79,784	76,521	86,288
3. Total number of Deaths ...	2,075	1,634	1,995	1,790	1,925
4. Total number of Deliveries:					
(a) Live Births ...	7,870	9,827	10,564	11,704	12,503
(b) Still Births ...	359	494	515	461	444
5. Total number of Operations:					
(a) On In-patients ...	13,171	14,325	14,564	16,124	18,086
(b) On Out-patients ...	45,112	41,722	43,800	42,445	49,279
6. Total out-patient Attendances in hospitals (including Casualty department) ...	921,169	1,166,677	1,312,244	1,224,536	1,282,255
7. Total out-patient Attendances in dispensaries ...	1,763,871	1,492,238	1,508,327	1,527,773	1,775,026

DISTRIBUTION OF HOSPITAL BEDS IN MAURITIUS

	1973	1974	1975	1976	1977
1. Medical ...	620	612	586	572	556
2. Surgical ...	247	241	269	284	299
3. Obstetrics ...	182	208	216	206	246
4. Gynaecology ...	90	90	98	82	88
5. Tuberculosis ...	144	147	146	146	144
6. Orthopaedics ...	169	173	196	220	207
7. Paediatrics ...	164	166	159	156	161
8. Ophthalmology ...	78	79	73	57	58
9. Ear Nose and Throat ...	28	27	26	34	35
10. Infective diseases ...	15	17	11	47	47
11. Psychiatric ...	874	855	884	884	884
12. Leper ...	49	49	40	37	37
13. Radiotherapy ...	43	42	42	43	43
14. Burns ...	35	31	34	34	32
Total ...	2,738	2,737	2,780	2,802	2,837

REPORTED HEALTH NEEDS

(A) The preventive and curative principal medical officers indicated a rise in drug abuse throughout the island. It appears as if opium and marijuana use is causing a significant problem amongst young Mauritians. However, there has not been a detailed survey conducted on this problem.

(B) It was reported that manpower training is needed immediately in rehabilitation services, which includes:

1. Occupational Therapy
2. Physiotherapy (particularly for the aged)
3. Speech Therapy

(C) The Ministry of Health (MOH) has been given a renal dialysis machine which it is extremely anxious to put into use. It was suggested that Howard University personnel might conduct a feasibility study to ascertain the needs related to helping the MOH operationalize this piece of medical equipment.

(D) In Mauritius there is very little if any, biomedical research taking place. However, the desire to initiate this activity is very strong.

(E) The Public Health Laboratory has limited resources and its overwhelmed with routine lab work. The MOH is interested in setting up an additional laboratory to relieve some of the burden from the existing facility.

(F) Tuberculosis has been a significant problem in Mauritius. Positive cases are treated initially as inpatients for a period of six to twelve weeks at the Chest Disease Hospital at Poudre d'Or. B.C.G. vaccinations of school children are conducted and infantile immunizations are done in the Maternal and Child Health Clinics regular. However, many people do not utilize these services.

(G) The major causes of death are:

1. Infant Death

Enteritis and other diarrhoeal diseases, respiratory infections, marasmus, and congenital anomalies.

2. Adult Death

Heart disease and other circulatory system disorders, infective and parasitic diseases, and neoplasms.

Note: The vehicular accident rate in Mauritius is staggering (30 thousand deaths per year). The author of this report was involved in a auto/bus accident during this visit.

KENYA

Kenya's geographical features, lying astride the earth's equator; bound in the East by the Indian Ocean; dissected by the Great Rift Valley; sloping upward above sea level at a height of 1134 meters; and descending to the humid shores of Lake Victoria, promote a variation in temperatures. The fauna and flora are equally varied. Thus all the ingredients for a multiplicity of disease vectors abound.

A previous country analysis was submitted earlier and should be referred to as needed. Kenya being more developed than many LDC's has a definite health infrastructure which in time should satisfy many of the basic health needs of its population. However, at the moment the rural population still suffers from those common health problems which exist in most developing countries.

Prior to departing from the United States, several meetings were held with the Kenyan Ambassador, His Excellency, John P. Mbogua. He suggested that a contract should be made with the Nairobi City Council in order to explore the possibility of an Institutional Linkage between Howard University and the Division of Health Services under the aegis of the Nairobi City Council. As a follow up to Ambassador Mbogua's suggestion, a meeting was held with his Worship the Mayor Councilor Nathan M. Kahara of Nairobi. Mayor Kahara was most appreciative of Howard's interest and provided an opportunity for more detailed discussions with his Town Clerk, Mr. S. J. Gitonga. It became very apparent after meeting with Mr. Gitonga, that the City Council has a number of internal constraints that preclude Howard University from instituting a linkage with them at this time.

Subsequent to the arrival in Kenya of our Vice President, Carlton P. Alexis, a meeting was held with Professor L. M. Mungai who is the current Vice Chancellor of the University of Nairobi. Our discussions were profitable in that a number of issues were clarified, one of which related to previous contacts from Howard University. An additional meeting had been held earlier with Professor Bwibo and Professor Wasunna of the College of Medicine in Nairobi. It was made clear that the desire to establish a linkage with Howard University does exist and we are not awaiting the delineation of

various programmatic areas from them. Once this is developed, more details of this matter will be forthcoming.

CAMEROON

The demographic data relating to Cameroon was previously presented and is a matter of record. Drs. Alexis, Sinnette, and Gaston arrived in Yaounde, Cameroon on June 27, 1980. The weekend was utilized to rest and to contact Cameroonian and AID officials. The first order of business on Monday June 30, 1980 was a meeting with the USAID Mission Director, Mr. James Williams. After a brief meeting with Mr. Williams we met with the Chancellor of the University of Yaounde, Mr. Belle Mbappe and with the Vice-Chancellor, Professor V. A. Ngu. The meeting was cordial and centered on the theme of our mutual institutional linkage. Dr. Carlton P. Alexis reemphasized the commitment of Howard University to the concepts of our linkage agreement.

Subsequent meetings were held with Professors Eben-Moussi (Dean of the Medical School) and his deputy Professor Dan Lantum. The agenda items of the meeting related primarily to the proposed Bi-institutional Linkage Seminar, to be held at Howard University; the refinement of various didactic and logistical considerations of the forthcoming involvement of the grant Nutritionist, during here stay in Cameroon; a review of CUSS for Dr. Alexis; and the delineation of future programmatic possibilities between Howard and CUSS.

The Bi-institutional Linkage Seminar had been previously scheduled to take place at Howard during the week of September 15-19, 1980. However, because the officials at CUSS were to be heavily involved in student recruitment and examinations at that time, the seminar was postponed until the second week of November, 1980.

The future Howard/CUSS programmatic activities under consideration are as follows:

1980-1981

- (A) A Bi-institutional Linkage Seminar at Howard University
- (B) A Howard University Faculty will teach at CUSS in the area of Nutrition.
- (C) A visit to CUSS of a Howard University faculty member in community medicine.
- (D) Summary report of first faculty exchange.

1981-1982

- (A) A Bi-institutional Linkage Seminar at CUSS
- (B) Soliciting the support of Basic Science Faculty in the College of Medicine for disciplines at CUSS.
- (C) A delineation of new linkage activities as deemed mutually appropriate.
- (D) A review of all health related activities for programmatic expansion and funding possibilities.

APPENDIX B

COURSE DESCRIPTIONCOMPREHENSIVE AND COMPARATIVE HEALTH PLANNINGI. Howard University

Howard University in Washington, D.C. is strategically located in a world reknown metropolis. The city contains a wealth of resources in the health disciplines as well as numerous international health and foreign assistance agencies. The University's unique contributions to the field of international health is derived in part from its extensive experience in meeting the health care needs of underserved and disadvantaged populations. Additionally, over the last few decades, a number of leaders in Africa and other parts of the developing world have been trained at Howard University.

One of the key elements of the Howard University International Health Program is the ability to design appropriate and relevant health training curricula. Utilizing the varied and extensive experiences of its faculty, the International Health Program has the capacity to provide educational and training opportunities in such areas as health manpower development, health care financing and health services administration.

II. Course Content

The course is divided between the theoretical principles of health planning and practical approaches to the development and implementation of an actual health plan. Subject matter taught in the course is integrated with actual cases drawn from experiences in countries of the participants. In selected instances, field trips and simulated models are employed as integral features of the course.

The total program is eight weeks duration in which the participants are enrolled in an intensive course of study covering applied biostatistics, demography, systems analysis, health economics, health services administration, epidemiology, environmental health, nutrition and the ecology of tropical diseases. These skills are considered essential for effective health planning at local, regional and national levels.

In the training process, participants are also called upon to share their personal experiences and demonstrate their competence in problem solving and decision making techniques.

The College of Medicine in collaboration with the School of Business and Public Administration has designed a course in Comprehensive and Comparative Health Planning covering the following areas:

Global Epidemiology

Modern tools for the identification of common diseases especially those widely prevalent in the developing countries. Emphasis will be on the quantification of information, statistical analysis, distribution, management and evaluation of specific disease patterns.

Global Nutrition

Tools for the identification of nutrition related health problems. Focus will be on populations at risk such as mothers, children and the aged.

Demography and Public Health Statistics

Methods for measuring the structure of growth of populations including assessment of health status, census taking techniques and vital registrations with special reference to developing countries. Tools for measuring natality, mortality, disability, morbidity and migration as well as their effect on health and social services are discussed.

Health Services Administration

Principles of organization, comparative health care delivery systems and methods of evaluation applicable to health care services.

Systems Analysis and Quantitative Decision Models

Methodical examination of alternative courses of action. Special emphasis on the analytical model for planning, management and evaluation (feed-back) of health services.

Health Manpower Planning

Sources of health manpower information. Analysis and projection of manpower needs. Determination of appropriate manpower combinations and distribution. Examination of the roles of primary health care workers and issues relating to the training and deployment of allied health workers.

Economics of Health

Economic analysis of health services, supply vs demand, regulation, accreditation and financing. The principles of costing facilities, manpower and services are taught using cost-benefit and/or cost-effective techniques where appropriate.

III. Eligibility

The program is designed for a limited number of physicians, health administrators, nursing administrators, allied health professionals, and social scientists with background and experience in public health.

IV. Financial Arrangements

Most of the participants are supported by national governments, U.S. Agency for International Developments, World Health Organization, private foundations. Tuition is U.S. \$_____.

Housing information is provided in the attached pamphlets.

V. Course Period

This program begins _____ and ends on _____.
Registration for the course should be completed by _____ in
order ensure enrollment.

VI. Faculty

Howard University draws on its extensive experience in developing countries particularly in Africa and the Caribbean. The faculty is constituted or persons of multi-disciplinary background in training, research and services:

- Awantang, Felix N., M.S., MPH
Environmental Health, Department of Community Medicine
and Family Practice
- Chang, Paul P.L., M.D.M., MPH
Health Care Administration, Department of Community Medicine
and Family Practice
- Douglas, Harry E., III, MPA
Health Systems Analysis
Associate Dean, College of Allied Health Sciences

- Eldadah, Adnan H., M.D., Dr. P.H.
Department of Community Medicine and Family Practice
Epidemiology
Director, Public Health Program and Professor of Epidemiology
- Gaston, Alonzo D., Ed.D.
Health Education
Director, International Health Program
Department of Community Medicine and Family Practice
- Hunter, Gertrude T., M.D., MHMS
Professor, Community Medicine and Family Practice
- Johnson, Allan A., Ph.D.
Nutrition
Department of Human Ecology/International Health Program
- Kassim, Kunle, Ph.D., MPH
Environment
Department of Community Medicine and Family Practice
International Health Program/Department of Human Ecology
- Kaul, Lalita, Ph.D., R.D.
Nutrition
Department of Community Medicine and Family Practice
- Karefa-Smart, John, M.D.
Primary Health Care Delivery Systems/Population/Tropical Health
Department of Community Medicine and Family Practice
International Health Program
- King, Sterling, Dr. P.H.
Health Services Administration
Chairman, Department of Health Services Administration
- Moen, Ahmed A., Dr. P.H. MPH, MHA
Health Manpower and Primary Care Health Delivery Systems
Department of Community Medicine and Family Practice
College of Allied Health Sciences/International Health Program
- Poindexter, Hildrus A., M.D., Ph.D., MSPH, D.Sc. (Hon.)
Tropical Health
Department of Community Medicine and Family Practice
- Rao, Mamidana S., D. Sc., M.A., M.S.
Biostatistics and Health Economics
Department of Community Medicine and Family Practice
- Robertson, William A., M.P.H.
Health Care Systems
Department of Community Medicine and Family Practice
- Standard, Donna Ann D., B.S.N., M.P.H.
Maternal and Child Health Care
Department of Community Medicine and Family Practice

APPENDIX C

APPENDIX C

IMMUNOLOGY AND INFECTIOUS DISEASES GROUP

NAME	BACKGROUND & CURRENT INTERESTS	INDICATED CONTRIBUTIONS
Dr. M. F. Abdul-Wahab	Clinician: Clinical, experimental and field studies in schistosomiasis, and other tropical diseases.	<ol style="list-style-type: none"> 1. Clinical training in tropical medicine. 2. Overseas training ins schistosomiasis, T.B. and diarrheal diseases research. 3. Research in clinical epidemiological aspects of above diseases.
Dr. Willie Lena Austin	Medical Mycologist: Teratogenicity of toxic cytochalasins in mammalian systems.	<ol style="list-style-type: none"> 1. Training in medical mycology. 2. Epidemiological evaluation and research. 3. Diagnostic laboratory services.
Dr. Earl Block	Immunochemist: Collagen-type diseases and complement components.	<ol style="list-style-type: none"> 1. Assessment of immunocompetence in infected populations. 2. Deterrining immune parameters in relation to collagen involve-ment.

IMMUNOLOGY AND INFECTIOUS DISEASES GROUP

NAME	BACKGROUND & CURRENT INTEREST	INDICATED CONTRIBUTIONS
Dr. Georgia Dunston	Cellular Immunologist: Cellular immunity of regional lymph nodes	<ol style="list-style-type: none"> 1. Evaluation of immunocompetence in infected persons. 2. Cell-mediated and humoral immunomonitoring.
Dr. Adnan Eldadah	Clinician and Epidemiologist: Epidemiology of infectious diseases and cancer; public health education; vaccine preparation and clinical trials.	<ol style="list-style-type: none"> 1. Public health training - in short-term courses and the MSPH program.
Dr. Margaret Grigsby	Clinician, Epidemiologist: Tropical medicine and Infectious diseases research.	<ol style="list-style-type: none"> 1. Development of simplified and inexpensive method of diagnosis. 2. Epidemiological surveys. 3. Control methods. 4. Development of vaccines. 5. Clinical trials of new drugs for malaria and schistosomiasis

IMMUNOLOGY AND INFECTIOUS DISEASES GROUP

NAME	BACKGROUND & CURRENT INTERESTS	INDICATED CONTRIBUTIONS
Dr. Kunle Kassim	Parasitologist, Epidemiologist: Immunology of malaria and schistosomiasis; environmental control methods for communicable diseases.	<ol style="list-style-type: none"> 1. Development of simplified low-cost diagnostic techniques for epidemiological surveys. 2. Vector identification and control. 3. Water resource development and sanitation system designs. 4. Training in field surveys and laboratory diagnosis.
Dr. Laing	Immunologist: Tumor and cellular immunology.	
Dr. Gloyd Malveaus	Clinician, Immunologist: Allergy and infectious diseases	<ol style="list-style-type: none"> 1. Identifying the prevalence of allergic diseases in parasitized populations. 2. Determining percentage of infected patients with positive skins to parasite and common pollen antigens 3. Measurement of total and specific parasite serum IgE.
Dr. Vinod Mody	Clinician; expert in tropical medicine; infectious diseases research and drug evaluation in clinical trials.	<ol style="list-style-type: none"> 1. Clinical training in tropical medicine. 2. Field laboratory training in tropical and infectious diseases.

IMMUNOLOGY AND INFECTIOUS DISEASES GROUP

NAME	BACKGROUND & CURRENT INTERESTS	INDICATED CONTRIBUTIONS
Dr. Ahmed Moen	Health Planner: Development of health manpower models for Africa and Persian Gulf States.	<ol style="list-style-type: none"> 1. Analysis and assessment of health services needs. 2. Health services research. 3. Curriculum design and analysis.
Dr. Fred Postell	Parasitologist: Research work in parasitic protozoa.	<ol style="list-style-type: none"> 1. Training in parasitic and micorbial diseases. 2. Research in pathogenesis of parasitic infections.
Dr. Phillip Roane	Virologist: Cellular and tumor immunology.	<ol style="list-style-type: none"> 1. Training in viral diagnosis. 2. Research in immunology of viral diseases.
Dr. Eustace Vanderpool	Virologist, electron microscopist: Viral biochemistry and serology.	<ol style="list-style-type: none"> 1. Training in immunodiagnostic procedures.
Dr. Curla Walters	Cellular Immunologist: Functional capacity and mutual regulatory effects of classes of lymphocytes.	<ol style="list-style-type: none"> 1. Immunological assessments, cellular or humoral. 2. Training in immunochemical.
Dr. Sandra White	Cellular Immunologist: Cellular & tumor immunology. Macrophage regulation of immune response.	<ol style="list-style-type: none"> 1. Role of suppressor macrophages and prostaglandins in certain parasitic omfectopms.