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A SURVEY OF INSTITUTIONAL DEVELOPMENT  
ACTIVITIES AND NEEDS IN LATIN AMERICA  
COUNTRY REPORTS

THE POPULATION COUNCIL  
JANUARY 1975

SURVEY OF INSTITUTIONAL DEVELOPMENT

ACTIVITIES AND NEEDS

Latin America

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BOLIVIA

(with Special Emphasis)

Introduction

The statistics available for Bolivia are of a very limited nature and are unreliable for many purposes. The following data should be treated with caution. The population of Bolivia is estimated to be 10 million. At the beginning of 1970 the total population was estimated to be five million. The crude birth rate has been estimated to be 27 per thousand and this figure is given for the entire country. However, there has probably been a decline in fertility since 1960, when it was 30 per thousand. The area mortality rate is estimated at 100. The crude death rate is stated to be 15 per thousand and infant mortality in 1967 is reported by the Ministry of Health to have been 300 per thousand. Infant mortality exceeds 400 per thousand and it seems unlikely that the present rate is less than 150 per thousand, particularly since the Ministry estimate for 1970 was 150 per thousand (thirty-five percent of the total for population is urban and 65 percent rural).

There is considerable out-migration from Bolivia, in 1967 it was estimated that 225,000 Bolivians were living abroad. At the present time out-migration is estimated to be 1 per thousand. The natural increase in Bolivia is estimated to be approximately 2.4 percent. Life expectancy according to CELADE is 46 years for males and 48 years for females. The age structure is that of a young population with 53 percent under 15 and only 3 percent over 65 years of age. Sixty-five to 70 percent of the population is illiterate.

The ethnic composition is made up of 65 percent Indian (approximately half Aymara-speaking and approximately half Quechua-speaking), 35 percent mestizo and 5 percent of European extraction. Nominally, approximately 98 percent of the population is Roman Catholic, but there is a large admixture of traditional Indian religions as well as a small Protestant minority.

During 1971 and 1972 the gross national product (GNP) grew 5.1 percent annually. It is estimated that 36 percent of the population is economically active. GNP per capita grew from \$183 in 1964 to \$234 in 1972. Bolivia is the poorest country in Spanish-speaking South America, but economic prospects are improving somewhat as a result of increasing exports of petroleum and mining products. Mortality is expected to decrease gradually, migration is also likely to decline and despite the CEIAD prediction of no fall in the fertility rate before 1980, it seems probable that a gradual decline will occur and may offset the expected mortality decline. As a result, it is likely that in 1980 the population growth rate will remain at about the present level of 2.4 percent.

#### 11 HEALTH POLICY AND PROGRAMS

Bolivia is divided into 11 health departments and the health infrastructure is composed of 84 hospital health centers, 11 health centers without hospital beds, 76 medical posts and 306 health posts staffed by auxiliary nurses. In all, the Ministry of Health had 116 hospital establishments as of 1972. In 1971 Bolivia had 2,143 physicians, 591 nurses, 1,264 auxiliary nurses, 45 to 90 midwives, depending on the source of the information, 296 social workers, 250 to 300 empirical midwives, 12 health educators and 7 sanitary engineers. According to the Ministry of Health the health coverage of the population in 1971 was 45 percent, 25 percent being provided by the Ministry, 9.5 percent by Social Security, 5.2 percent by other social security institutions, and 5



cians and nurses in La Paz and Cochabamba and also includes the training of empirical midwives during 1975. A total of eighty personnel will be trained in 1974. The three universities with health science faculties involved in the training and research elements will receive \$6,000 each, according to the proposal. The research component contemplates studies of the demand for services toward family planning services.

### III. POPULATION POLICY AND PROGRAMS

It is not clear what influences have had the most effect on the development of population policy in Bolivia. Until mid-1973 the policy of the government was frankly pronatalist despite sporadic attempts by private groups to begin family planning programs. One early development that is widely reported to have influenced government opinion was the provision of family planning services by the Peace Corps. This led to accusations that IUD's were being inserted for Indian women without their prior consent, which reportedly was a major factor in the expulsion of the Peace Corps in 1970. (The anti-United States movie "Blood of the Condor" was also "inspired" by Peace Corps family planning activities.)

On June 15, 1973 the government issued a decree that created a sub-program of family planning within the Ministry of Health -- a Maternal and Child Health program. It seems likely that this development was related to concerns regarding the high incidence and cost of illegal abortions and the high levels of infant mortality and maternal morbidity and mortality. The concerns therefore had to do with preventive medicine and it was made clear by the government that there was no implicit intention to reduce the population growth rate. In La Paz, 60 percent of the gynecological hospital beds are occupied by complicated abortion cases. Overall, it can be said that no

comprehend the population policy exists now in Bolivia.

It is possible that the church may oppose family planning activities which may begin in the near future, but it is equally possible that it may adopt a more progressive stance. The contraceptive program is made to include sterilization and other permanent methods. Opposition to family planning remains especially among the most traditional and conservative sectors of the population; these are the sectors which have been the most resistant to the imperialistic efforts to bring the population policy to the Bolivian people. There exist some groups which are in favor of abortion, but they have not acted in a wide scale manner. The number of physicians in the country is very small and the rate of illegal abortion is carried out in secret and clandestine ways. A large number of physicians are unemployed in Bolivia and are seeking employment in the demand for illegal abortions, because the law punishes them with imprisonment for performing an illegal abortion. The medical talent emigrates or another source of talent was brought to Bolivia. There are no legal laws relating to sterilization.

Contraceptives are freely available in the commercial sector and may be purchased without prescription in any drugstore. Oral contraceptives in La Paz cost \$1.70 to \$1.50 per cycle and condoms are about 10 cents each. Strictly speaking the sale of orals without a prescription is illegal. Very rough estimates suggest that 75,000 women are using orals, 5,000 have IUD's, and 15,000 are using other methods.

Until now organized family planning programs have been minimal. La Clínica Metodista, with Pathfinder support, has been providing services in La Paz to perhaps 300 to 400 women and La Clínica el Gran Poder has also been

providing services on a small scale outside the city. The Ministry of Health has not officially provided services in its health centers and hospitals in the past, but is reported to be starting at the present time. The Ministry requested \$1,300,000 from UNFPA for a program of training and service in MCH and family planning. UNFPA made a counter-proposal and it seems likely that the government will receive about \$100,000 in 1974 and again in 1975. In any event, when the Ministry receives funds from UNFPA there is a definite intention to make services available in Ministry health centers, posts, and hospitals. After 1975, the Ministry hopes to receive \$1.3 million from UNFPA for a four-year program.

In addition, a recently formed private family planning association called PROFAM will begin offering services in April 1974 with support at the level of \$60,000 each from IPPF and Pathfinder. PROFAM has signed an agreement with the Ministry of Health to provide a physician to work in a hospital and another in a health center belonging to the Ministry and will also set up an independent pilot clinic in La Paz. Plans for 1975 call for the opening of an additional four to five clinics in other major cities. The goal of PROFAM is to provide services to 1,000 to 1,500 women during 1974.

In January 1974 the Ministry of Health requested USAID/Bolivia funding for five family planning clinics in Ministry hospitals to begin in March 1974, and the project has been approved. CENAFPA, the National Center for Family Studies, has been an important research and promotional institution during the last several years. This organization has carried out a number of research projects relating to fertility and family planning in Bolivia and the head of its population division, Dr. Luis Llano has been instrumental in bringing the various national institutions together to the point where a national program can be contemplated. Sr. Llano will serve as secretary-

general of UNFPA. Mr. Amédée Landry of the USAID Mission has also played an active and important role in catalyzing activities in the field of population mainly through support to institutions such as CFNAPA, by sending individuals for special training and arranging inspection tours of population programs in all countries for high level officials.

During the past several years, the Social Research Center (CIRS) was supported by the USAID Mission. In 1975, at the National Academy of Sciences in Washington, D.C., it was recognized that the efforts in social sciences were not sufficient and that a special effort was needed to promote, support, and disseminate scientific research in the behavioral sciences in Latin America. The Center's efforts were recognized as an area of interest of the center. In July 1976, the Population Council granted a grant to the Center for a program of activities toward family planning. The project was designed on a flexible basis for planning training and service activities in various projects.

#### IV. THE UNIVERSITY SYSTEM

Due to severe political problems, all Bolivian universities were closed from mid-1974 to early 1975. When they were reopened all the universities were placed under a national council for superior education (CNESE) which in fact created a unified system since the Council is in charge of the norms, administration, and budgets of the universities. Entrance examinations were instituted and guaranteed a place to those who were successful. There is now complete reciprocity between the nine universities in the country so that both students and professors can freely transfer. Tuition is free except for a \$6 matriculation fee per semester. The council has set limits on the number of disciplines in each university to avoid excessive

duplication.

Of the nine, all except the Catholic university are state institutions, but the Católica has also complied with the regulations set by CNES. Total enrollment in the universities was approximately 35,000 in 1973 and the number of faculty was approximately 2,300 (Table 1). Twelve percent of the faculty were full-time, 70 percent half-time, and the rest employed by the hour. About 75 percent of the students come from the middle to lower socio-economic groups -- the higher strata usually send their children abroad to be educated.

There is now virtually no autonomy in the individual university since the curriculum is standard, and the administration and financing is controlled by CNES. This has brought the advantage of stability to the university system, and since its introduction, calm has reigned in all the universities. However, the council with its power and government funding naturally creates some friction with the universities, especially in the country's largest, Universidad Boliviana Mayor de San Andres in La Paz. Apart from San Andres, two other universities have faculties of health sciences -- Universidad Boliviana Mayor de San Simon in Cochabamba and Universidad Boliviana Mayor de San Francisco Fayer in Sucre.

The social science faculties of Bolivian universities were not canvassed at this time based on the judgement of knowledgeable persons that it would be fruitless. The social science faculties have undertaken little social science research or teaching of population matters of any kind. The political concerns of students and staff likely will remain opposed to serious DARSS activities. However, the Social Research Center of the National Academy of Sciences is an exception. It was formed precisely because of the deficiencies of the universities, and it is exempt from the obstruction of

TABLE 1  
BOLIVIAN UNIVERSITIES

	<u>No. of Students</u>	<u>No. of Faculty</u>
Universidad de San Francisco Xavier Cochabamba, Bolivia	2,424	230
Universidad Mayor de San Andrés Avenida Sucre No. 1000 La Paz, Bolivia	10,787	870
Universidad Mayor de San Simón Avenida Arce Cochabamba, Bolivia	3,418	489
Universidad Boliviana Tomás de Frías Potosí, Bolivia	1,216	165
Universidad Boliviana Juvenal de Urquiza Oruro, Bolivia	1,918	216
Universidad Boliviana Gabriela de la Cruz Santa Cruz, Bolivia	1,818	179
Universidad Boliviana Misael Fernández Tarija, Bolivia	804	87
Universidad Boliviana General José Ballivián Beni, Bolivia	143	18
Universidad Católica Boliviana La Paz, Bolivia	Not Available	
TOTAL	<u>24,446</u>	<u>2,245</u>

students and faculty based on its non-university charter. This social science institution is described below.

Universidad Boliviana Mayor de San Andres, La Paz

This public university is located on two campuses -- one for health sciences and one for other disciplines. The major emphasis is on health sciences, in which there are seven courses -- medicine, nursing, dentistry, nutrition, pharmacy, biochemistry, and social work. The medical school has a contract with the Ministry of Health to provide health services to a population of 80,000 in an area 80 kilometers from La Paz called Alto Beni. The total enrollment of the university is 10,757, of whom 3,700 are in the health sciences. The majority of the students come from the middle to lower socio-economic strata and 30 percent are women. All students are required to pass an entrance examination and there is great demand for entrance into the medical course, so that the entering classes in medicine number approximately 400. Of these about 50 percent drop out or fail during the first year, the average graduating class is on the order of 120 physicians. Student enrollment in this university comprises approximately 40 percent of the total number of university students in the country and the number of faculty (870) is approximately 35 percent of the total faculty for all nine universities. The health sciences faculty has 238 professors, of whom 51 percent work half-time (three hours a day), 18 percent full-time, and the remainder are employed by the hour. The health sciences faculty is housed in a relatively new twelve-story building which seems to be well equipped. On the other campus the university has an 1130 computer. This university has a very important institutional impact both with the government and other elites. The current rector is a friend of the president which adds to this traditionally strong influence.

The other eight universities have far less impact at the national level. Although both disciplines belong in the health sciences faculty, for the purposes of this report the course in medicine and the course in nursing will be treated separately. However, they should both be considered as high priority, developing programs.

#### School of Medicine

A comprehensive and well-organized course in demography is offered by the Department of Public Health under the able leadership of Dr. Julio Bustillos, who for seven years was a PAHO advisor. This seventy-two hour course (half theory and half laboratory practice) is given to all medical, nursing, nutrition, and dentistry students. A shorter course is given to students of pharmacy, biochemistry, and social work. The course is given in the fourth four-month segment of the medical course which is composed of fourteen such segments during the six years before internship. The Department of Public Health has seven faculty, three full-time, three half-time and one part-time. None of its members has been specifically trained in demography, but two members are being sent for training in 1974. Since the teaching of demography began in September 1972, Dr. Bustillos has encouraged several groups of students to study population topics for their required theses. In addition, he himself has carried out two studies, one on a health center in La Paz covering a population of 120,000 and another on the MCH activities in another health center. Both of these studies were presented to the Ministry of Health but were not published. This is clearly a strong department and there appears to be much interest in the population field.

In the Department of Obstetrics and Gynecology medical students are

given two hours of theory regarding family planning and contraceptive methods. Since the university does not provide any family planning services there is no practical teaching. One of the reasons for this is that the "university hospital" belongs to the Ministry of Health and is staffed by its personnel so that the university does not have the prerogative of offering family planning services there. Dr. Roberto Suarez, a distinguished gynecologist who has been on the faculty for eighteen years and head of the department for two years, has tried since 1968 to introduce family planning. However, he states that he was never able to obtain funding mainly because he was anxious to introduce family planning covertly because of the fear of student and other opposition. He hopes to receive funds from Pathfinder in the near future to open a clinic which will be called Preventive Gynecology and will be rationalized as an effort to reduce induced abortion. The students in the university attack family planning as an imperialist strategy emanating from the United States. As recently as one to two months ago the rector opposed the provision of family planning services by the university because of fear of student opposition. However, discussions within the university and with the Ministry of Health have been underway concerning the role of the university in providing education and training for the Ministry of Health/UNFPA MCH and Family Planning Program.

The leaders have been Dr. Bustillos and Dr. La Fuente of the Department of Public Health; more recently Dr. Botelho, the dean of medicine, and to some extent Dr. Suarez, have begun to favor family planning. The leadership is clearly influential by virtue of their positions on the medical faculty and their personal status, especially in the case of Dr. Bustillos with his wide experience with PAHO. Since the university was a hotbed of political activity

is recently as two years ago, relations between it and the government are not as cordial as they might be. However, it appears that they are improving, especially with regard to the coordination of activities relating to the UNEPA project.

The approved objectives of the teaching program are to provide medical students with the information necessary for them to deal adequately with the family planning needs of their future patients and to have basic knowledge in demography. These objectives are well articulated within the Department of Public Health particularly and within the medical school as a whole. The teaching of demography and family planning remains the source of possible political conflict since many people feel that the medical students are seeking appropriate lessons on the basis of which they can create disturbances.

There have been no publications other than those already cited. The Department of Public Health is interested in research in the areas of induced abortion, rural population education, family planning methods and sexual practices of the rural population, and in carrying out a demonstration family planning project in the Alto Beni region with a population of 80,000. The Department of Obstetrics and Gynecology is interested in carrying out research on family planning methods used at high altitudes (La Paz is situated 3,500 meters above sea level). If agreement is reached with the Ministry of Health and the UNEPA project is funded, the medical school will become involved in training and research in family planning. The present teaching program in the Department of Public Health appears to be first rate, while the teaching in the Department of Obstetrics and Gynecology needs to be considerably reinforced.

USAID/Bolivia has provided \$67,000 to the medical faculty for a population program. Of this amount \$40,000 was budgeted for the teaching of

demography and the purchase of calculators, \$6,000 was set aside for per diem for medical, nursing, dental, and social work students who work forty days in the rural project in Alto Beni, and \$20,000 for two fellowships in demography and family planning.

Without doubt this medical faculty is the strongest and most prestigious in Bolivia. The majority of the students come from urban areas, approximately 15 percent are female and they come from the middle to lower socio-economic strata. As mentioned previously, there is considerable unemployment among physicians so that the present enrollment of 300 to 400 per year exceeds the country's absorptive capacity. Until the present government came to power there was a union of unemployed physicians! In addition many physicians have left Bolivia to work in the United States, Africa, and other Latin American countries.

The major strengths of the population program are the quality of the demographic teaching program and the interest in the Departments of Public Health and Obstetrics and Gynecology both in carrying out population research and making family planning services available.

The major weaknesses of the program are the inability to date to make family planning services available as a medium for the teaching of health sciences students, the comparatively weak teaching program in the Department of Obstetrics and Gynecology and the small amount of research being carried out.

On a country basis, the Medical School would rate the best, the population program modest, staff interest in the program good, the likelihood of reaching program objectives good, with an overall rating of good.

#### School of Nursing

Before discussing the School of Nursing at Universidad de San Andres

In a few words are called for regarding the general situation in nursing education in Bolivia. At the present time there are five schools of nursing in Bolivia. Approximately sixty to eighty nurses in total are graduated from the new schools each year and the number is going down. The reasons for the decline in number of graduates are various: the prerequisites to study nursing are not met, nurses are poorly paid (they average US\$40 per month in 1942), and the profession has little status. In addition the course is a long one and now generally requires four

years. The majority of nursing students at Universidad de San Andres come from the urban areas and the lower middle class although some do come from the rural areas. The present enrollment in the four-year course is fifty-five, of which thirty are expected to graduate in March 1944. This year the nursing students will for the first time be able to elect to graduate without a degree after three years although the four-year course will remain for those who wish to take it. The nursing faculty consists of five graduate nurses, a training instructor, and several other members of the health science faculty working part-time. Of the nursing faculty two have studied public health.

The teaching program for the nurses is essentially the same as that offered for the medical students although some content is adapted. In addition to the seventy-two-hour course in demography offered by the Department of Public Health, the nurses carry out fifty hours of practical work in the area of maternal and child health and family planning. This is composed basically of providing family planning information to women in the prenatal and other out-patient clinics. The only research project carried out to date was a complete socio-economic and health study of a community of 45,000 which included questions regarding fertility. This study was carried out by the students and was

TABLE II  
DIRECTORY SCHOOLS OF NURSING

1. Departamento de Enfermería  
Facultad de Medicina  
Universidad Mayor de San Andres  
La Paz, Bolivia
2. Departamento de Enfermería  
Universidad Mayor, Real y Pontificia  
de San Francisco Xavier  
Sucre, Bolivia
3. Escuela de Enfermería  
Corporación Minera de Bolivia  
Catavi, Bolivia
4. Escuela de Enfermería  
Universidad "Juan Misael Saracho"  
Tarija, Bolivia
5. Escuela de Enfermería  
"Elizabeth Seton"  
Kilómetro 5 - Avenida Blanco Galindo  
Casilla 926, Cochabamba

not published.

It cannot be said that there are any outstanding leaders in the School of Nursing, although the director of the School, Sra. María Teresa de Barrientos, is now actively taking the initiative, spurred by the leadership demonstrated by her superior in the Department of Public Health.

The objectives of the teaching program are to provide the future nurse with a sufficient background in the areas of demography, sex education, and family planning to carry out her responsibilities after graduation. The objectives are in a way controlled by the department and do not appear to be the cause of any conflict among the students or faculty.

When the university begins to offer family planning services, it is expected that the school of Nursing will want to cooperate fully. The current curriculum teaching program is essentially the same as that for medical students with the difference that the nurses receive a considerable amount of practical training in terms of providing family planning information to the patient.

The major concern of the school of Nursing is the declining demand for studies in this area. In April 1964 a national seminar regarding human resources in the nursing profession will be held with a view to finding solutions to the present difficulties. Graduate nurses in Bolivia have no difficulty in obtaining positions but the pay, status, and working conditions are such that many emigrate to other countries. This School of Nursing is considered to be at least as good and probably better than any other in the country.

The major strengths of the program are the same as for the medical school, while to the major weaknesses must be added the current inability of academic nursing programs to attract students.

On a country basis, the School of Nursing would rate the best, the

population program average, staff interest in the program good, the likelihood of reaching program objectives good, with an overall rating of good.

The School of Public Health, La Paz

This public institution, formerly called the School of Public Health Technicians, began to function January 1, 1962 with the financial assistance of the Cooperative Inter-American Public Health Service and USAID/Bolivia. It was closed on December 31, 1964, at which time the Ministry of Health assumed the responsibility for the program. The school was reopened with its present name in June 1969. It is located at Avenida Kapac No. 122 (Esquina Final Avenida Montes) in an old three story building in need of remodeling. Of the 985 graduates from 1962 to 1973, 437 were nurse auxiliaries, 160 environmental sanitation technicians, and 143 statistical technicians. The school has undertaken practically no courses for physicians, the first one-month course in public health being in 1973 with fourteen physicians attending. In addition, one course for physician hospital directors was held in 1972. Similarly, there has been little attention given to the teaching of public health nurses, except for one nine-month course for fourteen nurses in 1964 in public health nursing and another course for twenty-four nurses in 1973 in the area of medical care and hospital administration. The school is charged by the Ministry of Health with training the health personnel needed for the Ministry's programs throughout the country. The largest number of students trained in one year was 224 in 1972 and enrollment in 1973 was 171. Since the major role of the school is the training of auxiliary nurses, the remainder of this report will focus mainly on this aspect.

The majority of auxiliary nursing students come from the upper/lower socio-economic stratum and usually from the urban areas. They are all full-time

and the usual drop out rate is two to three from each class of thirty. Entrance requirements are that the individual pass the second year of secondary school and is currently employed by the Ministry of Health. The demand for training considerably exceeds the capacity of the school, so that many Ministry of Health employees have to wait until it is able to provide them with training. At the moment the school is not able to take care of the demand from individuals who are not currently employed by the Ministry. The faculty consists of eight full time members, six are physicians and seven graduate nurses. The school is administered by staff who are working staff from the Ministry of Health as well as consultants provided by the Pan-American Health Organization (PAHO). The Ministry of Health provides the building for the school as well as the furniture and most of the equipment and educational materials. PAHO provides the majority of the staff and also provides economic aid comes from UNICEF in the form of a technical teaching staff, fellowships for students and equipment and supplies are provided by the Ministry of Health. As a result, the number of courses held depends in large measure on the amount of economic assistance from UNICEF. The school does not yet have a strong reputation although it is clearly assuming more importance and training more personnel than formerly. However, it cannot be held that at the moment it has major institutional impact.

In 1972, 179 auxiliary nurses were trained by the school, but in 1973 this number dropped to 90. For 1974 it is scheduled to train 90 auxiliary nurses. In all, Bolivia has four schools of auxiliary nursing - the School of Public Health, a private school in Oruro, and state schools in Oruro and Beni. The total number of graduates per year averages 150 and although this is increasing, it should be noted that the total production of nurses and auxiliary

nurses is considerably less than the 300 to 400 physicians graduated each year. Furthermore, the total number of physicians already exceeds the combined number of nurses and auxiliary nurses. After graduation the majority of auxiliary nurses work in city hospitals, mainly in La Paz and Cochabamba, and very few work in rural areas where the majority of the population resides.

The School should be considered a high priority, developing institution for the training of auxiliary nurses. The course for auxiliary nurses is five months long with 70 percent of the time dedicated to practical work and 30 percent to theory. Five faculty members -- a director plus four instructors -- are in charge of the course and all are graduate nurses; three have public health training and one has been trained in MCH and Family Planning both in CELADE and Cali, Colombia. In addition, other instructors at the school assist in the teaching of demography. The trainees receive eleven hours in the area of demography, seven hours of theory, and four hours of laboratory exercises. In the area of family planning they receive fifteen hours divided equally between theory and practice. Both teaching programs were begun three years ago with the help of CENAFAP. However, family planning services have only been emphasized since June 1973 when the decree was passed by the government. All the faculty teaching auxiliary nurses are in favor of family planning. Up to the present time no population research has been carried out but there is a clear interest in the area of family planning on the part of the faculty. It is important to point out that all four schools of auxiliary nursing have a common curriculum so that demography and family planning are taught to all students and the diplomas for graduates are given by the Ministry of Health. In addition, the School of Public Health is charged with the supervision of the training of auxiliary nurses in the three other schools.

Although in the past, courses in the training of nursing instructors

have been sporadic, a six-month course was held in 1963 and another is programmed for 1964, depending on financing from UNICEF and technical assistance from PAHO. In these training courses, the students receive twenty hours of demography (eight hours of theory and twelve hours of laboratory work) plus charts and forms for the area of family planning, consisting of twelve hours of theory and twenty hours of practice with normal and post-abortion patients. There is no separate training for the training of graduate nurses, the regular faculty at the school is divided into two teams to share the work. In addition, it is noted and mentioned that British graduate nurses have been sent to the 3-year nursing course at the school in Bogota, Colombia.

There is a lack of strong administrative leadership in popular health programs in Bolivia, and the few people who appear to have been interested in family planning are few in number.

The school is training nurses and preparing auxiliary nurses and graduate nurses. It has a staff which shows little interest in the practice of family planning, and is concerned regarding the need for family planning. These reports of staff are of general knowledge in Bolivia.

The administrative and graduate courses offered in the school of public health are a good part of the school resources needed to carry out the contemplated MCH and family planning program with assistance from the UNFPA. Given the conditions prevailing in Bolivia, the teaching program of the school appears to have made a good start and one would expect the program to improve in terms of both quality and quantity. When family planning services become more widely available, practical experience in the delivery of the services should be added to the training program.

On a country basis, the rating of the School of Public Health in La Paz is weak, the population program modest, staff interest in the program

good, likelihood of reaching program objectives average, with an overall average rating.

Centro de Investigaciones Sociales (CIS)

Academia Nacional de Ciencias de Bolivia

CIS, in English the "Social Research Center," has four substantive departments: urban and community studies, sociology of the family; population, development and social change, and socio-medical. Each department in early 1974 had basic staff consisting of at least one senior investigator and two student assistants. In all there were ten active staff members (half of whom had M. A. degrees from outside Bolivia) and eight field assistants. Sixteen research proposals from the four departments were approved for submission to funding agencies for their consideration. Most are still pending and the absence of favorable responses constitutes a peril to the orderly development of capable and experienced research teams.

The center also seeks fellowships and guidance for placing promising researchers in advanced training. The center also is amenable to conducting formal training in La Paz in areas related to its research. Demography and population matters, as well as research methodology, are among the candidates should funding be provided. Finally, the center expects to become a forum for the dissemination of research findings and for discussion of their policy implications. Antonio Cisneros is the director of the center; he also holds a position with PROFAM, for multiple job holding is a common phenomenon for professionals in Bolivia and many other countries of the region.

On a country basis, the center is the best in this field, and the population program, staff interest, likelihood of reaching objectives, and overall rating are good.

CENAFE and PROFAM

Two other institutions bear mention, albeit brief, to complete this sketch of institutions in Bolivia. CENAFE, the National Center for the Family, was created in 1968 by supreme decree of the then President Barrientos. It was managed by an executive director under police guidance from an inter-institutional consejo, which had representation from the Ministries of Health and Planning, the universities, and the private sector. Several different individuals have served as executive director, but the institution remains viable today, although it is still subject to close political scrutiny based on its organization. CENAFE continues to be concerned with information and education, training, and publications, although its staffing and institutional competence in these areas would need strengthening if it were called upon for major studies in the future. A Centro de Investigaciones Demográficas was formed as part of PROFAM and although it continues in existence, it too lacks staff and adequate resources.

PROFAM was formed in 1974 as a private family planning organization that would collaborate with the Ministry of Health but which would have the flexibility inherent in an institution organized privately. Its staff includes individuals recruited from other institutions, including its executive director, Lic. Luis Huanes (demographer, formerly with CENAFE) and its head of Information and Education, Lic. Antonio Caceres (sociologist and director of CIS). This institution seems to be concerned primarily with the provision of family planning services.

V. CONCLUSIONS AND RECOMMENDATIONS

Bolivia, the poorest country in Latin America, faces a critical population problem: not only is the growth rate very high, but the majority of the

population lives in sub-human conditions and mortality rates, especially for the Indian majority, are comparable with those prevalent in Africa. During the past year the government stance regarding family planning has changed from a clearly pronatalist position to one favoring the provision of family planning services within the context of MCH services but not for the purpose of reducing the growth rate. However, there is a critical shortage of health personnel to provide such services, especially in the rural areas, since the vast majority of the health resources are concentrated in the cities. This seeming contradiction, since health conditions are far worse in the rural areas, seems to result from the fact that the Indian population is perceived to contribute little to the national economy and in addition has very little political power. It would appear that the time is right for additional international inputs in the field of population especially if the UNFPA project is approved and implemented. However, it should be recognized that the Bolivian political situation is volatile and that the policy position could change radically. (There has been an average of more than one coup d'etat per year for more than 150 years.) However, another positive development is the constitution of PROFAM.

It is well to recognize that there exists a subtle form of discrimination against countries such as Bolivia in terms of their ability to obtain international funding for research and training except from the United Nations group of agencies. This probably relates to the small size of the country and its remoteness and its undeveloped state, but in the field of population it cannot easily be explained as resulting from a lack of competent individuals or interest. An example of how this discrimination operates is that of 2,500 fellows sent overseas by USAID for training over the years, few have ever received a research grant from a United States foundation. A recent exception

is the \$10,000 study of physicians' attitudes toward family planning granted by the Council to the National Academy of Sciences in December 1973.

Bolivia provides an ideal setting for certain kinds of research and demonstration projects which will benefit not only the country but also the field of population in general. Given the high level of mortality, especially among infants, if it is the case that a reduction in these rates would be followed by a reduction in fertility, Bolivia provides the best proving ground in Latin America to test this hypothesis. In addition, Bolivia provides an excellent site to test delivery systems and methods of communication in family planning in order to reach a rural, traditional indigenous population. Only with the extensive use of paramedical personnel, including the lay midwives, could one hope to provide family planning services in the rural areas. Some examples of the needs and opportunities for institutional development activities are given below:

1. In the School of Public Health there is a need for additional inputs to improve the quality and quantity of teaching in the area of family planning for auxiliary nurses and other paramedical personnel. The school is particularly interested in books and other teaching materials, audiovisual aids and fellowships for the faculty.

2. At the Universidad Boliviana Mayor de San Andres, La Paz, the teaching program in demography appears to be adequate for both the medical and nursing students and will presumably be strengthened in the family planning area as services become available. However, there exists a good deal of interest in research and demonstration programs and the community health project being carried out with a population of 80,000 in Alto Beni provides an attractive testing area for a demonstration program in the area of MCH and Family Planning. The health sciences faculty is interested in international

support for this project and for research related to abortion, family planning, and sexual practices among the indigenous population, and the effect of hormonal contraceptives at high altitude. Given the prestige and impact of the university and the caliber of the faculty, research and demonstration projects deserve careful consideration for funding. In sum, the major needs are for research support, fellowships, and support for library development.

3. As the government and PROFAM service programs get underway there will be considerable need for a research and evaluation capacity which might be developed at Universidad San Andres, PROFAM, CENAFSA, or the Center for Social Research at the National Academy of Sciences. Regardless of its location, this research and evaluation unit will require specialized personnel, which points up the need for fellowship support at Universidad San Andres.

4. Although institutional development support in the health area should give priority to the Universidad San Andres and the School of Public Health, fellowships, library, and perhaps research support should be considered for the other two health science faculties (Universidad Mayor de San Simón, Cochabamba and Universidad de San Francisco Xavier, Sucre).

5. Finally, the Center for Social Research of the National Academy of Sciences, though not a teaching institution, appears to be the best candidate for DARSS assistance in Bolivia, and one with promise for developing and sustaining a greater competence.

SOURCE OF DATA:

Site visit to La Paz, Bolivia, February 10-16, 1974. (Political disturbance, floods, and government-restricted travel prevented a visit to Cochamba.)

February 22, 1974

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BRAZIL

Luis A. Sobrevilla and Axel I. Mundigo

I. COUNTRY SETTING

With over 100 million inhabitants, Brazil is both demographically and geographically the largest of the Latin American nations. Brazil is divided into five major territorial regions and subdivided into twenty-seven political units: twenty-two states, four federal territories, and one federal district where the new capital -- Brasilia -- is located. With an area of 8,500,000 square kilometers, covering almost half of South America, Brazil is the fifth largest country in the world.

The population of Brazil, like that of the United States, contains a rich ethnic background made up of European and African groups, which today seem to be integrated without apparent dominance by any group. Between 1850 and 1970 the population grew from 7 million to 94.5 million, and in 1973 it was estimated at 101.3 million. The average annual growth rate of the population rose from 2.4 percent in the 1940-50 decade to 3 percent in the 1960-70 period (2.8 in 1973). Most of this increase is attributed to natural growth. Mortality has declined sharply, increasing life expectancy to 58 years for men and 63 years for women. Fertility levels, on the other hand, are high: the crude birth rate is currently estimated at 38 per 1,000, reflecting a decline from a level of 43 to 44 per 1,000, which appears to have been rather stable as a national average for the three decades 1930-60. Detailed analyses, still the subject of considerable discussion in Brazil, appear to indicate that the

birth rate declined from a level of 42 in the early 1960's to the 37 or 38 prevailing in the last years of the decade, which remains the present level. In short, while there appears to exist some evidence in support of a decline in fertility in the 1960's, the decline is small and to a large extent localized, concentrating in the southern and southeastern regions. The area of the northeast -- where some 35 million Brazilians live -- exhibits birth rates that far exceed the national average. The birth rate for the region comprising the states of Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, and Fernando de Noronha, for example, is estimated at 46 per 1,000 population for 1965-70. In contrast, the birth rate for the state of Sao Paulo is 30 births per 1,000 for the same period.

Brazil is highly urbanized. By 1970 more than half of the population was already living in an urban setting. Two metropolitan regions (São Paulo and Rio de Janeiro) each have a population of more than 6 million. Other cities, such as Belo Horizonte and Recife, have more than 1 million inhabitants each. The rapid urbanization, especially the growth of large metropolitan areas in the southern part of the country in recent years, corresponds to a period of rapid economic expansion and industrial development, a great deal of which has centered in the São Paulo-Rio de Janeiro axis. Cities of 100,000 or more grew by 400 percent between 1940 and 1970. This rapid urbanization process implies large movements of population within Brazil. Therefore, the study of internal migration has become a top-priority concern for many demographers.

## II. HEALTH POLICY AND PROGRAMS

In 1969, the last year for which information is available, there were 3,600 hospitals in Brazil, with a total of 300,200 beds, giving a pro-

portion of 3.3 beds per 1,000 inhabitants. Of the hospital system, 15 percent belonged to the official sector (federal, state, municipal, or parastate) and 85 percent to the private sector; of the private sector hospitals, 41 percent belong to nonprofit or philanthropic institutions.

In 1969 Brazil had 47,250 physicians, of whom 42,800 worked in the hospitals. Working in the hospital system were 6,900 nurses, 18,700 auxiliary nurses, 5,000 practical nurses, and 2,000 practical midwives.

In Brazil, as in most of the other Latin American countries, there is a large concentration of health professionals in the capital cities and more developed regions. There is also a great degree of internal migration of the professional health force from north to south, which makes for more unequal distribution.

The largest provider of health care is the Instituto Nacional de Previdência Social (INPS), an autonomous institution affiliated with the Ministry of Labor. The institute is financed by contributions from the workers, the employees, and the federal government. The number of Brazilians covered by this institute is close to 25 million. The institute owned 18 hospitals in 1970 and made agreements with an additional 2,500 hospitals and 405 dispensaries. In that same year it provided 45 million consultations and covered 645,000 deliveries. Besides its responsibility as provider of health care, the institute is also responsible for retirement and subsidies for workers. Although providing maternal and child care, the institute does not include family planning among its services.

The hospitals of the nonprofit private organizations account for 41 percent of all the institutions. These are primarily the "Santa Casa de Misericórdia" hospitals that belong to the local charity organizations of

the cities.

The importance and degree of development of the private health services vary according to the degree of development and economic level of the individual states in the federal union.

### III. POPULATION POLICY AND PROGRAMS

The need to occupy the vast lands of the country is a historic preoccupation in Brazil. This idea is still prevalent and is partially responsible for the pronatalist attitude of the Brazilian government.

Another idea central to most of present-day Brazilian thinking and planning is that of accelerated socio-economic development. The administration has been promoting, with a great deal of success, a policy of rapid economic growth, and many political and economic leaders believe that population growth is an important factor in economic growth and development. Lately, a great deal of debate has been going on in the country regarding the relationships between economic growth and "ideal" population growth. Brazilians have often expressed the idea that "birth control" could reduce the rate of economic development and might also impede the occupation of the sparsely settled Amazon area.

In an effort to redirect the traditional north-to-south migratory trend to the sparsely populated west, the federal government has been stressing the importance of the Amazonian Highway, trying once more to occupy the Brazilian hinterland, in the tradition of the "bandeirantes" of the past. This effort has been only partially successful.

The interest and concern of physicians and other health professionals with the problems created by the increased rates of abortion and illegitimacy

in the large urban centers led in 1965 to the creation of the "Sociedade Civil de Bemestar Familiar no Brasil" (BEMFAM). Since its foundation, BEMFAM has promoted the right of the married couple to decide the number of their offspring and the need to offer them the means to implement this decision. After a period of struggle, BEMFAM has been able to obtain recognition for this position. In 1971 the organization was recognized at the state and federal levels as a public utility, exempt from taxes and with some additional benefits. This represents a change in the former position of the government and a recognition of the need for family planning on the basis of health considerations.

Although the policy of the federal government remains pronatalist, the policy of the state governments varies from a pronatalist stand to positions clearly in favor of family planning.

Oral contraceptives can be sold only with a medical prescription, and abortion is forbidden by law.

BEMFAM is the only organized family planning program in Brazil. Since reorganization in 1968, BEMFAM is directed by a central council located in Rio de Janeiro. This seven-member body is now under the presidency of the prestigious former professor of obstetrics at Rio University, Octavio Rodriguez Lima, and the executive secretary is Professor Walter Rodrigues.

BEMFAM has a staff of approximately 600 and operates 85 clinics throughout Brazil. Although clinics vary in size, the usual unit is made up of five: a physician, a nurse, a family educator, a secretary, and a "helper." BEMFAM is organized in six departments: information and education, administration, medical, evaluation unit, programs, and a department for raising funds. In 1972 BEMFAM had a total of 129,000 new acceptors and a cumulative total of 370,000, making it the second-largest family planning program in the Western

**Hemisphere.**

The funding for BEMFAM comes from Brazilian sources, the International Planned Parenthood Federation, and private foreign donors such as the Ford Foundation and the Population Council.

The family planning methods in use in BEMFAM's program are oral contraceptives, the intrauterine device, and other mechanical methods. Abortion and sterilization are not utilized.

The Department of Information and Education is in charge of the production of informational material for the mass media and for the program. Printed material, audiovisuals, and films with Brazilian themes have been produced by this department. It is also in charge of organizing training courses for medical and paramedical personnel, and of seminars for community leaders.

BEMFAM has built up and maintains useful working relationships with several of the universities and health institutions of Brazil. It has recently signed an agreement with the governorship of one of the northern states to develop a program of community resources mobilization for family planning, with an emphasis on the nonclinical distribution of contraceptives.

The main weakness of BEMFAM's programs is in the area of research and evaluation, where efforts have been very limited to date.

**IV. INSTITUTIONAL AND UNIVERSITY DATA**

In 1970 Brazil had sixty universities divided among federal, state, and private institutions. The federal universities are chartered by the central government and receive funds from the federal budget. The system entered into a stage of rapid expansion in the 1930's. The first university was established in Rio de Janeiro in 1920, combining several existing schools. The federal government undertook to charter universities and provide them with

support. This explains the "federal" attached to the name of most "state" universities in Brazil. In 1934 the second university was formed -- the University of São Paulo, chartered by the State of São Paulo and therefore truly a "state" university in the American sense of the word (although it also receives federal subsidies). The only real "federal" institution, and most recently established, is the University of Brasilia, created by federal decree in December 1961.

Coordination and technical assistance for the university sector are a function of the recently created "Centro de Perfeccionamento de Pessoal no Sector Superior," a center that depends on the Ministry of Education. This entity has coordinating and support functions, but does not set norms.

A distinctive feature of the Brazilian university system is its development as a group of independent schools and institutes that have only recently been united into universities (following the example of the University of Rio de Janeiro). Only of late, with the added stimulus of the law of university reform of 1967, are they developing into coordinated institutions. The provisions of the law promote the creation of central institutes to provide basic humanistic or scientific knowledge and to serve as a core for specialized professional schools.

In 1930 only 6.3 students per 1,000 people in the ages 18 to 21 were enrolled in universities. By the 1960's the figure had jumped to 18.1. But with more than 20 million people in the age group 15 to 24 in 1971, only half a million were enrolled in universities, indicating the magnitude of the challenge facing the Brazilian system of higher education.

#### Public Health and Medical Schools

The historical development of Brazilian higher education also explains

the existence of more medical schools than universities. There are seventy-four schools of medicine, unevenly distributed among the twenty-two states. Whereas the eleven north and northeastern states have only sixteen, the remaining eleven states and federal district, located in the more developed regions of the south, southeast, and central west, account for the remaining fifty-eight.

The Associação Brasileira de Escolas da Medicina (ABEM) is in charge of the coordination of the medical schools. It was founded twelve years ago and is directed by a council elected by the assembly of representatives of the schools. President of ABEM is Professor Alloysio Salles da Fonseca, and the executive secretary is Dr. Fernando Bevilacqua. ABEM receives its funding from the Ministry of Education and to a limited extent from the Pan American Federation of Medical Faculties (FEPAFEM).

In 1970 Brazil had thirty-two schools of nursing, seventy-two schools of auxiliary nursing, and ten schools for nurse technicians. The schools of nursing are at the level of superior education; the schools of auxiliary nursing and nurse technicians are at the level of high school for auxiliary nurses and at the technical education level for nurse technicians. Only twenty-one of the nursing schools have a university affiliation.

In the last few years there has been a large expansion in the number of students enrolled in schools of medicine and nursing. In 1970 there were 7,485 students registering in the first year of medical school, and there were only 3,200 graduating physicians. For nursing the numbers are 1,025 and 477 respectively.

There are great disparities in the demographic, economic, social, and cultural development of the different regions of Brazil. Those highly developed are in the center, southeast, and south, and the less developed regions are in the north and northeast. These factors determine the preferential

location of the medical schools and the schools of nursing and auxiliary nursing in the areas of greater development. Also, the large urban centers (São Paulo, Ríó de Janeiro, Minas, Paraná, and Ríó Grande do Soul) are the sites of most of these schools.

An initial selection of twenty-six medical institutions was made on the basis of their activities in the population area, their location in key states, and their significance at the local and national level. After site visits, fifteen have been selected for this report, five in the regions of the north and northeast and ten in the southeast, central west, and south.

The medical institutions have been included on the basis of their interest in developing programs in family planning and public health.

Although the importance of the institutions for training paramedical personnel is recognized, they have not been included, since collection of information regarding their activities in the population area was deemed to be a politically sensitive issue at the time of this study.

#### Federal University of Bahía

This public school belongs to the federal system of universities and is therefore supported by the Brazilian government through the Ministry of Education. Its director is Professor Renato Tourinho Dantas. The school presently enrolls 1,300 students and graduates yearly 200 to 220 physicians. Admission is through an annual exam (called "vestibular exam"), which takes place in all the medical schools of Brazil.

This should be considered a high-priority institution. There is a great deal of interest and activity in research in human reproduction in the "Clímério de Oliveira" Maternity, the teaching center for obstetrics. The section of human reproduction research, located in this maternity, was organized

twelve years ago thanks to the efforts of Professor Arpad Csapo (then at the Rockefeller Institute) and of Drs. José Adeodato, Jr. and Elsimar Coutinho, who began research in uterine activity. Professor Csapo and Dr. Coutinho directed the research section for four years, Dr. Csapo dividing his time between Brazil and the United States. Upon Dr. Csapo's retirement four years ago, Dr. Coutinho became the head. At that time a five-year agreement was signed by the Ford Foundation and the Federal University of Bahia for the continued development of the program of research in the biology of human reproduction. This agreement allowed for the purchase of equipment and materials and provided salaries for technical personnel and the training of staff abroad (five doctors have completed research fellowships, three in the United States and two in Sweden). At present the research group has the following structure:

Director of the "Maternity Climério de Oliveira" and of the program of biology of human reproduction: Professor José Adeodato, Jr.

Chief of the research section of Climério de Oliveira's Maternity and principal investigator of the program of human reproductive biology: Prof. Elsimar Coutinho.

Seven medical investigators, three biochemical investigators, four technicians, and two nurses.

The research section occupies the same building of the maternity as the prenatal and family planning outpatient.

The university leaders are:

Dr. Renato Tourinho Dantas: director of the Medical School.

Dr. Elsimar Coutinho: professor of biochemistry of the school of Pharmacy, associate professor of biochemistry of the Medical School, staff member of the Maternal and Child Department, and head of the research section of the maternity.

Dr. José Adeodato Jr.: professor of obstetrics, chief of the Maternal and Child Department of the Medical School, and director of the maternity.

Dr. José Souza Costa: associate professor of gynecology of the Medical School and representative of the Surgical Department on the Medical School Board. (Note: in this school, gynecology is part of the Surgical Department, unusual in Brazil).

Dr. José Duarte Araújo: acting head of the Department of Preventive Medicine.

The Climério de Oliveira Maternity has shown great interest and activity in research in human reproduction and family planning. The internationally known research section was selected two years ago as a clinical research center of the World Health Organization. Sixteen research papers were published in 1973. The areas of research are: uterine dynamics during the menstrual cycle, tubal physiology, contraceptives, dynamics of the pregnant and parturient uterus, ovarian activity, and male contraception.

An annual course in human reproduction is included in the research program, which invites professors and their associates from other Brazilian schools to make the results of their research known.

Other sectors of the university working in the population area are:

1. The Department of Preventive Medicine. A project dealing with "tendencies in the change of fertility patterns in relation to urbanization" begun in 1967, with a grant from the Ford Foundation. At that time, Dr. Guilherme Rodrigues da Silva was the chairman, and the project associate was Dr. Costa. When, a few years later, Professor da Silva moved to São Paulo as professor of preventive medicine, Dr. Costa became chief of the program, which ended in 1972. The results are being evaluated for publication. The acting

head of preventive medicine is Dr. Araújo, who took a one-year master's course in maternal and child health at the University of California at Berkeley. Dr. Costa believes that there is a good possibility of creating a course in demography in the Department of Preventive Medicine.

2. Department of Sociology, College of Liberal Arts.

3. A Human Resources Center, which conducts teaching and research in demography.

Being a public institution, the Medical School is funded by the federal government. These funds are used for the maintenance of the installations and equipment and payment of the teaching staff. The allocations for research are small. The development of the research program in reproduction was funded mainly by foreign assistance institutions (Ford Foundation, Population Council, and others). The availability of research funds, the unusual development of this program, and the budgetary difficulties of the university created a great disparity of growth and resources between the research section and the other services, including teaching, which resulted in criticism of the program. It was finally accepted, however, thanks to the international status given to the university by the research section.

The family planning services of the Maternity "Climério de Oliveira" are supported by funds from BEMFAM.

In 1973, the Obstetrics and Gynecology Department was dissolved. Obstetrics was included in the new Department of Maternal and Child Health, which will include pediatrics, neuro-pediatrics, obstetrical pathology, and human reproduction (the last as an optional discipline starting in 1974, headed by Dr. Coutinho). Gynecology now belongs to the Surgical Department.

The research section of the maternity has had problems with the rector

of the federal university. At the beginning, there were also problems with the students, who accused the service of using women as "guinea pigs" and of serving the "American interest of sterilizing the Brazilian population." This campaign was partly responsible for the retirement of Professor Csapo.

The research section was closed to the students, a fact that also brought problems. Now, thanks to the success of the program and its recognition by the WHO, the problems have been substantially resolved.

Rankings, on an in-country basis, are as follows:

Overall quality of university: average

Quality of population program: excellent

Apparent degree of staff interest in population program: excellent

Likelihood of success in reaching program objectives: excellent

Overall rating: excellent

Federal University of Pernambuco

Faculty of Medicine

This federal school has 1,300 students, and an average of 230 to 240 physicians graduate a year. It should be considered of limited priority.

Some of its leaders are interested in population programs. They are:

Dr. Arthur Barreto Coutinho: director of the School of Medicine and professor of pharmacology. Favorable towards family planning.

Dr. Rosaldo Cavalcanti: professor of gynecology, head of the Department of Mother and Child Care, which includes the following sections: gynecology, obstetrics, pediatrics, infant care and neonatology, and two more disciplines of the postgraduate school, human reproduction and clinical genetics.

Dr. Antonio Simão dos Santos Figueira: professor of infant care and

neonatology in the Faculty of Medicine, director of the School of Medical Sciences of Pernambuco.

Dr. Fernando Figueira: professor of pediatrics of the School of Medicine and of the School of Medical Sciences of Pernambuco; at the moment he is on leave since he is the Health Secretary of Pernambuco; president of IMIP (Institute of Infant Medicine of Pernambuco).

Dr. Martiniano Fernandes: former professor of obstetrics of the School of Medicine, he retired three years ago. He is very favorable toward family planning.

Dr. Figueira, in his capacity as health secretary for Pernambuco, or in any other official capacity, will not express support of family planning. However, he has agreed to include a family planning program in the Integrated Health Center, which would come under the heading of "research." He would like to carry out a four-year research program on the effects of a family planning program on the demographic change in a community with a low socioeconomic level.

Dr. Fernandes is 73 years old, and although retired continues to work. He is director of the Oscar Coutinho Maternity Clinic of Santa Casa, where he has a family planning clinic connected with BEMFAM. Some clinical research programs are being carried out here, especially to test the effectiveness and acceptability of contraceptives for pharmaceutical laboratories. He would like to do more research.

When BEMFAM was founded in Pernambuco in 1966, its most important founding members were Drs. Martiniano Fernandes and Fernando Figueira. Dr. Fernandes is now the family planning leader in Pernambuco.

Since Dr. Cavalcanti is in favor of family planning, the Department of Gynecology has included it in the curriculum. The gynecology outpatient

clinic issues oral contraceptives through prescriptions, and it uses the zipper ring IUD.

Dr. Martha Wanick wrote her doctor's thesis in 1973 in the mother and child care department on "hystological changes of the endometrium with the use of the polyethylene intrauterine devices." Dr. José Constantino's thesis for the examination for the professorship in obstetrics was on "the intrauterine device."

Pediatrics is taught in the IMIP Hospital (Pernambuco Institute for Infant Medicine), as the professor is also director-president of IMIP, a private foundation. IMIP carried out between 1968-70 a project approved by the WHO, "Inter-American Investigation of Mortality in Childhood." Information was obtained comparing infant and prenatal mortality, prematureness and malnutrition. The same project was also carried out in São Paulo and in Ribeirão Preto.

The Mother and Child Care Department, under the leadership of Dr. Cavalcanti, presented a plan for a mother-child care unit at the maternity clinic in Afogados, a poor neighborhood. This aims to develop an assistance and teaching program, including family planning. The plan is now in the hands of the rector of the Federal University of Pernambuco and will later be studied by the secretary of health of the state.

Part of the Physiology Department of the School of Medicine is the Department of Nutrition, headed by Dr. Nelson Chaves, former faculty professor of physiology. The institute is carrying out important studies on the influence of infant protein deficiency in mental development.

Despite its problems, the Federal University of Pernambuco has quite a lot of prestige, and the federal grant for this university is the largest in the northeast (even larger than the grant for the University of Bahía). But

the university is still struggling with insufficient funds. The School of Medicine has economic problems, chiefly as a result of too many students.

The School of Medicine has an agreement to function in the Santa Casa Hospital. The French and Swiss governments have made a loan to Brazil, through the Planning Ministry, to finish equipping the University Hospital. It is hoped that it will be in use by 1976, when all the departments will move there.

According to information supplied by Dr. Cavalcanti, in 1973 the university gave the department a donation of 3,120.00 cruzeiros (US\$520.00), and each important section received 780.00 cruzeiros (US\$130.00). The department survives by private donations and by charging patients who come for preventive gynecology cancer tests a small fee.

The Mother and Child Care Department functions in the Santa Casa Hospital (Pedro II Hospital), Oscar Countinho Maternity Clinic, and the IMIP Hospital. The equipment belongs to the university, but the improvements made to the installations belong to the Santa Casa.

The Faculty of Medicine is going through a difficult period with insufficient funds to carry out the teaching program for its 1,300 students. Any attempt to do a research program runs up against the problem of the excess of students. A trained or interested team to man the mother-child care unit does not exist.

Rankings, on an in-country basis, are as follows:

Overall quality of university: average

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of success in reaching program objectives: modest

Overall rating: average

School of Medical Sciences of Pernambuco

This is a private school, supported by the Pernambuco Higher Education Foundation (FESP), also a private organization. It has 1,500 students, and an average of 250 doctors graduate a year.

It should be considered a low-priority school, interested in developing population programs.

The leaders are: Dr. Antonio Simão Dos Santos Figueira: director of the School of Medical Sciences and faculty professor of infant care. Dr. Fernando Figueira: head of the Mother and Child Care Department, faculty professor of pediatrics. Dr. Figueira is also the secretary of health for Pernambuco and director of the Amaury de Medeiros Health Foundation (FUSAM), an organization that belongs to the Secretary of Health, which implements the health policy and controls the hospitals and other health organizations under the Secretary of Health. One of the FUSAM's aims is mother-child care assistance.

Dr. José Constantino: faculty professor of obstetrics. His work has always been characterized by active support for family planning. His professorship thesis was on the intrauterine device.

The director of the school is also professor of infant care and puts great emphasis on mother and child care assistance. Taking advantage of the fact that his brother, Dr. Fernando Figueira, is the state secretary of health and director of FUSAM, and since one of FUSAM's aims is mother health care assistance, an agreement between FUSAM and FESP (the organization that supports the Faculty of Medical Sciences) was signed to create a program for mother and child protection. It is carried out by the School of Medical Sciences through its Mother and Child Care Department, whose head is Fernando Figueira.

As part of this agreement, a project for an integrated health center is

being started. The project will cover two neighborhoods, Encruzilhada and Beberibe, whose total population is 273,000, the majority in a low socioeconomic bracket. It will be a mother-child health project and in the future will include family planning.

This project is still in the beginning stages, and it has the full support of the state secretary of health. It will be run by the Mother-Child Care Department with the help of FUSAM. According to Dr. Antonio Figueira, the Kellogg Foundation and the Ford Foundation are interested in the project. FUSAM will support the project with installations, material and personnel, and the FUSAM computer. Among the personnel who will work in the Mother Child Care Department are an economist and a mother-child health expert from the state secretary of health, and a pediatrician, Dr. Roberto Moreira Nunes de Silva, one of the two people most responsible for the development of the project.

Research and teaching will be included in this project. Dr. Fernando Figueira hopes to have the program functioning fully by July 1974. The group has already begun research, which is to continue and to complement the research done in 1968-70 under the auspices of OMS, through IMIP, which has been mentioned. Dr. Fernando Figueira, who is also director-president of the IMIP, is now more active in teaching than in research.

The Epidemiology School, which is part of the Medical School, includes in its curriculum a general outline of biostatistics, demography, general prophylaxis, and epidemiology. Dr. Fernando Figueira has asked for this school to be incorporated into the Mother-Child Care Department, where more emphasis will be given to biostatistics and demography.

The School of Medical Sciences is funded through the Pernambuco Higher Education Foundation (FESP), which receives funds from the State of Pernambuco,

private donations, and students' fees. The Kellogg Foundation made a donation to the Faculty of Medical Sciences.

The secretary of health for Pernambuco will help the faculty develop the mother-child assistance program.

The Mother-Child Care Department includes the following sections: obstetrics, gynecology, pediatrics, infant care, and hygiene. The political and scientific leadership of the Figueira brothers has made it one of the most important departments in the faculty. On the other hand Dr. Antonio Figueira's term as director of the School of Medical Sciences is coming to an end. After he steps down, he should become director of FESP.

The School of Medical Sciences, which until a short time ago was of secondary importance in Pernambuco, has now gained status thanks to the agreement with the secretary of health of Pernambuco. According to Dr. Fernando Figueira, when he is no longer secretary of health (in about a year), FUSAM will continue to support the integrated health center.

There is still much to be done, but the members of the Mother-Child Care Department are very enthusiastic about the health center project. The possibilities are good if the secretary of health continues to give financial, material, and technical help.

Rankings, on an in-country basis, are as follows:

Overall quality of university: weak

Quality of population program: average

Apparent degree of staff interest in population program: good

Likelihood of success in reaching program objectives: modest

Overall rating: average

Ceará Federal University Center of Health Sciences

This is a public school belonging to Ceará Federal University and is located in Fortaleza, the state capital. As a result of the Federal Universities Reform Program, the Schools of Medicine, Odontology, and Pharmacy were integrated into the Center of Health Sciences in October 1973. It was one of the first universities to integrate the departments according to the program of the Ministry of Education. Basically the aim is to turn the faculties into professional courses and group all those with the same aims under one name. In the majority of the universities this program has not yet been implemented.

There are almost 1,000 students matriculated in the medicine course. The Faculty of Medicine was founded in 1948.

This should be considered a low-priority institution. There are plans to start a mother and infant health care center program, including family planning, in the Department of Social Medicine.

The leaders are:

Dr. José Galba Araujo: professor of obstetrics since the founding of the Faculty of Medicine in 1948. He is the BEMFAM representative in the state of Ceará.

Dr. Danisio Correa: director of the Center of Health Sciences and assistant professor of social medicine. He is interested in family planning and in the teaching of demography.

Dr. José Fernandes: professor of pediatrics and infant care and head of the Department of Social Medicine. He supports work in family planning.

The only activities in the area of population being carried out in the former Faculty of Medicine are in an outpatient family planning clinic at the Assis Chateaubriand Maternity Teaching Hospital. The teaching of

obstetrics and gynecology is also done there. There are courses in demography run by the Department of Preventive Medicine (which no longer exists under that name). Professor Araujo is interested in a project to develop a mother-infant health care program in a poor neighborhood, to be connected to the Assis Chateaubriand Maternity. Family planning is included in the program. The school director is interested in enlarging and improving a course in demography within the discipline of ecology.

The Center of Health Sciences is supported by the Brazilian government through the Ministry of Education. There is no special financing for population programs. Despite insufficient funds, the discipline of obstetrics and gynecology holds a special position, as it is housed in the Assis Chateaubriand Maternity. The director of the hospital has a certain amount of autonomy, which enables him to make agreements with other institutions (INPS, for example) and to have a wing with better and more comfortable beds for private patients, apart from the beds for charity patients.

The Maternity Hospital receives funds from the Ministry of Education, from INPS under a special agreement, from other institutions, and from the fees paid by private patients. The hospital director, Professor Araujo, is also faculty professor of obstetrics. The outpatient family planning clinic in the Assis Chateaubriand Maternity is supported by BEMFAM.

As a result of the Central University Reform and the necessity of having at least twenty-eight staff members in each department, three departments were united into one in October 1973. The Departments of Preventive Medicine, Obstetrics-Gynecology, and Pediatrics-Infant Care became the Department of Social Medicine. At the moment, this also includes social medicine (formerly preventive medicine), ecology, gynecology-obstetrics, and pediatrics-infant care. This department has a staff of thirty-five.

This is the only place in Brazil where obstetrics, gynecology, and pediatrics are together with preventive medicine, and this could be very useful in developing an integrated program of mother and child health care. The discipline of ecology offers courses in medical statistics and demography.

It was slow and difficult to introduce a family planning program into Ceará. The deep-seated attitudes of the Catholic Church and of the local leaders meant that they were always trying to say that BEMFAM's efforts were part of "an attempt to introduce a mass sterilization program organized and paid for by the U.S. government." Slowly BEMFAM's efforts reduced the problems and opposition. At the moment there are five BEMFAM clinics in Fortaleza, one of them in the Assis Chateaubriand Maternity Teaching Hospital. Intrauterine devices have been used for only a few years.

The greatest difficulty in introducing population programs is the lack of trained personnel, especially personnel trained in research.

Rankings, on an in-country basis, are as follows:

Overall quality of university: weak

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of success in reaching program objectives: modest

Overall rating: weak

#### University of Amazonas, School of Medicine

This is a "federalized" university, which means that although it does not belong to the network of federal universities, it is supported and controlled by the federal government. It has almost 1,000 students and graduates an average of 180 physicians a year. It was founded eight years ago and is located in Manaus, the capital of the State of Amazona.

This institution should be considered as having low priority, with interest in population programs.

The leaders are:

Dr. Agostinho Cruz Marques: director of the School of Medicine and professor of epidemiology.

Dr. Wallace Ramos Liveira: professor of parasitology.

Dr. Jose Genari: professor of obstetrics.

Dr. Jose Leite Saraiva: professor of gynecology.

They are all interested in family planning.

In epidemiology, the school is following a teaching program of the Panamerican Federation of Medical Faculties (FEPAFEM). The professor of epidemiology, Dr. Marques decided to follow the FEPAFEM course in demography. He wants to expand and improve the course, and he needs aid to do this. There is interest in developing a mother-child health care program in the Department of Obstetrics and Gynecology. They also want to develop research in human reproduction and fetal monitoring.

The Faculty of Medicine's funds come from the federal government and from an annual fee charged to the students.

The possibilities of developing a course in demography in the university are excellent. It is a new faculty, founded eight years ago, with young professors who are interested in expanding medical teaching in the region. It has excellent facilities, which are unique in Brazil. Manaus is a free port, so that imports are tax free.

The lack of personnel trained in research is the main problem.

Rankings, on an in-country basis are as follows:

Overall quality of university: weak

Quality of population program: weak

Apparent degree of staff interest in population program: modest

Likelihood of success in reaching program objectives: modest

Overall rating: average

Federal University of Rio de Janeiro

This is a public institution, which through the rector is connected to the Ministry of Education and Culture. It is directly financed by the federal government. National and international funds are frequently channeled to different institutions in the university. The Institute of Biophysics has especially benefited from these, and it is directly involved in teaching medical students in postgraduate courses and in training scientists.

The university is in Rio de Janeiro, and it was originally founded by the integration of the independent and traditionally autonomous schools of higher education. Some of them were among the oldest in the country, most notably the School of Medicine. A campus is being built, to which these institutions will all eventually be transferred, and several institutions are already working there.

According to the recent reform of university structure, the university is now made up of various "centers." Each center includes the departments that form a homogeneous area of study: mathematical and natural sciences, philosophy and human sciences, law and economics, the center of technology, and the medical sciences center. The latter includes the Institute of Biomedical Sciences and the Schools of Medicine, Odontology, Pharmacy, and Nursing. The center has some more specialized institutes which contribute to the medical teaching (biophysics, nutrition, microbiology, and gynecology), which are actually functional parts of the Institute of Biomedical Sciences or the School of

Medicine. Their relative independence is a result of their autonomy before the university reform.

The basic medical sciences are now taught entirely at the new institute on the campus. The clinical teaching is still being done at various hospitals in the city, in one of which is the Department of Preventive Medicine. The University City (or campus) will soon have a new teaching hospital; the building has already been finished.

The Department of Educational Technology in the Medical Sciences Center has modern audiovisual equipment and its own computers. Programmed courses are being prepared or adapted here.

At the moment, the Federal University has 30,000 students, the Institute of Biomedical Sciences has 2,000, and the School of Medicine annually admits 350 students from the Institute of Biomedical Sciences.

Despite its potential, one of the greatest in the country, this institution should be considered of low priority. Instruction in demography is very superficial, including only the data needed to understand general points of public health. In the preventive medicine program there is a seminar (two hours) on "The Population Growth in Brazil and in the World. The Socio-Economic Implications. The Role of Medicine in Population Equilibrium." There are no research projects in demography.

In the Gynecology Department contraceptive methods are used only in individual cases when, for medical reasons, a pregnancy is deemed dangerous to the health of the patient. The professor believes that "it would be against the laws of the land" to include family planning in his program. A research program is being carried out on a contraceptive method that sterilizes by "extra-peritonealizing" the ovaries. The idea is to avoid an irreversible operation.

According to preliminary observations, when desired, the "extraperitonealized" ovaries, with another operation, can be put back into their normal anatomical position and be fertile again.

The leaders are:

Dr. Walter Rodrigues: associate professor of obstetrics.

Dr. Helio Aguinaga: professor of gynecology.

Doctor Rodrigues has been the leader in the development of BEMFAM, and he, with members of his staff at BEMFAM who also hold appointments at the university, have been developing family planning programs in an outpatient FP clinic that operates in connection with the Maternity Teaching Hospital. Because of their open and often controversial activities in BEMFAM, they have not been willing or able to involve the university in the development of a strong FP program.

Helio Aguinaga wants to develop a FP program serving a poor neighborhood in Rio, based in an associated hospital, Sao Francisco, with teaching and research components.

Some individuals are receptive to programs in population problems. In the Department of Preventive Medicine, the seeds of interest in demography have been sown by a new study just begun in a suburban community. However, this department is very much oriented toward tropical pathology, and its staff is too small to allow it to diversify its interests. The Departments of Obstetrics and Gynecology might in the future develop service programs in FP, with teaching and research components.

Rankings, on an in-country basis, are as follows:

Overall quality of university: good

Quality of population program: average

Likelihood of success in reaching program objectives: weak

Overall rating: average

Guanabara State University

This is a public institute, financed by the state of Guanabara and located in Rio de Janeiro.

Rector of the university is Dr. Oscar Asciooli, a lawyer. The GSU has 8,000 students. Of these, 120 register in the first year of the Medical School and 100 graduate yearly.

One of the divisions of the university is the biomedical center, which consists of the School of Medical Sciences (with a teaching hospital), the Institute of Biological Sciences (responsible for teaching basic medical sciences), the Institute of Social Medicine, the School of Odontology, and the School of Nursing. The Institute of Social Medicine is legally autonomous; it has its own director and plans for development, but at the moment it functions as a department of the School of Medical Sciences.

This should be classified as a high-priority developing institution.

The Institute of Social Medicine is developing, with support of the Kellogg Foundation and technical advice from North Carolina University, a post-graduate course entitled "Course on Preventive Medicine." It will cover 18 months and will include demography.

There is also a possibility that the Ford Foundation might support the development of a community research project, and that one of the elements would be family planning. During my visit to Rio de Janeiro, the institute's director, Dr. Nelson de Moraes, was in Terezopolis at a meeting of professors from several medical schools throughout the country. The meeting, under the auspices of the Ford Foundation, aimed to establish the basis for these programs, which could be

started as pilot projects in some of the medical schools, preferably those already active in community medicine. Family planning would be a part of the programs, although at the beginning it would be used only for selected cases with a high maternal risk. Evaluation of the program would be based on the degree of acceptability and practicality of the recommended procedures and on the indices of infant and maternal mortality, infant growth and development, and maternal health.

The Department of Gynecology and Obstetrics is not now doing any special work related to human reproduction or family planning.

The leader is Professor Nelson de Moraes, professor of public health and an advocate of FP for health consideration.

Although the Institute of Social Medicine is developing a program of teaching in demography, there are no other interested groups in the university.

Rankings, on an in-country basis, are as follows:

Overall quality of university: Average

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in achieving program objectives: good

Overall rating: good

#### The Federal University of Minas Gerais

This is a public institution, financed by the federal government and under the administrative control of the Ministry of Education and Culture.

It is located in Belo Horizonte, the capital of the State of Minas Gerais. Like other official universities, in the last few years it has been going through a reform that has organized the medical studies in two parts: the basic (at the Institute of Biomedical Sciences) and the professional (at

the School of Medicine). The School of Medicine includes the clinics and hospital services of the University Teaching Hospital. Apart from the medical students, the Institute of Biomedical Sciences receives students of odontology, pharmacy, and nursing. A campus is being built on the outskirts of the city. The central administration of the university is already functioning there, but few institutes have moved out.

The university receives 350 new medical students a year. The majority of the basic science teaching staff is full time, while the clinical teaching staff is on the whole part time.

This should be considered a high-priority developing institution.

Almost ten years ago, a family planning clinic was opened in the Department of Gynecology and Obstetrics. Professor Dr. Clovis Salgado and Dr. Alberto H. Rocha have been the force behind this project. Professor Salgado is the present director (dean) of the School of Medicine. He has had a long public service career, since he was Minister of Education and Culture during President Juscelino Kubitscek's government. Professor Rocha is in direct charge of the department and participates personally in this project.

The program began in 1964-65 with the help of the Pathfinder Fund (Boston) and later received funds from BEMFAM, in the form of donations of IUD's and hormonal contraceptives, as well as funds to pay for employing two doctors, a secretary, and a social worker. A total of 15,355 patients have received contraceptive treatment (through the first quarter of 1974). In March 1974, there were 326 new patients and 2,393 follow-up consultations. Approximately half these patients have been fitted with IUD's, and the other half have received hormone contraceptives. Professor Rocha and his collaborators have written a number of publications based on this material.

The Department now plans to expand the activities of this service to reach a larger segment of the population, but the aim is to keep it as a demonstration project to which graduate students will be exposed, and in which the postgraduates (at the moment there are seventeen) will actively participate.

Apart from their contact with the above program, the graduate students study family planning and contraceptive methods. There are no important courses or research in demography. In the Department of Preventive Medicine, only the bare outlines of what is called "vital statistics" are taught, to permit evaluation of health and sickness in the communities.

In the Department of Social Nutrition, population expansion is studied, in the context of the growth of alimentary resources. One of the professors responsible for teaching the course said that Malthusianism and Neo-Malthusianism were only ideological positions, and that birth control was too controversial to be considered as a possible road toward a solution of the problem. The decision not to include it in the teaching program also comes from the conviction that "family planning in Brazil goes against government policy."

The program cannot be considered firmly established because of some internal resistance, especially in those sectors that cover the study of demographic problems. However, the activities of the Department of Gynecology seem to have passed the stage of most violent opposition, and the contraceptive clinic is accepted.

The leadership of Professors Salgado and Rocha, and the success of the activities of FP, are the major assets of the program. The poor development of the teaching of demography and the lack of interest and lingering opposition from other departments are the principal weaknesses.

Rankings, on an in-country basis, are as follows:

Overall quality of university: good

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in achieving program objectives: good

Overall rating: good.

#### University Foundation of Brasilia

This is a public institution, supported by the federal government and connected to the Ministry of Education and Culture by means of the rector. It was founded and built in Brasilia at almost the same time as the city. It was modeled on an entirely new concept, which was destined to revolutionize the objectives and concept of university organization in the country. In the original plans, it was to be a completely independent institution, even financially, but it is now financially dependent on the federal government.

In the medical sector, special research and training programs have had significant financial support from national and international organizations (IDB, Ford Foundation, and others). This support centers in the community medicine program, which the school is conducting in Sobradinho, a satellite city in the suburbs. The university bases its clinical teaching in this program, which includes preventive and curative aspects of community medicine. This is one of the programs in which the University of Brasilia has pioneered.

Another innovative concept is that the school is not of "medicine" but of "health sciences," because it aims to train different categories of professionals in health, all in the same institute. There are several courses common to different careers, especially at the basic level. At the moment the Faculty of Health Sciences gives the medicine and physical education courses, and next year it will begin nursing.

There are almost 600 medical students from all over the country. The proportion of students from the federal districts is growing, and in recent classes it is already more than 50 percent.

Almost all the teaching staff is full time. There are eighty in the medical sector of the School of Health Sciences and approximately the same number in the Institute of Biological Sciences, where preclinical courses are taught.

The university is well provided with laboratories and classrooms. There are three computers available, with ample time for processing research data.

This should be considered a high-priority developing institution. Demography is studied in very general terms in the preventive medicine program. With the dominant interest in the health aspects of the community, they are carrying out a research program on the nutritional state of infants in relation to the interval between each pregnancy, and the influence of this interval on the length of breast feeding time. Along with observation of a control population, there is an experimental group of women who have been under continual contraceptive treatment since they last gave birth. This group already has more than 150 women. It is a well-planned and controlled project, whose original aim is the study of the factors that influence the newborn and infants' health. It has been funded by the Ford Foundation.

The leader is Dr. João Bosco Salomon, professor of community medicine and also advisor to the rector for research and postgraduate studies. Thus his leadership includes general orientation not only in the School of Health Sciences, but also in the whole university. He has had a great deal of experience in research in the field of nutrition, principally in Guatemala, at the

INCAP (Central American Institute for Nutrition). He has now been at the University of Brasilia for five years.

Rankings, on an in-country basis, are as follows:

Overall quality of university: good

Quality of population program: good

Apparent degree of staff interest in population program: excellent to good.

Likelihood of success in reaching program objectives: good

Overall rating: good

#### São Paulo School of Medicine

This school began forty years ago as a private entity and was made a federal institute in 1962. It is now a public institute, which follows the federal higher education plans and will be the nucleus for a future Federal University of São Paulo. The school is dependent on the federal government and it has financial difficulties.

There are good installations for teaching the basic courses. The laboratories are located around the central building, which is the teaching hospital (São Paulo Hospital).

The São Paulo School of Medicine has a six-year graduate course in medicine, a four-year course in biomedical sciences, nursing, or phonoaudiology, and a three-year orthopedic course.

In 1974, there were 1,088 students matriculated: 769 in the medical course, 75 in biomedical sciences (the basic disciplines of the undergraduate medical course), 98 in phonoaudiology, 113 in nursing, and 33 in orthopedics. There are 25 students in the postgraduate medical course, studying for M.A.'s and Ph.D.'s in the following: endocrinology (3), gastroenterology (1), microbiology (7), molecular biology (3), pharmacology (9), and natural products (2).

Students take an entrance examination, which is annually set by CESCEM, a specialized entity belonging to the Carlos Chagas Foundation. The school receives students from all parts of the country and from all social classes. Tuition is free.

The standard of the faculty staff is very high. There are 381 professors, 60 percent of whom are full time.

It was not possible to obtain information about the school's budget.

The São Paulo Hospital has 400 beds and is well equipped for medical teaching and service. The basic disciplines have excellent laboratories and receive a great deal of attention. The classrooms are adequate.

As regards library facilities, the São Paulo School of Medicine is privileged, because it has at its disposal a wide selection of medical books and journals at BIREME, the Regional Medical Library. BIREME, directed by Dr. A. Neghme, is funded by the Organization of American States. BIREME gives help to all medical schools in Latin America.

The São Paulo School of Medicine has a very good national and international reputation. It is graded number two in the country because of the high standard of the professionals it graduates and the excellent level of research being carried out.

This should be considered a high-priority developing institution.

In the Department of Preventive Medicine, the course in social and preventive medicine includes an extensive demographic teaching program, and research is also being carried out.

Family planning is taught in the Department of Tocogynecology. Professor Maguid Iunes, head of the Department and Institute of Preventive Medicine, is interested and motivated to develop an extensive family planning program,

in coordination with other units of the school. Professor Klaus M. Rudolph, head of the Department of Tocogynecology, has delegated to Professors Domingos Delascio from the discipline of obstetrics and Otavio Alves de Lima Filho from the discipline of gynecology, the responsibility to work with Professor Iunes in the program.

Professor Iunes is undoubtedly the leader in population-family planning programs. He is organizing a multidisciplinary program. He has also invited professors from other schools, Campinas State University and the University of São Paulo (São Paulo School of Medicine and the Riberão Preto), to participate in a more ambitious plan, which includes making people more conscious of family planning and maternal and child care.

Professor Delascio is interested in clinical research on reproduction, and he has done research on the IUD, circulation in the umbilical cord, placental enzymes in connection with high-risk pregnancy, and the effect of drugs on pregnancy. He is also very enthusiastic about participating in Professor Iunes's family planning program. The directors of the São Paulo School of Medicine support the efforts of Professor Iunes's group.

The São Paulo School of Medicine is one of the most important medical institutes in the country and is also outstanding as a center that produces many leaders.

Rankings, on an in-country basis, are as follows:

Overall quality of university: excellent

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in reaching program objectives: good

Overall rating: excellent

School of Medical Sciences  
of the State University of Campinas (UNICAMP)

UNICAMP is an eleven-year-old public institution supported by the State of São Paulo. It consists of a main campus on the outskirts of Campinas and two subordinate institutes, the Faculty of Odontology in Piracicaba and the Faculty of Civil Engineering in Limeira. Dr. Zeferino Vaz, professor of parasitology, is rector. As the university's administrative and tutorial structure has not yet been defined or established, it is totally dependent on state policy for grants for maintenance.

Much emphasis is put on teaching but even more on research in physics, chemistry, mathematics, and engineering. These have substantial financial resources, not only from the university but also from private and public institutions.

The director of medical sciences is Dr. José Lópes de Faria, a pathologist. He is also head of the Department of Pathology.

In 1974 the Campinas State University had almost 6,000 students studying the following academic subjects: administration, philosophy, human sciences, economics and finance, political sciences, physics, chemistry, mathematics, engineering, biological sciences, odontology, medicine, and pedagogy.

The School of Medical Sciences and the Institute of Biology have a total of 180 professors and 492 students matriculated in the medical course, which takes six years. After these there are an optional two-year residence, and the possibility of turning it into a postgraduate course for M.A.'s and Ph.D.'s is being studied.

Of the 180 faculty members, 85 are full-time teachers and researchers, the other 95 are part time. The students take an entrance examination, which is set by CESCEM. Tuition is free.

The university teaching hospital is on the drawing board, and the most optimistic forecasts say that it will be finished in five years. Till then, the university will continue to use the Campinas Santa Casa de Misericordia Hospital, as it has been doing, with an official permit. This hospital has approximately 150 beds available for teaching purposes.

Almost all the funds come from the state, which gave UNICAMP Cr\$156,000,000 in 1974, of this, Cr\$67,000,000 was to pay the teaching staff, the technical auxiliary, and administrative personnel. The Institute of Biology and the Faculty of Medical Sciences' joint budget in 1974 was Cr\$16,000,000.

Owing to the dynamism of their directors, the Institutes of Physics and Mathematics and the Faculty of Engineering have received important donations from the IDB, BNDE, the Metropolitan Company of São Paulo, and the Brazilian Telephone Company. Small grants and scholarships are regularly donated to the departments and professors by foundations such as CNPQ, FAPESP, and the Ford and Kellogg Foundations, for medicine and biology.

UNICAMP has a central library subdivided into one unit per institute. That is, each institute or faculty has its own library, which is subordinated administratively to the central library.

In July 1968, the computer center was installed. It now has a Digital Computer PDP-10 and an IBM-360. Terminals (one for each institute) are being connected to the Digital Computer. The terminal for the School of Medical Sciences will be installed in the Department of Preventive Medicine, and the one for the Institute of Biology will be in the Department of Physiology and Biophysics. The latter will have a GT-40 display unit as well as the ordinary teletype printer terminal.

Although recently founded, UNICAMP has a good reputation in official circles and among the general public. Despite the problems mentioned above, it

is considered to be one of the best in the country, and is ranked fourth.

UNICAMP should be considered as a high-priority developing institution.

The course in social and preventive medicine includes demography and health and is developing a community service program. Family planning and contraception are taught in the Department of Tocogynecology.

The Department of Physiology and Biophysics teaches physiology of reproduction and carries out basic research in reproduction and endocrinology. Projects to study human reproduction will start shortly.

The head of the Department of Tocogynecology is Professor Jose Aristodemio Pinotti, and he is extremely interested in clinical studies. As well as participating in an extensive plan headed by Professor Maguid Iunes of the São Paulo School of Medicine, the Department of Tocogynecology is developing collaborative study programs with the Departments of Preventive Medicine and Physiology and Biophysics.

The head of the Department of Preventive Medicine is Professor Miguel Ignacio Tobar Acosta, a Colombian. This department has a community assistance center in Paulinia, where a large integrated medical program is being offered to the community, with economic aid from the state and municipal governments and from the Kellogg Foundation.

The head of the Department of Physiology and Biophysics is Professor Carlos Eduardo Negreiros de Paiva. The department is doing research on endocrinology and reproduction. The interests lean toward studying the physiology of the foetal-placental unit and the electro-mechanical activity of the pregnant uterus.

The leaders are:

In the Department of Tocogynecology, Professor José A. Pinotti in

gynecology and Professor Eduardo Lane in obstetrics. Professor Pinotti, who was Professor Bussamara Neme's student, has done courses in Europe and was director of the School of Medical Sciences for three years. Professor Lane is an obstetrician with a good reputation. He began university teaching after many years of clinical experience.

In the Department of Preventive Medicine, Professor Miguel Ignacio Tobar Acosta, the leader in social and preventive medicine, is active and dynamic and has motivated and encouraged many generations of students to practice community medicine.

In the Department of Physiology and Biophysics, the leader is Professor Carlos Eduardo Negreiros de Paiva, one of the founders of UNICAMP. He was an obstetrician, but ever since 1957 he has dedicated his efforts to the physiology of reproduction. He was a Rockefeller Foundation research fellow in the Montevideo Faculty of Medicine, Uruguay. Later he collaborated with A. Osapo in Saint Louis as a visiting research professor at the Washington University in 1969 and 1972. Together with Osapo, he has lately been interested in research on the electric activity of the pregnant uterus (its stimulation and inhibition) and Prostaglandin 'F-2'a effects.

Demography is taught in the Department of Preventive Medicine. Family planning is taught in the Department of Tocogynecology.

Research and teaching in reproduction and FP depend on the personal influence of Professors Tobar, Pinotti, and Negreiros. They are all highly motivated, but they must face the resistance of the director of the School of Medical Sciences and the general opposition to family planning that exists in the country.

Rankings, on an in-country basis, are as follows:

Overall quality of university: excellent

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in reaching program objectives: good

Overall rating: good

The Ribeirão Preto School of Medicine

University of São Paulo

This is a public institute located in the city of Ribeirão Preto and supported by the São Paulo state government. Administratively, it is part of the University of São Paulo.

The Ribeirão Preto School of Medicine was founded in 1953, and it was the last part of the University of São Paulo to be built, far away from the university's main body in São Paulo. It will become the nucleus of a regional university, the Ribeirão Preto University, which has already been legally founded by state law, although it has not yet been organized.

The campus was built 13 kilometers from the city in a large state. The new teaching hospital is being built next to the basic disciplines building and it will be ready in two or three years. The School of Philosophy, Sciences, and Letters is also nearby, and the professors from the Ribeirão Preto School of Medicine collaborate in teaching there.

At present, clinical subjects are taught in the Sinha Junqueira Hospital. With almost 200 beds, it is located in the city (thus it is 13 kilometers from the campus).

The teaching staff is very good and has a high standard. About 80 percent are full time, and the majority come from the School of Medicine of

São Paulo. There are 193 professors.

In 1974, 735 students registered in medicine and biology. The teaching staff also collaborates in the nursing course, which has 151 students. The six-year medicine course has a total of 571 registered students.

The students take the entrance exam set by CESCEM. The tuition is free.

The University of São Paulo's total budget is Cr\$600,000,000; of this the Ribeirão Preto Faculty of Medicine receives Cr\$28,067,600. The departments and the researchers also receive funds from national and international entities (the State of São Paulo Research Aid Foundation, the National Research Council, the Kellogg Foundation, the Population Council, and the United States Air Force).

The School of Medicine has a very good, up-to-date medical library. A special building with large, comfortable classrooms has recently been built especially for the basic disciplines. The laboratories for the basic disciplines are well equipped with good installations, and the laboratories are satisfactory. There is a computer center.

The school has a very good reputation and is ranked number three in the country.

The Ribeirão Preto School of Medicine should be considered a high-priority established institution.

The Department of Social Medicine gives a thirty-hour course in demography to the third-year medical students. A six-week seventy-two hour course in demography is also given as part of the requirements for the magister's or doctoral level, postgraduate program. Research in fertility is being carried out. The Department of Gynecology, Obstetrics and Pediatrics is in charge of family planning in community medicine and has various other active research pro-

grams in reproductive biology.

The leaders are:

Professor Alberto Raul Martines, an obstetrician, is director of the School of Medicine. He is the person who made the Department of Gynecology, Obstetrics and Pediatrics a dynamic unit.

Apart from Professor Martines, the leader in the Department of Gynecology, Obstetrics and Pediatrics is Professor Italo Baruffi, who follows the orientation and leadership given to the department by Professors Martines and Negreiros de Paiva. With help from the Rockefeller Foundation they installed the first center for Obstetrical Research in Brazil in 1960. The center continues to be active under the guidance of Professors Baruffi and Roberto Meirelles, the latter a former Ford Foundation Scholarship student.

The Department of Social Medicine, led by Professor Nagib Haddad, works very closely with the Department of Obstetrics and Pediatrics.

Professor Woiski, now at Santa Casa, is still active in field research. He controls and makes decisions on how to spend funds and is participating in the work at the Vila Lobato Community Social Medicine Center on the outskirts of Ribeirão Preto.

The university, the oldest in the state of São Paulo (1927), has a very good reputation and is the cradle of the best Brazilian scientists. It is the leader among the universities, private and public, because of the high standard of its teaching and research programs.

The local population is receptive to the work being done by the leaders mentioned above, because they give advice but do not impose ideas.

Rankings, on an in-country basis, are as follows:

Overall quality of university: excellent

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in reaching program objectives: good

Overall rating: excellent

The University of São Paulo, School of Medicine

This is a public institution, supported by the state of São Paulo.

The School of Medicine of the university (FMUSP) is not located on the University City campus, but next to the Hospital das Clinicas. This hospital, an autonomous institution, is the teaching unit. The hospital is surrounded by various medical and health institutes, some belonging to the university and others directly controlled by the state. They include: The School of Hygiene and Public Health, the Institute of Legal Medicine, the Adolfo Lutz Institute for clinical and bromatological analysis, the Emilio Ribas Isolation Hospital for infectious and tropical diseases, the Orthopedic Institute, the Cardiology Institute, and the School of Nursing.

In 1974, there were 1,163 students registered in the six-year medicine course. Of these, 640 are following the "classical" medicine course, with the basic disciplines taught in the School of Medicine and the clinical disciplines in the Hospital das Clinicas and neighboring hospitals and institutes. The other 523 students are doing an "experimental" course, with the basic disciplines taught at the Institute of Biomedical Sciences, on the University of São Paulo's main campus. The institute is also in charge of the basic disciplines for the Faculties of Veterinary Medicine, Odontology, Pharmacy, Biochemistry and Physiology, Letters and Sciences, all in the city of São Paulo. The clinical disciplines of the experimental course are taught in the Hospital das Clinicas.

The students take the entrance exam set by CESCEM. The School of Medicine receives students from all over the country and from all social classes. The tuition is free.

The School of Medicine has 246 professors, 78 full time and the rest part time. The majority of the full-time faculty teach the basic disciplines. Some doctors from the Hospital das Clinicas medical staff collaborate with the teaching.

Of the University of São Paulo's total budget of Cr\$600,000,000, Cr\$48,000,000 are for the School of Medicine. It also receives funds for research from national and international entities: the São Paulo Research Aid Foundation, the National Research Council, the Kellogg Foundation, and the Ford Foundation.

The School of Medicine of the University of São Paulo has an excellent medical library and also takes advantage of BIREME's library facilities.

The Hospital das Clinicas, founded in 1944, has about 850 beds and is considered to be one of the best hospitals in the country.

The School of Medicine should be classified as a high-priority developing institution.

The students are taught the basic aspects of demography in the social and community medicine course given by the Department of Preventive Medicine.

The Department of Obstetrics and Gynecology teaches family planning. This department is divided into two sections: obstetrics, directed by Professor Bussamara Neme, also head of the department, and gynecology, directed by Professor Carlos Alberto Salvatore. The department is doing research in both human reproduction and family planning. The obstetrics sector is more interested in medical service, and the research being done is oriented toward high-risk

pregnancies and perinatology in general.

In the gynecology sector, research is divided into four areas: human reproduction (Dr. Franz Muller); female sterility (Dr. M. Nakamura); andrology-male sterility (Drs. A. Castro and Vicente M. Izzo); and family planning (Dr. L. Ramos).

The leaders are:

Professor Bussamara Neme, head of the Department of Gynecology and Obstetrics. Professor Neme, who was the first fellow of the Uruguay School of Physiology and Obstetrics, works part time and has only recently been named head of the sector of obstetrics. He is slowly reorganizing the department, and also dedicates much of his time and energy to the "Dona Leonor Mendes de Barros" Maternity Home. This institution belongs to the Brazilian Assistance Legion, a nonprofit organization providing mother and child care in the whole country.

Dr. Carlos Alberto Salvatore is responsible for the gynecology sector of the Department of Obstetrics and Gynecology. He has been trained in various foreign medical centers and has done postgraduate studies at Cornell University. He is head of BEMFAM in São Paulo, and his collaborators, although almost all part time, devote themselves to research almost full time, sometimes voluntarily and without pay.

The Department of Preventive Medicine is directed by Dr. Guilherme Rodrigues da Silva. The director of the School of Medicine is Dr. Paulo de Almeida Toledo, Professor of Radiology.

The institutional aims are basically to train professionals, doctors, and nurses and to provide the community with medical attention. Up to now there has been no systematic and regular program in population in the Medical School.

This university, the oldest in the State of São Paulo (1927) and cradle of the best Brazilian scientists, has a very good national and inter-

national reputation. It is considered the best in Brazil, because of the high standard of the teaching and research programs. The School of Medicine has traditionally been considered number one among all the Brazilian Medical Schools.

In regard to research in reproduction and family planning, the work of Professor Salvatore and his group is important and promising. The negative factor is that there is no contact between the various departments; none of them seems to be interested in the others.

Rankings, on an in-country basis, are as follows:

Overall quality of university: excellent

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in reaching program objectives: average

Overall rating: good

#### The School of Public Health of the University of São Paulo

The School of Public Health is an official entity, financed by the São Paulo state government and administratively integrated with the University of São Paulo. It was founded in 1918 as a result of an agreement between the state government and the Rockefeller Foundation, as a "Health and Hygiene Laboratory." Later it was integrated into the School of Medicine of the University of São Paulo, where the first health center in the country was created, and it pioneered in training public health personnel.

Over the years it has been developing, expanding its activities, and diversifying its courses, and in 1945 it was made an institute of higher education and named the School of Hygiene and Public Health. In 1947 "The Official Health Service" was founded in the municipality of Araraquara, which formed the rural training nucleus. With the reform of the university system, it was renamed

School of Public Health in 1969.

The School of Public Health teaches courses at three levels:

1. Undergraduate courses in nutrition which take twenty students a year and last four years.

2. A public health course for graduates lasting a year with a total of 900 required hours. This course is a prerequisite for the masters' and doctorate courses. It is open to graduates in the following professions (the number of places for each in brackets): public health for physicians (60); public health for engineering graduates (30); public health for graduates in architecture (10); public health for veterinary graduates (10); public health for pharmacists and biochemists (10); public health for nursing graduates (20); public health for other graduates (30); public health education for graduates (health educators) (40); and hospital administration for graduates (40).

3. Doctoral and masters' degree courses: five postgraduate courses have been approved by the Federal Education Council:

Masters' courses of 1,440 hours -- public health education, hospital administration, and public health; and doctorate courses of 2,880 hours -- hospital administration and public health (open to doctors, engineers, dentists, and nutrition graduates).

The school's activities are closely linked to those of the schools of Medicine, Nursing, and Architecture of the University of São Paulo.

The majority of the students come from the state of São Paulo, and a few from the other states and from neighboring countries. In 1974 a total of 226 students matriculated.

There are eighty-eight faculty members, thirty-four full time and the rest part time.

The financial resources come from the state government, and they are considerably supplemented by other national sources (National Research Council and the São Paulo Research Aid Foundation) and foreign and international sources (WHO, the Ford and Kellogg Foundations).

The school has an excellent library, classrooms, and laboratories, and it uses the University of São Paulo Computer Center by means of a time-sharing agreement.

The School of Public Health has its own official quarterly magazine, the Public Health Magazine (Revista de Saúde Pública).

The School of Public Health should be considered a high-priority established institution.

#### The Population Dynamics Studies Center at USP/SPH

The Population Dynamics Studies Center (CEDIP) is presently housed within the Department of Epidemiology. It is a very active group. There are seven members of the research staff of whom two belong to the Faculty of Public Health teaching staff. The other five are financed by WHO.

CEDIP was born out of the need to investigate demographic phenomena, especially mortality and morbidity, at the School of Public Health. The first research came from epidemiologists, economists, mathematicians, and biostatisticians. In 1964 a mortality research project had been completed and its results published in the Brazilian Medical Review, followed in 1967 by an infant mortality study published in the Brazilian Public Health Review. A statistical investigation led to the publication of Patterns of Urban Mortality by the Pan American Health Organization. Seminars on population and cooperative research with other institutions followed. In 1968, four years after the first research results were published, CEDIP was created as a program of research and training for the study of population dynamics.

CEDIP developed very fast and opened fields of research in human reproduction, the evolution of the Brazilian population including migration, mortality, health, and housing, and also in population policy. Its development has been so important that it has applied to become an interdepartmental center of the University of São Paulo. This application is in the process of being approved by the São Paulo University Council.

If the change is approved, CEDIP will serve the School of Public Health's Department of Epidemiology, the School of Medicine's Department of Preventive Medicine, the School of Architecture's Department of Town Planning, and the "Luis de Queiroz" Higher School of Agriculture's Department of Applied Sciences in its sectors of Nutrition and Agricultural Technology.

The director of the School of Public Health is Professor Walter Engracia de Oliveira, from the Department of Environmental Health.

There are various leaders in the institute, and they are not always the heads of the departments. Thus in the Department of Epidemiology the leader is Dr. Ruy Laurenti, now studying mortality, especially the various causes of death within the various types of autopsies. He is also interested in the legal aspects of registering deaths. Dr. Laurenti represented the School of Public Health at the World Population Conference in Bucharest in August 1974.

The leadership for the creation of CEDIP was provided by Professor Elza Berquo. Its director is now Dr. João Yunes.

In the Department of Practical Studies in Public Health, maternal health is very important, and Dr. Cyro Ciari Junior, the director of this discipline, is the leader in this area. The postgraduate courses are given to doctors, nurses, and health educators. Courses include human and animal reproduction and perinatology and maternal care, not so much from the clinical aspect

as from the wider viewpoint of public and social health.

The institute has a very good reputation among official national organizations and foreign institutions. This school and the Castelo Branco Foundation in Rio de Janeiro are the only two centers in the country dedicated to teaching and research in demography and public health.

The School of Public Health has a high standard because of the excellent quality of its professors and research staff, the variety of courses it offers for graduates from different schools, and the large number of specialists in public health who graduate every year.

Rankings, on an in-country basis, are as follows:

Overall quality of university: excellent

Quality of population program: excellent

Apparent degree of staff interest in population program: excellent

Likelihood of success in reaching program objectives: excellent

Overall rating: excellent

Federal University of Rio Grande do Sul

School of Medicine

This is a public institution that belongs to the federal system of universities, and by means of its rectorate it comes directly under the Ministry of Education and Culture.

The School of Medicine has been restructured according to the new federal universities law, so that now the basic courses have been separated from the medical and integrated into an institute for teaching the medical and biological basic disciplines for all courses in the field of biology. Thus a Biosciences Institute was created, which teaches anatomy, hystology, physiology, pharmacology, pathology, microbiology, zoology, botany, and genetics to all

students of medicine, odontology, biology, veterinary medicine, agronomy, and nursing. The Biosciences Institute has 1,200 students, of whom 300 are studying medicine (first and second years).

The School of Medicine includes the students in their third to sixth years. In 1974 there are a total of 840 students matriculated (210 students in each year).

The students take an entrance exam. The tuition is free. The students come from all social classes, and the poorest have the possibility of getting scholarships to pay for their upkeep. The faculty of the School of Medicine has approximately 300 members, 30 full time, 150 part time at twenty-four hours a week, and 120 part time at twelve hours a week.

The full-time faculty members are dedicated to research, with the help of a few voluntary part-time members who do occasional research.

The Biosciences Institute is situated in an old building that belonged to the School of Medicine until last year. The institute's permanent building is still at the planning stage and will be built in the University City, 12 kilometers outside Porto Alegre.

The School of Medicine is now functioning in the Hospital de Clinicas, which when fully equipped will have about 400 beds. It is a modern building in the center of the city, which as a result of an agreement signed between the Federal University of Rio Grande do Sul and the Ministry of Labor treats the affiliates to the National Social Security Institute (INPS). Thus it will not be like the other Hospital de Clinicas in Brasil, which treat charity patients.

Until the Hospital de Clinicas is completed, the clinical disciplines are being taught in the Porto Alegre Santa Casa de Misericordia Hospital, which has 770 beds; in the Sao Pedro Hospital (Psychiatric), with 200 beds; in the

Legal Medical Institute belonging to the Secretary of Public Security; and in the São José do Murial Social Medical Center, which comes under the Secretary of Public Health and Hygiene. The Secretariat of Public Health and Hygiene is directed by Dr. Elis Busnel, who also teaches at the School of Medicine, and the preventive medicine and pediatrics courses are taught there.

All the federal university's financial resources come from the federal government through the Ministry of Education and Culture. Apart from federal funds, the state government gives the university aid through the Secretary for Health and Assistance, to pay for interns and for a program to control gynecological cancer.

The university has access to a computer center, which can be used by the entire teaching and research staff. The School of Medicine has a subcenter of the Regional Medical Library (BIREME). This should be considered a high-priority developing institution with interest in developing population programs.

General aspects of demography are taught in the Department of Preventive Medicine. Head of the department is Professor Gilberto Ferreira Fossati, an odontology graduate, who is not interested in developing a program of population studies.

The students come into contact with population problems and community social medicine only in the São José do Murial Center, thanks to the interest and efforts of Professor Busnel, who is doing excellent work.

Except for routine teaching of social medicine and the basic aspects of demography, there are no other studies in population in the Department of Preventive Medicine.

The head of the Department of Gynecology and Obstetrics is Professor Pedro Luis Costa. The teaching in this department is done at the Mario Tota

Maternity Hospital, which has 130 beds and serves only charity patients.

According to Professor Costa, every year they have 8,000 to 9,000 births and 2,000 to 3,000 women to be treated as consequence of illegal abortions.

Research in perinatology and studies on amniotic liquids and nutrition and gestation are being carried out in the Department of Gynecology and Obstetrics. They are also developing a program to treat cases of high-risk pregnancies. Thirty beds in the Mario Tota Maternity Hospital have been reserved for this program, and it receives economic aid from the State Ministry of Health.

Dr. Arnaldo Nicola Ferrari is a professor in the Department of Gynecology and Obstetrics. Dr. Ferrari, a former fellow of the Population Council, is director of the University Foundation of Endocrinology and Fertility, a private foundation which has agreements with the School of Medicine and BEMFAM. The foundation receives aid from WHO for a project on diagnosing ovulation through the changes produced by heat in the color of the cervical mucus. It also receives aid from the Ford Foundation for small projects, and almost \$20,000 annually from BEMFAM for the study of new contraceptives and their use in microdoses.

In the Department of Physiological Sciences, Professor Kraemer is studying maternal fertility in experiments with rats. He is especially interested in the mortality rate, the size of each nestful, the relationship between the maternal and foetal glucose levels and foetal growth, and the uterine activity in these animals.

The leaders are Pedro Luis Costa, professor of gynecology and obstetrics and head of the department, and Professor Ferrari.

Professor Costa believes that the right not to have children is linked to the right to have healthy children. He is in favor of giving out family

planning information to the poor, and thinks that this should be a national effort, basically supported and backed by the state and federal organizations and taking into account the individual conditions of each region. As to family planning, Professor Costa has adopted a prudent position.

Dr. Ferrari is dynamic, and scientifically his orientation is sound. However, owing to his ties with BEMFAM, he is criticized by many of the gynecologists and obstetricians in Porto Alegre.

The School of Medicine has good and capable people, but there is some rivalry among the teaching staff, mainly in gynecology and obstetrics. To a certain extent, this hinders and harms the work being done and the performance of the highly qualified individuals.

Rankings, on an in-country basis, are as follows:

Overall quality of university: good

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in reaching program objectives: good

Overall rating: good

#### Demography and Related Social Sciences

The social sciences are striving to establish themselves in the Brazilian university system. Experiencing an economic boom, Brazil in the last six years has been able to assimilate economists into the private and public sectors at a high rate. As one professor of economics put it. "They take them as soon as they finish their course work and once employed they forget what should be their goal -- completing their degrees." Economics is the strongest and best organized of the social sciences. All graduate schools offering degrees in economics recruit their students through a national examination, and competition

for admission into the best schools is stiff. Of all degrees awarded by Brazilian universities, the proportion in economics and administration has increased from 12 percent in 1965 to 14 percent in 1970. Approximately 64,000 university degrees were awarded in Brazil in 1971.

Among the leading graduate programs offering degrees in economics are: the Center for Regional Planning (CEDEPLAR) of the Department of Economics at the Federal University of Minas Gerais; the Graduate School for Economics of the Getulio Vargas Foundation (note: foundations in Brazil bear little relationship to the American concept); the Institute for Economic Research (IPE) at the University of Sao Paulo; and the Integrated Masters in Economics and Sociology (PIMES) at the Federal University of Pernambuco in Recife.

Sociology, anthropology, psychology, and political science are all placed under the general category of "philosophy, sciences and letters" in reported educational statistics. Impressionistic evaluations of the status of sociology derived from field visits and conversations indicate that there is less demand for sociologists and fewer applicants for this discipline, but new graduate degree programs are emerging, for example at the University of Campinas' Institute of Philosophy and Letters. Conversely, "applied" areas offer good career prospects. Communications seem to be such an area, attracting people to sociology and psychology and offering promising careers.

The need to develop the social sciences, especially to establish graduate programs of high quality, is recognized by the Ford Foundation, the leading source of external funds in Brazil. The 1973 Ford Foundation - Brazil Report notes: "The social sciences receive a large fraction of the Foundation resources, 36 percent of all donations in the last four years. Included are projects in economics, social anthropology, sociology, and political science."

The recent emergence of demographic specialties within masters' degree

programs in leading Brazilian institutions represents the latest of a series of stages in the process of institutional development. In Brazil, as in other countries in the region, university training and research in demography has evolved along the lines of what might be called a Latin American model of institutional development in population studies. This model has a unique characteristic in that a series of factors contribute to an initial research push, which leads to a demand for trained personnel in demography, thus creating the basis for university programs. The following stages illustrate the process: (1) initiation -- isolated research from a variety of perspectives concentrates on population; (2) exchange -- results are publicly discussed, conferences take place, information is exchanged; (3) institutionalization -- population research is integrated in existing research centers, demand for trained experts increases; (4) consolidation -- demographers (a good number trained abroad) appear on the scene and degree programs are started; training and research are consolidated.

These four stages are helpful in evaluating the status of demography and related social science in Brazil today. Alternatively, these four stages can be helpful to trace longitudinally the development of the discipline, although that is not our primary concern.

In the vast geographical extension of Brazil, two centers have taken the lead and consolidated resources creating formal degree programs in demography. These two centers are located in the central and southern regions of the country. One is CEDIP at the School of Public Health in São Paulo; the other is CEDEPLAR at the Federal University of Minas Gerais.

CEDEPLAR, Federal University of Minas Gerais

CEDEPLAR, an institution of considerable and growing importance in Brazil, offers a program of research and graduate training in regional economics.

Its growing interest in population studies, as expressed in faculty research, courses in its economic curriculum, and staff training, has led the center to broaden its master's program in economics to include a specialty in population studies. Four to five of the twenty students who enter the two-year CEDEPLAR master's program each year combine basic curriculum of economics and quantitative methods with a set of core courses in substantive and methodological demography, leading to a master's degree in demographic economics.

This approach represents an integration of population studies into CEDEPLAR's existing strengths, which combine economics with a growing capacity in the population area, rather than the establishment of a separate population center, which is viewed as premature in the present institutional setting. This program has been supported by Population Council funds since 1974.

CEDEPLAR was founded in 1967 by a group of faculty members at the Federal University of Minas Gerais. Their aim was twofold: to develop a graduate training and research institute specializing in regional economics and planning, and to create the conditions necessary to retain young faculty members on a full-time basis within the university. In the years since its founding, the center has made considerable progress toward these goals. A master's program in regional economics was instituted in 1968, and the fifth class started its graduate training at CEDEPLAR in March 1973. Students have come from all parts of Brazil and from other Latin American countries.

An important complement to formal classroom training is student participation in CEDEPLAR's research program. Research has been a priority of the center since it was founded, and a nationally recognized research capacity has been developed. Studies recently completed include the first regional input-output table for Brazil and a related analysis of the structure of Minas Gerais, a study of the growth poles in the state of Minas Gerais, and an analysis of

the role of public expenditures in the state's economy. More recently the center's research competence attracted contracts with the Brazilian Census Bureau for advice on the 1970 industrial census and with the state of São Paulo to consult on an in-depth study of Paulista economy. More recently a contract was signed between CEDEPLAR and the Brazilian Superintendency for the Development of Amazonia for a study of internal migration and related demographic factors -- including fertility -- in order to plan the development of the various states that comprise this region. With its growing research commitments, CEDEPLAR has developed a strong research infrastructure. The center has a data bank containing both published and unpublished census data, sample survey data, and a wide range of information on social and economic aspects of the population at all levels.

An important characteristic of the institution's development process has been the multidisciplinary orientation of the center and its staff members. Another important area besides population studies is urban economics. In 1972 CEDEPLAR joined with the metropolitan planning authority for Belo Horizonte in a series of research projects that will lead to a metropolitan area plan. CEDEPLAR designed the demographic and manpower sections of the project and will analyze results of the sample survey conducted jointly with the plan group. In a further development, the recent publication of the definitive results of the 1970 population census is already being regarded as a demographic landmark in Brazil and has served as a catalyst to awaken interest in population research on both academic and government levels.

Thus the center has been able to consolidate training and research activities. Thesis research seminars allow students to gain research experience through participation in research projects. During 1974 six thesis

students will utilize the census and survey data described above in studies that span the disciplines of economics, demography, sociology, and urban planning.

CEDEPIAR is undoubtedly a high-priority institution that deserves support from the international donor agencies. It offers, in the field of demography, an excellent setting, staff, and a strong potential to become the leader in population training in Brazil.

#### CEDIP University of São Paulo

Although the Center for the Study of Population Dynamics (CEDIP) has been reviewed elsewhere in this report, it is important to mention here that its present transitional status might result in a closer interaction with the social sciences. In 1974 CEDIP decided to leave its original affiliation to the School of Public Health to become an interdepartmental-interdisciplinary and independent training and research center servicing the social sciences, agronomy, architecture, public health, and other related disciplines at the University of São Paulo. This flexible interdisciplinary approach would permit a greater number and variety of students to take majors or minors in demography at CEDIP. If successful, this move might lead to an eventual development of the first Ph.D. program with a concentration in population in Brazil.

#### Other DARSS Institutions

A number of institutions in Brazil are involved to various degrees in population research or have done some teaching, but where no organized demography training programs exist. Among these are, the Institute of Philosophy and Human Sciences at UNICAMP, CEDOPE at UNISINOS near Porto Alegre, and institutions in the northeast of Brazil. Particularly in the Northeast,

the stage of institutionalization of demographic studies is still to be reached, and the timing is uncertain.

UNICAMP: Institute of Philosophy and Human Sciences

The State University of Campinas (UNICAMP), São Paulo, was founded in 1966 to perform three main functions: (1) to train students, (2) to conduct research, and (3) to collaborate in the social and economic development of Brazil. UNICAMP is located in the city of Campinas about two hours from São Paulo.

The Institute of Philosophy and Human Sciences was started in 1969 and is devoted to three main areas: social sciences, economic development and planning, and linguistics. The institute also maintains a language center and a center for the development of small and medium size business firms. The Social Science Department includes separate specialties in social anthropology, philosophy, history, political science, and sociology.

At the graduate level, the institute has initiated masters' level degree programs in five main areas: economics, political science, sociology, social anthropology, and linguistics. There are (as of March 1974) sixty-four full time and ten part-time faculty members, representing a threefold increase in the past two years. Of these, twenty-four have completed Ph.D.'s and forty have done graduate work abroad. While there are no graduates yet from the various graduate programs, enrollment in these programs (eighty-two students in the five specialties) surpassed initial expectations. Plans for the expansion of some of these specialties to full doctoral degree programs are already being made.

Overall the social sciences have made great progress at UNICAMP in the past two years -- including the expansion of students and faculty and the move into a modern complex of integrated buildings (including specialized

libraries, statistical and language laboratories, and graduate seminar rooms). The institute is beginning to attract notice both in Brazil and in Latin America as its members participate in professional meetings, and their talent and expertise has led to research and consultative arrangements with private and public sector agencies.

The main objective of the institute is to achieve high levels of excellence in its main areas of expertise and to attain recognition within the Brazilian and the Latin American academic systems.

The institute considers demography a vital discipline to several of its main areas of expertise. Yet, because of the recent beginning of the institute's graduate programs, it is premature and also unwise to think of a master's level offering in demography. However, they anticipate, in the next three to five years, the possibility of developing demography to a level that would merit a separate graduate-level degree program. To reach this goal the institute is slowly increasing its staff capacity in this area. For example, Dr. Maria Luiza Marcilio, the only Brazilian historical demographer, is expected to join the history faculty in 1975. In addition, within anthropology there is substantial interest in working in demography. Over the past two years, sociology has had a Population Council-supported visiting demographer. Demography courses are already a part of several curricula and have been well received by the students.

Because of the lack of demand for demographic training in Brazil, the institute would like to continue to hire an expatriate demographer as well as to attract some of the Brazilians studying demography abroad.

Simultaneously, the institute hopes to be able to recruit economists and/or anthropologists who have concentrated their studies or done advanced research in demography. The increase of demographic talent among the faculty of the various graduate departments appears the best strategy for this university

to lay the basis for the eventual launching of a full demographic specialty.

UNICAMP graduate programs in the social sciences are, however, just beginning, with most students having matriculated in the past year but none yet having graduated. The newness of its program and the undeterminate form of its commitment to population studies, place this institution in a secondary level of funding priorities in Brazil.

#### UNISINOS: The Center for Documentation and Research

In the south of Brazil, in the state of Rio Grande do Sul, the University de Vale do Rio dos Sinos (UNISINOS) is in the midst of an intensive research and institutional build-up. Demographic training does take place but only at the undergraduate level. The Center for Documentation and Research (CEDOPE) is headed by a dynamic Jesuit, Pedro Calderon Beltrão, author of the newest text for the study of demographic methods in Brazil. UNISINOS is a private Catholic institution, but CEDOPE's research orientation reflects little of this background. They have won both Rockefeller Foundation (International Competition) and Ford Foundation (National Competition) research awards to study fertility, abortion, mortality, and migration in Rio Grande do Sul. Although plans for a graduate training program are not yet formulated, the fact that CEDOPE staff are receiving training in foreign institutions points in the direction of such development in the future. The Population Council has contributed to building up their research facilities with equipment and library support.

#### Institutions in the Northeast

The Brazilian northeast represents another stage in the development of population studies. With close to 35 million inhabitants, the northeast of Brazil is the world's most densely populated semiarid region. An area of rapid

growth and traditionally the origin of important migration movements whose destination is the prosperous São Paulo region, the northeast offers an unusually rich field for population research.

The northeast appears to be at the stage where exchange of research information precedes the formulation of more ambitious training programs. Two important agencies whose mission is to foster the development of the area have either created research units or encouraged demographic research through contractual arrangements. One of these is the Bank of the Northeast, whose Technical Bureau (ETENE) has been gathering and analyzing demographic data under Helio Moura, a competent specialist and member of the national advisory committee on population grants to Ford Foundation. Moura has carried out migration surveys, assembled a research staff and built up a demographic library at ETENE in Recife. Also in Recife the Agency for the Development of the Northeast (SUDENE) employs a French-trained demographer, Georges Pelleran, who has been doing labor force analysis and is assisted by two CELADE-trained staff associates.

While this research activity proceeds in nonacademic settings, the Federal University of Pernambuco is strengthening its integrated master's degree program in sociology and economics (PIMES) and making plans for the eventual development of a demographic "track." A Georgetown-trained M.A. already offers a demography course. In addition, as a means to foster the informational exchange process, the University of Pernambuco's rector, Dr. Marcionilo de Barros Lins, has undertaken to pool local resources and national experts to launch a course-workshop in demography to be aimed primarily at planners from the various development agencies to the northeast.

Another important northeastern university, the Federal University of Bahia in the city of Salvador, has a program of human resources, which also plans

courses in demographic techniques and carries out some demographic research.

"The Program of Human Resources" was created in April 1969 as an interdisciplinary program, with the aim of planning studies, carrying out research, and promoting specialized training for technical personnel.

For the first years, the main goal was the formation and training of a permanent staff of specialists in areas such as economics, sociology, demography, statistics, health, and education. Simultaneously, the collection of basic data concerning human resources, which were practically nonexistent, was emphasized.

Among the projects developed by the program is the study of "Population Dynamics of Salvador from 1940 to 1968," under the direction of Professor Paul Singer (CEBRAP) and Professor Jair Licio F. Santos (CEDIP), which besides linking the program to these institutions provided information on the main changes observed in fertility, mortality, migration, and composition by age and sex.

Another study, also in collaboration with CEBRAP, is the "Labor Force and Development in Salvador," a sample survey of 1,112 persons from different socioeconomic status including questions on employment, unemployment, migration, health, education, income level, social mobility, and so on.

Clearly these institutions in the northeast reflect a latent interest in and demand for demographic expertise. These activities indicate that the northeast will soon move to the next stage in the process of institutionalizing a structured program of demographic studies.

#### The Supporting Agencies

In Brazil's population scenario, both local and external funding as well as support agencies play an important role in fostering the development of demographic studies.

An important support agency is the Fundação IBGE, the Brazilian Census Organization. While not able to contribute funds to universities, IBGE is actively seeking and encouraging more research activity in academic settings. The 1970 census of Brazil is being hailed as a landmark in national demographic data collection history, a unique new source of data for analysis, and a starting point for further research. Isaac Kerstenezky (Ph.D., Yale), head of IBGE, feels: "The time for the development of university programs in Brazilian universities is right now, because we have basic data for population studies and demographic analyses that previously had not been possible to do in our country." IBGE maintains a staff of programmers and has ambitious research plans of its own.

Among the local funding sources, federal as well as state agencies play an important role through direct support to universities or through contractual agreements for specific research projects. The Ministry of the Interior (MINTER) at the national level, or PLANBEL, the metropolitan planning agency of Belo Horizonte at the local level, are examples of agencies undertaking contractual research arrangements with universities. The Ministry of the Interior has budgeted US\$2.5 million to carry out a long term migration study. An objective of this project is to study the feasibility of adopting a national migration policy. The MINTER has also formed a National Migration Commission, made up of experts from various planning agencies and university staff consultants.

The leading source of external funds for population research is the Ford Foundation, which maintains an office in Rio de Janeiro. In addition to its strong commitment to the development of the social sciences, Ford Foundation has singled out population emphasizing three areas: reproductive physiology, family planning, and demography.

In demography, Ford first concentrated its resources on fellowships

for graduate study abroad, hoping that those students would return to create a cadre of professionals to develop university programs in Brazil. More than thirty fellowships have already been awarded. In 1972 a national competition for population research projects was launched. At least fourteen projects have been funded. Five nationally known social scientists form a committee to evaluate and award research project funds. The Ford fellowship budget for Brazilian demographers is \$365,000, and the total budget including the population research program is \$665,000. This excludes sums allocated for family planning and reproductive biology. The Population Council is another source of external aid to Brazil. The Council's logical support target is institutional development, an area the Ford Foundation does not cover. The Council's support of research has a long history. Institutions that have received Council funds are the University of Campinas (salary support for a demographer), the Center of Religious Statistics and Social Research (CERIS) of Rio, the Agricultural School "Luiz de Queiroz," and the Brazilian Center for Analysis and Planning (CEBRAP), the last two in São Paulo. In 1974 the Council gave an institutional development grant to support a demographic specialty within the master's degree program in Economics at CEDEPLAR, Belo Horizonte and a small grant to CEDOPE at UNISINOS in Sao Leopoldo.

#### V. CONCLUSIONS

Although the Brazilian government maintains a pronatalist policy, the right of the married couple to receive family planning advice and services and to determine the number of children that they want to have has been recognized since 1971, and further reaffirmed recently. This has given support to the Brazilian universities that were doing pioneer work in the fields of family planning and contraceptive research, and also furthered interest in demographic studies. The efforts of these institutions have opened the way to the development of similar

work by other universities. The teaching of demography and public health-family planning has been slow to develop, but given the change of attitude and the presence of able and highly motivated leaders, it is expected that it will improve in quality and coverage. The availability of external support and adequate levels of funding might greatly accelerate this process.

Specifically, among public health and medical institutions, in the regions of the north and northeast, the Federal University of Bahía, a long-time leader in biomedical research in human reproduction, is interested in the development of a maternal and child health service program to the community. Other universities in this region also interested in developing MCH-FP programs are the School of Medical Sciences of Pernambuco and the School of Medicine of the Federal University of Pernambuco. The University of Amazonas is interested in expanding teaching and research activities in demography.

In the center west, west, and southern regions, a number of universities have been developing activities in family planning-preventive medicine, and they want to further develop their programs.

The Medical School at the Federal University of Minas Gerais pioneered in the development of family planning programs. It is now interested in enlarging the scope of its services and in the development of research and training programs in family planning. The Federal University of Rio de Janeiro collaborates with BEMFAM, and there is interest in the development of a pilot program of family planning services in the Department of Gynecology. The University of Brasilia is developing an innovative and important research program of family planning and nutrition. The Guanabara State University in its Institute of Social Medicine is developing a program of postgraduate teaching in preventive medicine and wants to increase its efforts in research in health and family planning.

In São Paulo and the south, a number of institutions have interest in the development of family planning-preventive medicine programs and highly motivated leadership. Among them are the São Paulo School of Medicine, the School of Medicine of the University of São Paulo, the School of Medicine of Ribeirão Preto of the University of São Paulo, and the School of Medical Sciences of the State University of São Paulo in Campinas.

The School of Medicine of the Federal University of Rio Grande do Sul is developing an important program of biomedical research in human reproduction and is also interested in the development of family planning-preventive medicine programs.

Another important institution in Brazil, now developing highly interesting research and training programs in public health, is the School of Public Health of the University of São Paulo.

The potential contribution of these institutions to the development of public health-family planning activities in Brazil is very important. Most of them are truly institutional leaders, highly influential and respected in their society. The future development of public health-family planning activities can be greatly accelerated through their intervention, or delayed by their inability to become involved.

Turning now to the social sciences, two important university programs offering graduate specialties in demography are at a take-off point. One is a totally new program at CEDEPLAR, University of Minas Gerais. The other is a re-structured program that will have additional social science inputs, CEDIP at the University of São Paulo. Both these programs will make an important contribution in filling the need that exists in Brazil for trained demographers. Those two programs can only partially meet the present and future demand, but a significant first step has been taken.

Brazilian universities are not entirely newcomers to the population field, but programs have been slow to develop, mainly because of lack of trained staff. Today undergraduate courses, specialized libraries, and documentation centers, and more importantly faculty research in demography, are in evidence throughout the country. Outside the academic setting, institutions like Fundação IBGE, the National Housing Bank, the Agency for the Development of the Northeast and others are creating both a staff and research demand that promises vigorous activity in the demographic field in the decade ahead.

While it is perhaps difficult to anticipate the exact course that the field will follow in the years ahead, the following recommendations can be made specifically for Brazilian demography and related social sciences:

1. Graduate programs in demography now exist in two leading universities. Every effort should be made to lend, in addition to financial aid, professional expertise and guidance through a careful monitoring of their first-year experiences.

2. Competition from other universities in the immediate future should be encouraged, provided that (a) there is no repetition of effort, (b) the discipline where demography is to be anchored is different from existing programs, and (3) the locale is recognized widely as an academic center of high excellence in the social sciences.

3. The formation of a Brazilian Population Association should be encouraged. With academic activity in population in about ten universities and in about half that many research centers and public agencies, there is reason to believe that a more organized means to exchange professional views would be of great benefit.

4. Undergraduate education in demography should be locally supported and externally encouraged by means of library and related aid or by aiding in the

location of trained staff (both local and expatriate).

5. Graduate training programs should include a strong research component as a prerequisite for external consideration and financing. Where research is not a tradition, expatriate personnel can play an important role in developing a research commitment.

6. Recipients of fellowships for study abroad should be encouraged to return to academic settings. External support agencies should exercise maximum flexibility in order to counter offers made by international agencies that often lure returning graduates to other countries to the detriment of the profession in their country of origin.

7. In Brazil, demand for demographers is high now, but it will probably reach a plateau in the next five to seven years. The discipline should be particularly aware of changing demands and be flexible to respond to local needs rather than to maintain obsolete models. Demography is an "applied" field, and within the context of the Brazilian university today this is an important asset.

A last but major conclusion to this report is that the Population Council, along with other major donor agencies, should actively enter the Brazilian scene to strengthen and help develop major university programs in the field of population.

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CHILE

UNIVERSITY

I. General Information

The University of Chile is a public institution of higher learning located in Santiago, Chile. It is the largest and oldest university in the country, with a long history of academic excellence. The university is organized into several faculties and schools, covering a wide range of disciplines from the humanities to the natural sciences.

Founded in 1733 as the Universidad Real de San Felipe, the institution was inaugurated in 1843 as the Universidad de Chile. Today it has a branch in Valparaiso and five centros universitarios regionales (essentially junior colleges) in other parts of the country, as well as the main campus in Santiago. The university has a strong tradition of research and scholarship, and is recognized internationally for its contributions to various fields of study.

II. University and Institutional Data

The University of Chile has been ranked among the top universities in Latin America. 1970 information indicates that it serves about 50 percent of the nation's students, receives about 50 percent of the total government budget for universities, and engages in at least 70 percent of the research.

Founded in 1733 as the Universidad Real de San Felipe, the institution was inaugurated in 1843 as the Universidad de Chile. Today it has a branch in Valparaiso and five centros universitarios regionales (essentially junior colleges) in other parts of the country, as well as the main campus in Santiago.

There are approximately sixty research institutes or centers under the university's umbrella. (A 1954 law allocates 0.5 percent of government revenues for research, and in 1966 revenue from copper export taxes was added to this.) Total enrollment for all campuses is now over 50,000.

Santiago also has two other major institutions of learning. The Universidad Tecnica del Estado is a state school (enrollment 10,000) with branches, especially mining schools, in other parts of the country. The Catholic University of Chile (11,000 students) receives federal as well as church funds. It was particularly favored under the presidency of Eduardo Frei, receiving about 10 percent of the government allocation to universities in the late 1960's. Ford Foundation has also provided extensive support to Catholic University, largely for economics and political science.

In addition to Santiago, the central region of Chile has universities at Valparaiso (the Universidad Tecnica Federico Santa Maria and Universidad Catolica de Valparaiso, in addition to the University of Chile branch) and Concepcion. The northern and southern regions of the country are served by the Universidad del Norte in Antofagasta and the Universidad Austral de Chile in Valdivia.

Traditionally there has been a large degree of coordination and cooperation among the universities. The presidents of all eight institutions meet as a Consejo de Rectores, and there are commissions of the deans of the various faculties to coordinate research and teaching. One outgrowth of the consejo was the creation of the National Center of Information and Documentation (GENID) in 1963. Funded in part by the US National Academy of Sciences/National Research Council, GENID created a network to coordinate Chilean libraries and other academic resources.

### III. Demography and Related Social Sciences

Catholic University and the University of Chile are both active in social

... in connection with the Latin American Council for Social Sciences (CLACSO) and the Latin American Demographic Center (CELADE), both developed in the 1960s. Significant university research and considerable Ford funds for graduate studies were provided for development of a graduate program in demography and population. The international aspect of the Latin American Center for Demographic Studies (CELADE) has played a large role in making Latin American demography a discipline. The School of Demography at the University of Chile has been a major center for the study of population and demography in Latin America. The School of Demography at the University of Chile has been a major center for the study of population and demography in Latin America. The School of Demography at the University of Chile has been a major center for the study of population and demography in Latin America.

FLACSO was established in 1963 in Santiago, Chile. It was created by the Chilean government and the University of Chile. Its main objective is to promote research in the social sciences, particularly in the field of demography. The center has a long history of research and publication. It has published several books and journals, including the Latin American Journal of Demography (LAJDE) and the Latin American Journal of Population Studies (LAJPS). The center also has a library and a research center. It has been a major center for the study of population and demography in Latin America. Its 1972 class of eight-year came from eighty-four countries.

Support for FLACSO has come primarily from the government of Chile, UNESCO, and (in the late 1960's when ELACP was added) the Inter American Development Bank. Other Latin American governments and the Ford Foundation also provide significant funds. In 1970 an interdisciplinary research institute (ICIS) was added to FLACSO.

#### CELADE

The Centro Latinoamericano de Demografia (CELADE), connected with the Uni-

versity of Chile, is essentially a demographic research and training institution. It has had tremendous success in expanding demographic research and training throughout Latin America as well as within Chile. Established in 1957 by an agreement between the government of Chile and the United Nations, CELADE has the triple purpose of teaching demography to Latin American students, undertaking research, and providing technical advice on demographic matters to Latin American governments.

At the time CELADE was established, the University of Chile's Institute of Sociology (started in 1952) was already one of the more serious research centers in Latin America. Shortly afterward (1961) the Catholic University in Santiago began the Center of Sociological Studies, of which demographic analysis is a major project. Despite this nucleus of supporting centers, when training began at CELADE in 1958 demography for the most part was an unknown field to Latin America. Several programs for actuarial or statistical training did include courses in demographic statistics (including Chile's Interamerican Biostatistics Center, which functioned from 1953 to 1955). There was little else.

CELADE, then, undertook the challenge of attracting international students to an essentially unfamiliar discipline with an undefined employment market. By the end of the first ten years, however, 160 fellows from twenty Latin American countries had received training. By 1972 CELADE was, by invitation, taking an active part in the meetings of the Council of Rectors of Chilean Universities.

Cooperation among the social science institutions remains high. In 1961 the Council of Rectors formed a committee of experts in social sciences to study the feasibility of establishing an interinstitutional program of postgraduate studies. CELADE participated in discussion of the possibility of initiating a doctoral program in at least one of six disciplines.

The training program at CELADE consists of three sequential year-long



the world. At North American and European universities, the certificate of completion of CELADE's advanced course is often regarded as the equivalent of a master's degree in demography. Unfortunately, universities and government agencies within Latin America have been slower to give academic recognition to CELADE's certificate. As a result some trainees have been handicapped in making the fullest possible use of their training, and CELADE has been handicapped in recruiting the most highly qualified candidates for training.

Beginning in 1973 CELADE, jointly with the University of Chile, launched a master's degree program in economics with specialization in demography. Five semester courses in demography are taught by CELADE staff members, and economics courses are taught by economics faculty. A student with a good background in statistics and mathematics is expected to be able to complete the courses (but not the thesis) in two years. The number of participants varies between six and eight a semester. To date this is the only formal specialization in demography within a graduate degree program available in Chile.

In the first decade of its existence, CELADE functioned as a technical assistance project of the United Nations, receiving some funds from the Population Council and Ford. The United Nations programs of technical assistance contributed slightly more than half the annual budget, which in the early 1960's was about \$200,000.

Since 1966 CELADE has been operating with the financial support of the United Nations development program and contributions from thirteen Latin American governments. It has also received US AID support, as well as specific research project support from the Population Council and Ford. Students have been financed through the UN, OAS, WHO, Interamerican Development Bank, and several government agencies.

Since May 1971 CELADE has been an autonomous agency operating under the

AGENCY OF THE ECONOMIC COMMISSION FOR LATIN AMERICA (ECLA). At the seventh meeting of the governing board of CELADE (April 1974), the decision was made to place CELADE's Secretariat as an integral part of ECLA. This would presumably result in greater permanence and more assured long-term funding for CELADE.

The subject of the military coup on CELADE's operation or activities was raised in a meeting on 26 April 1974. Officially the government did not want to have international organizations involved. In March 1974, a conference of the military and police authorities regarding the education system was held. The military and police officials in the curricula of education were to be replaced by military and police officials. During the military coup, the military and police officials, literature, etc. were swapped with the military and police officials. They were used as centers for brainwashing and indoctrination of the military and police. It does not seem likely that the military and police officials' cooperation with CELADE can continue.

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Colombia's economy is developing rapidly, with an expected increase in GNP of 8 percent for 1973 and increases almost as large for the two preceding years. Per capita income is US\$340, but income distribution is grossly inequitable. The traditional dependence on coffee is being overcome by a successful program to increase and diversify exports. The manufacturing and construction industries are growing rapidly, and there is reason to expect that Colombia will continue its present rate of economic development.

## II. HEALTH POLICIES AND PROGRAMS

Colombia's health policy is directed toward increasing coverage in the public sector, especially in the area of maternal and child health, extending services to the marginal population groups in the urban and rural areas. Family planning is now an accepted part of these services, although it was not always so. A second aim is to conserve the levels of eradication of transmissible diseases already achieved, and to cover no less than 80 percent of the population groups susceptible. A further aim is to increase the sanitation programs, to make potable water available in the houses of 80 percent of the population. Mortality, plus the morbidity and mortality associated with illegal abortions led a group of prominent physicians to begin research through the Colombian Association of Medical Schools (ASCOFAME) in 1964. Based on data from the 1964 census and special KAP and abortion studies, ASCOFAME carried out an extensive information campaign with a large variety of influential groups. This culminated in 1968 with the signing of a contract between the Ministry of Health and ASCOFAME for the latter to train health personnel in family planning. By this time, ASCOFAME was overseeing a hospital postpartum family planning program in many of the largest hospitals throughout Colombia, and the private family planning association, PROFAMILIA, had opened free-standing clinics in the largest urban areas of the country. The Ministry

permitted its physicians to provide family planning services to patients who requested it, and had made arrangements which permitted physicians to receive information and training regarding modern contraception, but it had not yet established norms regarding family planning in its regulations established or regulations that described service goals.

Colombia has 10,317 physicians, of whom 3,095 are specialists. While the country has only 2,700 registered nurses, there are 12,300 auxiliary nurses and a further 2,000 rural health promoters. In all there are 745 hospitals, of which 530 are public or semipublic, 155 are private, and 40 belong to decentralized institutions such as Seguros Sociales, Caja Nacional, and the Armed Forces. The number of hospital beds in the public and semipublic sector is 33,303, while there are 7,107 private beds and 5,281 beds in the decentralized hospitals. The Ministry of Health has 450 health centers and 838 health posts.

#### POPULATION POLICY AND PROGRAMS

Concern with population matters developed during the presidency of Dr. Carlos Lleras, who in 1967 became the first Latin American head of state to sign the World Leaders' Declaration. During the first years of Dr. Lleras's term, both the National Planning Department (NDP) and the Ministry of Health became concerned with population growth and family planning. In 1969, NDP began to prepare a chapter on population policy to be included in the National Socio-Economic Development Plan. Following President Pastrana's election victory in 1970, ASCOFAME collaborated with NDP in the further elaboration of this statement, and on October 12, 1970, the president created a National Population Council. In the following month, the population policy was approved by executive act. The act has never been ratified by Congress, but remains government policy. The provisions are that the population be re-distributed, and family life and sex education, together with family planning services, be made available for Colombians, respecting their individual

consciences. The population policy has never been broadly promulgated, although it was described in the previous section, and family planning services have become more widespread and generally available through a combination of public and private efforts.

There are a number of interest groups concerned with population matters, and they have not always disagreed. For example, there has been high-level support for the policy of population re-distribution, but it is not yet clear if this has been successful in slowing the massive rural-urban migration. The policy to provide sex and family life education also enjoys broad support, including that of the Catholic church. There is not consensus with regard to the provision of family planning services. This is opposed by the political left, whose strength is centered in the universities. The church supports family planning, but opposes "artificial methods." In practice, this means that orals are, by and large, tacitly accepted, the IUD less so, and sterilization and abortion are vigorously condemned. There is also a group on the political right who oppose family planning services with considerably more energy than the church. Although efforts to reduce fertility now receive much more support in general, and from the press in particular, there remains substantial opposition from the political left, right, and the Populist Party, as well as from the church, based on the premise that such efforts represent United States imperialism and an effort to keep Colombia weak and avoid providing more development aid. However, the government is clearly cognizant of the barriers to development the growth rate implies and is increasingly determined to implement the policy to reduce fertility.

The National Population Council which was established in 1970 was comprised of representatives of several governmental ministries, a representative of the episcopacy of the church, a representative of the Colombian Association of Medical Schools, and another of the demographic profession in

Colombia. The character and composition of the council was substantially changed in 1973, when it was officially disbanded, and on June 4 a council on ecology and population, composed of nine cabinet ministers but without representation from the church or the private sector, was called together. Staff functions for the new council are handled by the National Planning Department, and in December presented a document which the council approved lines on the strategy and priority for the implementation of the population policy adopted the years previously. The council established a four-year program of research, training, and services in the broad field of population, and envisaged external aid for a four-year period totalling 38 million dollars. Planning information and services received top priority, but an important research component was contemplated. The responsibility for managing external sources for research was assigned to COLCIENCIAS, a government-funded decentralized agency which supports research in all branches of the sciences.

Today there are three organized service programs in Colombia. As part of the national POC program, the Ministry of Health offers family planning services in approximately 400 clinics and 20 hospitals throughout the country. The objectives are improvement of maternal and child health, early detection of cancer, and prevention of induced abortion. The program operates with a central staff of approximately twenty, and education is provided through group and individual talks; no mass media are employed. Orals (62 percent) and the IUD (34 percent) are the predominant methods, and sterilization is not offered. Total budget for the family planning component of the program is difficult to estimate, but approaches \$2 million, \$1 million of which is provided by the Pan American Health Organization. Total acceptors since 1967 number 242,655 to June 30, 1973, and currently there are 5,000-6,000 per month.

PROFAMILIA, the IPPF-affiliate, operates forty-two clinics in twenty-nine major cities with the objectives of providing high quality family planning

services and stimulating further efforts in the public sector. In addition, PROFAMILIA is pioneering in the provision of family planning services in the rural areas, utilizing orals, condoms, and suppositories. Since the organization was created in late 1965 by Dr. Fernando Tamayo, president of IPPF, over 350,000 new acceptors have been served, currently at the rate of more than 6,000 per month. Fifty-six percent of acceptors choose the IUD and 40 percent orals; both vasectomy and tubal ligation are also offered in addition to traditional methods and the caseloads are not great. The annual budget is close to \$2 million, with \$1.4 million from external sources (\$1 million from IPPF) and local contributions accounting for over \$300,000.

ASCOFAME has operated since 1968 postpartum programs in the major hospitals, reaching a peak of twenty-six in 1971. The Ministry of Health assumed responsibility for fifteen of these programs in 1973, and ASCOFAME now coordinates and supervises a teaching, research, and service program in the hospitals associated with the nine medical schools. The annual budget is \$200,000, and the central office staff numbers four. In the first half of 1973, 55 percent of the acceptors chose the IUD and 41 percent orals; traditional methods and tubal ligation are also offered. The objectives of the ASCOFAME program are similar to those of the other two programs, with the addition of the teaching and training of medical and paramedical personnel. The program had recruited 122,056 acceptors through June 30, 1973 and now averages approximately 1,200 per month.

There has been a conspicuous and serious lack of research and evaluation in all three national programs. Efforts through 1973 have included the 1970 international postpartum follow-up study in which ASCOFAME participated, an analysis of the experience with IUD acceptors in one clinic over a five-year period, a postpartum consumer satisfaction study in one city, and a recent evaluation of the PROFAMILIA rural program. Service statistics were processed by computer for all three programs by ASCOFAME until 1973, when the Regional

Population Center assumed responsibility for the ministry and ASCOFAME data. In 1974, PROFAMILIA received Council funding to develop its own research and evaluation unit. Competent staff were recruited, and the contemplated project completed during the year. The Regional Population Center, after a long period of planning and negotiation, came to an agreement with the Ministry of Health to undertake a follow-up survey of Ministry family planning acceptors. This will be completed in 1975. There is an urgent need for periodic follow-up studies in all three national programs, to conduct operational research designed to help improve their management.

PROFAMILIAS, with Population Council assistance in 1974, conducted a country-wide inventory of population teaching and research in universities and in public and private institutions. Specifically, the demographic study was designed to identify all the teaching of demography in the social sciences in the country, to identify the demographic studies underway in centers of investigations, either in universities or other institutions, public or private, and to ascertain the number of persons and their professional characteristics who are engaged in demographic activities and teaching and research, and to identify the financial resources and their origins for the specific studies underway in Colombia.

The study was carried out in the Faculties of Sociology, Economics, Anthropology, History and Political Sciences. The teaching institutions were surveyed, seventeen public and thirteen private. There was additional coverage of thirty university research centers, and twelve non-university research centers, four in the public center and eight in the private center, including two divisions of the national planning department, who carry out important studies.

On the basis of the findings from this study, it is expected that the government will publish priorities and to remedy whatever deficiencies impede their development goals.

It had been proposed that a center for research and research supervision be established within COLCIENCIAS to operate in the field of population and ecology. During 1974, this was not formally implemented.

The Regional Population Center, which was established in Bogota with an interdisciplinary team of professionals included from ASCOFAME's Division of Population Studies at the time of its reorganization, has been chartered as a private institution. At one time, there was speculation that this center would in some way be attached to the government, and function as its agency specialized in this field. The Center continues to operate privately, and represents the greatest concentration of talent in this field in Colombia.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

##### A. HEALTH INSTITUTIONS

Colombia has fifty universities, twenty-nine of which are considered public institutions and twenty-one private. However, most of the private universities receive financial assistance from the government, the basic distinction being that they charge higher fees. The universities enjoy a large degree of autonomy, but the national government exerts considerable influence and takes a very active role during the frequent student disturbances that take place. The Ministry of Education and the Colombian Institution for the Promotion of Higher Education are the chief governmental institutions that govern the functioning and set norms and standards for the universities.

There are nine universities with medical schools, and these have been surveyed, and are described in separate sections for each below, for there are significant population activities in the health sciences of each.

##### Universidad de Antioquia

This, the second-largest university in Colombia, is located on one campus in Medellín, the country's second city. Major emphasis is given to the health sciences, but all major disciplines are represented. Total full-time

enrollment is 11,000, and there are 700 part-time students. The average student comes from the middle class and is admitted on the basis of entrance examinations. The Medical School has a faculty of 310 (145 full-time, 120 half-time, 45 part-time). In 1972, 80 physicians were graduated, and 127 students were admitted in 1973; there are 607 students currently enrolled in the Medical School. The national government provides a budget of approximately \$9 million. The university has a new and excellent physical plant, which includes an 1130 computer. The institution has an excellent reputation and considerable impact at the national level.

Its medical school and a few others to be discussed should be qualified as high-priority, established institutions. Since mid-1968, the Council has provided to AMBA approximately \$3.8 million, including \$1.3 million for the postpartum program and one to two years of resident advisors. These funds have been expended primarily for institutional development activities in the nine medical schools.

Sociodemography, family planning, and sex education are taught at both the undergraduate and postgraduate levels. For undergraduates, they are taught courses on preventive medicine (twenty hours), physiology (eight hours), and gynecology and obstetrics (twelve hours), as well as during the internship period. On the postgraduate level, residents study these subjects in gynecology and obstetrics, postgraduate students in physiology, and general practitioners in the continuing education programs.

Special courses have been organized for doctors in Medellín, as well as for nurses, coordinators of maternity and child protection services, and others. Dr. Alfonso Jubiz Hasbun is director of this program and the staff includes a director of the family planning hospitals, a nurse, an auxiliary, and a secretary.

The leaders, in order of importance are: Dr. Luis Fernando Duque, rector; Dr. Jaime Botero, head of the Department of Obstetrics and Gynecology; Dr. Jaime Uribe, Dr. Alfonso Jubiz, and Dr. Germán Ochoa, all of the same

department. These individuals are very influential, both by virtue of their personal status and academic posts. They were relatively late (1969) in stimulating activities in the population field but have since then been very skillful and imaginative.

A considerable amount of research has been carried out in the area of reproductive physiology, in which the faculty is developing a capability second only to Universidad del Valle. A postpartum program is being carried out in the university hospital and forms the basis for teaching, training, and research for medical and paramedical personnel.

Ranking of population activities is as follows:

Overall quality of university: good

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of achieving success in reaching program objectives:

good

Overall rating: good

#### Universidad de Caldas (Manizales)

This public, one-campus institution has a 1973 enrollment of 2,300, selected on the basis of the national entrance examinations. Most students are of middle-class origin, as in all the public universities. The faculty of the medical school number ninety-eight (thirty-four full-time, twenty half-time, forty-four part-time). Eighty students were admitted in 1973, and forty-five graduated in 1972; the Medical School has 408 students. The budget for 1973 is \$2.2 million, and the physical plant is adequate.

Teaching activities related to population include courses in behavioral science and Colombian problems (fifteen lectures in a semester), human sexuality, and social sciences and Colombian problems (fifteen lectures),

all in the nursing school. Students in the last year at the Schools of Agronomy, Laws, Home Economics, Social Work, and Veterinary Sciences can take socio-demographic courses (1.5 hours a week). The university also provides extension courses for doctors, nurses, and auxiliaries of the health sectional service of Caldas and other short courses to various groups.

Research activities include projects on the teaching of human sexuality in Latin American schools of medicine and a study of suicide and attempted suicide in Manizales.

Director of the university programs is Dr. Mario Gartner Tobon. Other staff includes a person in charge of the courses in human sexuality, a person responsible for the programs in the schools of medicine, a statistician, and two secretaries.

A limited amount of research has been carried out, including a KAP study and a community trial of the copper-72.

The leaders are Drs. Alberto Portora and Mario Gartner of the Department of Social Medicine and Dr. Mario Valle of the Department of Obstetrics and Gynecology. There are excellent relations and considerable influence, partly since Dr. Portora was formerly head and Dr. Gartner leads his department.

Dr. Salfranz, who was nation and dean of medicine, led the efforts that resulted in the formation in 1965 of an interdisciplinary committee on population headed by Dr. Portora. All reports for teaching and research came from the committee and the Department of Social Medicine until 1969, when the postpartum program began under the auspices of the Department of Obstetrics and Gynecology.

Ranking of population activities:

Overall quality of university: weak

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of achieving success in reaching program objectives: good

Overall rating: good

Universidad de Cartagena

This public institution has two campuses, since the Medical School is located at a different site from the other faculties. Emphasis is given to the health sciences, but law, economics, and engineering are also offered. Enrollment in 1972 was 2,284, based on the national entrance examinations. Data on the Medical School faculty were not available. Admission in 1973 was 260, and 71 physicians were graduated in 1972; the Medical School has 778 students enrolled. The budget in 1972 was \$2.4 million. The physical plant of the Medical School is inadequate. This medical school does not have a strong reputation or strong institutional impact.

Demography is taught in the courses in introduction to statistics, anthropology, physiology, epidemiology, pediatrics, and gynecology and obstetrics. The director of the program is Dr. Hernando Taylor H., and his staff includes six teachers from the Department of Gynecology and Obstetrics, Preventive Medicine, and Psychiatry.

A research project to evaluate the effectiveness of a mobile unit providing health and family planning information is being carried out in cooperation with the state health department. There is considerable interest in research in the Department of Obstetrics and Gynecology, but the capability is limited.

Dr. Taylor, dean of medicine, and Dr. Zabaleta (Obstetrics and Gynecology) are the leaders in the population field and exert considerable influence. They enjoy excellent relations, but their influence depends basically on their personal status and positions.

Population activities began in 1965 through the efforts of Dr. Abel Duenas, head of Preventive Medicine and later dean, and Dr. Calvo (Ob-Gyn). Later Dr. Llanos, a general practitioner on the faculty, became an effective promoter in the field. Teaching began in the Department of Preventive Medicine,

and in late 1968 a postpartum program was initiated. Early research efforts were in the area of abortion and KAP studies.

Ranking of population activities:

Overall quality of university: very weak

Quality of population program: good

Apparent degree of staff interest in population program: modest

Likelihood of achieving success in reaching program objectives:  
good

Overall rating: good

Universidad del Cauca (Popayan)

This public, one-campus university had a 1972 enrollment of 2,662, with admission based on national entrance examinations. The medical school faculty members are: thirty-three full-time, fourteen half-time, thirteen part-time. Fifty-two students were admitted in 1973, and forty-one graduated in 1972; there are a total of 450 medical students.

The budget for 1972 was \$2 million. This relatively small university does not have a strong institutional impact.

Demography is being brought out in the curriculum, particularly during the last semester, with courses in family planning (sixteen hours) and required rotations of twenty days at the postpartum consulting office for students in the gynecology and obstetrics and sex education seminars.

An energetic research program is carried out in the Departments of Obstetrics and Gynecology and Preventive Medicine, under Drs. Erazo and Lara. Current projects include paramedical IUD insertions, hormonal contraceptive trials, follow-up of a large group of women who underwent surgical sterilization, and the relationship between parity and materno-fetal morbidity and mortality. Interest in population is very strong.

Dr. José Vicente Erazo (obstetrics and gynecology) and Dr. Braulio

Lara, head of Preventive Medicine, exert their influence on the basis of personal status and good relations. They have demonstrated initiative and imagination in developing carefully planned teaching and research activities.

An interdisciplinary population committee was formed in early 1965 thanks to the efforts of Dr. Erazo, Dr. Lara, Alcides Estrada, and Dr. Zapata (then head of Preventive Medicine). Dr. Estrada became head of Preventive Medicine and later dean before joining ASCOFAME. Teaching and research activities were carried out in the Departments of Ob-Gyn and Preventive Medicine and consisted of KAP and abortion studies and a family planning demonstration program. In late 1968 a postpartum program was initiated.

Ranking of population activities:

Overall quality of university: average

Quality of population program: excellent

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in reaching program objectives:  
excellent

Overall rating: excellent

Pontificia Universidad Javeriana (Bogotá)

This private Jesuit institution is located on one campus and offers courses in all major disciplines. Enrollment in 1972 was 7,095, with entrance based on the university examinations. Students generally come from the middle, upper-middle, and upper socio-economic strata and from many of the most socially prominent families. The Medical School faculty numbers 173 (67 full-time, 43 half-time, 63 part-time). In 1973, 150 students were admitted, and in 1972 53 graduated; currently there are 701 medical students.

The university also carries on an inter-institutional, interdisciplinary program of studies in population with the Population Center of the University of North Carolina at Chapel Hill. The University of North Carolina

at Chapel Hill has worked closely with Javeriana University in the planning and development of courses in demography and the health sciences, workshops and seminars on population and development and the development of specific projects for Javeriana students.

The budget for 1972 was \$2.4 million, and the physical plant is better than most in the university. It has graduated many presidents, ministers, and other national leaders and enjoys a strong reputation and major access to the elites.

Demagog has faculty in five schools of medicine, nurses schools and health nutrition and dietetics courses. For medical students, there is a total of eight years in the departments of anatomy, histology and embryology and obstetrics, distributed over the first five years, and including twenty hours of rotation in the family planning hospitals. The problems for nursing students were course in nutrition and dietetics (six hours) is done during the second semester in the Preventive Medicine Department.

Dr. Jaime Baquero Noddy, head of the Department of Preventive Medicine, is responsible for the program and Dr. Victor Rodríguez Romero is director of the family planning hospitals.

In addition to having a \$50,000 annual institutional development grant from the University of North Carolina, teaching and research activities are being developed in every faculty of the university. Research activities in the Medical School are centered in the departments of Obstetrics and Preventive Medicine and consist of studies of maternal high risk. Family planning services have been offered since 1970, and a postpartum program began in 1973.

Dr. Victor Rodríguez, head of Obstetrics and Dr. Jaime Baquero (Preventive Medicine) are the current leaders and are fairly influential on the basis of the status of their departments. The initiative for the university-wide program came from the Faculty of Nutrition and Dietetics.

Dr. Bernardo Moreno, the influential dean who later became executive director of ASCOFAME, pioneered in the population field in 1965. Dr. Jorge

Villarreal (Ob-Gyn) became an active leader in teaching and promotional activities in 1966 and in 1967 became Dr. Hernán Mendoza's assistant in ASCOFAME. (Dr. Mendoza was head of the Division of Population Studies and the leading pioneer in the population field in Colombia until his untimely death in 1968). The early activities consisted basically of teaching demography and family planning and speaking out regarding the importance of population issues.

Ranking of population activities:

Overall quality of university: good

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of achieving success in reaching program objectives: good

Overall rating: average

Universidad Nacional de Colombia

This public institution is the largest university in Colombia and has campuses located in Bogotá, Medellín, Manizales, and Palmira. This survey deals only with the Bogotá campus. Courses are offered in all disciplines, and in 1972 enrollment was 11,715. Students are admitted on the basis of entrance examinations. The Medical School faculty numbers 387 (273 full-time, 76 half-time, 38 part-time). Ninety physicians graduated in 1972, and 194 students admitted in 1973 bring the current total to 1,225.

The budget for 1969 (the last year for which data are available) was \$15 million, 95 percent of which came from the national treasury. This university, together with all the public universities in Colombia, has severe economic difficulties.

Teaching activities are centered in the Departments of Preventive Medicine (demography) and Ob-Gyn (family planning and sex education). During their clinical Ob-Gyn rotation in sixth year, all students spend a week in the postpartum program, Dr. Eduardo Cáceres, has a strong interest in the population

field, but there are other members of his department who are indifferent or opposed. Consequently, until very recently it was not possible to teach family planning as a full part of the program of the department. However, the postpartum program has become an institutionalized activity and faculty opposition has lessened. Current research is in the field of reproductive physiology.

At present Dr. Cáceres is the only outstanding leader and enjoys considerable influence on the basis of his personal status. However, because of the size of the department and the opposition of some members, he is not able to mobilize the full potential that would otherwise be possible.

The early leadership came from Dr. Hernán Mendoza (1964), Dr. Guillermo López-escobar (1965), Dr. Cecilia de Martín (1966), Dr. Silvio Gómez (1966), and Dr. Alejandro Jiménez. Dr. Mendoza was a professor of endocrinology, while the others came from various departments: Drs. López-escobar and de Martín (Physiology), Dr. Gómez (Preventive Medicine), and Dr. Jiménez (Microbiology). The strength of the group came from their personal status and the interdepartmental committee on population formed in 1965. Seminars and short courses were given on various aspects of population, and in 1967 the group was joined by Dr. Ramiro Cardona, an architect and sociologist. In 1965 Dr. Mendoza was named head of the newly created Division of Population Studies at ASOCOMÉ and held that post until his death in 1968. Drs. Cardona, Gómez, and de Martín also joined the Division of Population Studies, and in 1969 Dr. López-escobar succeeded Dr. Mendoza as division chief. Early research activities were in the areas of induced abortion, cervical cancer and contraceptive use, KAP studies, and sex education. A family planning demonstration clinic was established in 1966, and the postpartum program began in 1968.

Ranking of population activities:

Overall quality of university: good

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of achieving success in reaching program objectives: good

Overall rating: average

Since this institution is highly politicized, population activities have periodically come under attack from both faculty and students. In 1971 opposition to ASCOFAME's broad activities in the field was probably the most important of several factors that almost led to the Medical School withdrawing from the association. The situation has improved greatly since then, but underlying, politically motivated opposition from Marxist students and faculty sets a limit on population activities.

Colegio Mayor de Nuestra Señora del Rosario (Bogotá)

This private institution is dedicated mainly to the health sciences. Enrollment is based on the national entrance examinations plus an interview, and in 1973 numbered 2,000. Students tend to come from the middle to upper socio-economic strata. The medical faculty has 201 members (85 full-time, 84 half-time, 32 part-time). The first class of 54 was graduated in 1972 and 114 students were admitted in 1973; total Medical School enrollment is 484. The total budget is \$1.2 million, including some government support. The physical plant is adequate. This medical school is already developing an enviable reputation for quality.

The program of sociodemography and family planning is accomplished in different semesters, with a total of seventy-two hours of theoretical-practical teaching in demography and rotations of a week per student in the family planning service. The director of the program is Dr. Alirio Gómez-Quintero.

Research is being carried out on immediate postpartum insertion of the Dalkon Shield through the Department of Ob-Gyn, where most of the interest in population resides. There is also current interest in carrying out studies with the Copper-I IUD.

Drs. Alirio Gómez, Jaime Pedraza, and Roberto Jaramillo, all of the Department of Ob-Gyn, are the leaders. Their influence depends on both personal status and the strength of the department.

The Faculty of Medicine began to function in 1967, and in 1968 family planning services were offered in a health center adjacent to the hospital as a result of the efforts of Drs. Gómez and Jaramillo, with the support of Dr. Perdomo of the Department of Pediatrics and PROFAMILIA. Teaching activities began soon after, and research was carried out on IUD's, with a paper being published on the radiological location of devices.

Ranking of population activities:

Overall quality of the university: good

Quality of population program: good

Apparent degree of staff interest in population program: average

Likelihood of achieving success in reaching program objectives: good

Overall ratings: good

Universidad Industrial de Santander (Bucaramanga)

This public university places major emphasis on the engineering sciences, and the Faculty of Medicine only began to function in 1969. Admission is based on entrance examinations, and enrollment in 1972 was 3,342. The medical faculty has 73 members (44 full-time, 21 half-time, 8 part-time). Seventy-seven students were admitted in 1973, but there have so far been no graduates. There are now 400 students enrolled in the Medical School. Total budget for 1972 was \$2.5 million. The institution does not enjoy a particularly

strong reputation.

The Preventive Medicine Department teaches demography (56 theoretical hours during the semester) and family planning (120 hours).

Dr. Jorge Ferro Rangel is the coordinator of the program of socio-demography, assisted by a medical doctor and a secretary. Also during the first semester the university, together with the Education Division and the socio-demographic studies unit of ASCOFAME, planned the organization of a workshop on curriculum development, which will take place in August 1974. This workshop will discuss incorporating the teaching of sociodemography and family planning into the medical curriculum. No research in the population field has been carried out to date.

There has been no notable leadership in the population field. Teaching activities began in 1971, and in 1973 a postpartum program was initiated.

Ranking of population activities:

Overall quality of university: average

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of achieving success in reaching program objectives: good

Overall rating: average

#### Universidad del Valle

This public institution is located on two campuses (one for the health sciences) in Cali, Colombia's third largest city. Total enrollment in 1972 was 3,859, with admission based on the university entrance examinations. The Medical School has a faculty numbering 181 (104 full-time, 77 part-time). In 1972, 54 physicians were graduated and in 1973 104 students were admitted; 546 medical students are now enrolled. The budget for 1972 was \$4.4 million, and an excellent new physical plant was built in 1970. This university enjoys

a strong reputation and wields considerable influence in its relationships with the government and other elites.

An integrated program is being developed in sociodemography, family planning, and sex education for medical students. Courses are offered for other schools of medicine and postgraduate courses, as follows:

Undergraduate level in medicine: Through the Departments of Social Medicine, Anatomy, Morphology, and Gynecology and Obstetrics, a total of 286 hours in basic courses in socio-demography and one week for each student in the family planning services.

Nurses, undergraduate level: For second-year students in maternal and child welfare, thirty hours of theory in sociodemography, family planning, and sex education.

Postgraduate level: For students in the second year of residence in public health, a forty-four course in sociodemography and family planning.

Postgraduate level: for graduate nurses.

Other programs: For biology students (sixteen hours) and Sanitary engineering students (sixteen hours) of demography. A course on human sexuality (forty-eight hours) for students of the university in general and all those that live in the university homes.

The responsibility for these programs rests with the Centro Universitario para Investigaciones en Población (CUIP), under the direction of Dr. Daniel Bermeo Chaparro.

Universidad del Valle has the strongest research team in the country in the field of reproductive physiology. The Council is currently supporting five projects in this area, three by the Biomedical Division and two by TAD. A five-year institutional development grant from the Biomedical Division is currently under discussion.

With technical and financial assistance from the Family Health

Foundation and Tulane University, the Department of Social Medicine is carrying out a five-year demonstration project in comprehensive health care with a large family planning component. The project (PRIMOPS) is a coordinated effort involving the municipality and the state and has also received government financial support. In the area of population education, a research project is being carried out with funding from UNFPA/UNESCO.

The leadership comes mainly from Dr. Rodrigo Guerrero, dean of medicine, and Drs. Alfredo Aguirre and Guillermo Llanos of the Department of Social Medicine. The influence of these leaders derives both from their personal status and the strength of the Department of Social Medicine, of which Dr. Guerrero is also a member. Leadership in the population field in this university is innovative, and greater success has been achieved in coordinating population activities outside the Medical School than in any other Colombian university.

In 1958, the university began a community medicine project in Candelaria, a town of 30,000 inhabitants located thirty kilometers from Cali. From this project came the data that led to the subsequent realization of the gravity of the population problem and its adverse health effects. Dr. Aguirre, a pediatrician, was deeply involved in the project, and Dr. Gabriel Velásquez, ex-minister of health and dean of medicine at Valle, took stock of the situation and became an advocate of family planning. Dr. Ramiro Delgado, an anatomist, Drs. Guillermo Llanos and Daniel Bermeo (social medicine), and Dr. Miguel Bueno (Ob-Gyn) all exercised leadership through the interdisciplinary committee on population formed in 1964. (Some claim that this was the catalyst for the creation of ASCOFAME's Division of Population Studies.) Research was carried out on the relationships between multiparity, malnutrition, and maternal and delegation of functions in family planning. This university provided more quality population research than any other, and ASCOFAME's activities in the field received a great deal of impetus from Dr. Velásquez,

father of the association and for many years its president.

Ranking of population activities:

Overall quality of university: good

Quality of population program: excellent

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in reaching program objectives:  
excellent

Overall ratings: excellent

Summary Evaluation of Population Activities in the Five Colombian Medical Schools

Colombia is probably unique in terms of the critical role played by leaders in the medical academic community and the Association of Medical Schools (ASCOFAME) in the development of population policy and a national family planning program. These accomplishments were made despite strong religious and political opposition in a conservative Catholic country. When efforts began in 1964, they were directed toward the collection and dissemination of demographic facts and data relating to family planning, induced abortion, and sex education. From the outset, the ultimate objective was to involve the government in the provision of family planning services and the formulation of a national population policy. These initiatives were carried out with great energy, skill, and dedication by the highly prestigious individuals who provided the leadership -- Drs. Belásquez, Mendoza and López Escobar. At the same time the leaders never lost sight of the importance of teaching and training in population/family planning for future physicians and other health personnel.

Financial support for population activities carried out in the universities was provided to ASCOFAME by the Ford Foundation from 1965 until 1968, when the major Council grants began. Clearly the Council has been involved in a major institutional development effort for six years. The

teaching of demography has now been institutionalized in the medical schools and the postpartum program ended on December 31, 1973. Council funding to ASCOFAME for 1974 (\$387,532) is less than half of the peak reached in 1971 and is now used largely for teaching, training, and research in family planning for medical and paramedical personnel. Colombia now has the most advanced medical school population programs in Latin America, but ASCOFAME will continue to require and deserve support for a further period of at least two or three years, though at declining levels of funding. There can be no question about the impressive accomplishments made possible by past support and the benefits that will accrue from future activities. However, it must also be recognized that ASCOFAME has accomplished much of what it set out to do in the population field and that other institutions, especially in the paramedical training field, now deserve more priority than they have received in the past. It is largely due to ASCOFAME's efforts that other opportunities for international development support are now emerging.

La Escuela Nacional de Salud Pública, Universidad de Antioquia (Medellín)

The National School of Public Health is a faculty of the University of Antioquia but is not located on the main campus; since 1971 it has occupied a new and excellent building. It is considered one of the three leading schools of public health in Latin America (the others being at the Universities of Chile and São Paulo), and courses are offered in all public health disciplines. The school was founded in 1963 on the basis of a contract between the university and the Ministry of Health, with the ministry providing approximately 90 percent of the funding. A new ten-year contract stipulating the funding levels was signed in 1973. Courses are offered at the undergraduate, sub-professional, graduate, and postgraduate levels, and range from three-year residencies in public health for physicians to courses as short as four to

six weeks for public health workers. In 1971 there were 268 full-time students, of whom 84 were professionals. Seventy-one professionals attended continuing education courses, and 66 persons attended short courses, for a total of 405 students.

Entrance requirements vary greatly by course and professional background, as does socio-economic status. An increasing number of international students attend courses (approximately 30 to 40 per year). The faculty in 1971 numbered 40 and is now approximately 85, the great majority of whom are full-time. The 1973 budget was approximately \$1 million, with 85 to 90 percent coming from the Ministry of Health. The school has access to the university's 1130 computer and is equipped with peripheral software.

This institution is charged with the teaching and training of the public health personnel needed in Colombia and works in close coordination with the Ministry of Health. It can now probably claim to be the best school of public health in Latin America and wields considerable influence with the government and other health entities.

This is a high-priority, established institution. In 1970 the Council began a five-year institutional development project to support teaching and research in demography and family planning. Total support for this period amounts to \$218,596, including the \$19,992 request for 1974. Three faculty members constitute the demography group, which in 1974 will offer 12 courses at various levels in demography, human ecology, population dynamics, statistics, and research methodology. There are six faculty members in the MCH and family planning group, which in 1974 will offer ten courses involving family planning at various levels. All students take at least one course in demography and/or family planning, and classes are also given in the Medical School and the School of Nursing. Interest in population is strong among both groups. The MCH and family planning group is under the Department

of Health Administration, while the demography group is located in the Department of Basic Sciences.

For the past two years, the MCH and Family Planning group has been carrying out a major research project, funded by WHO, on the epidemiology of human reproduction. The fieldwork has now been completed and the data processing will be done in Geneva. Both population groups contributed to a consumer satisfaction survey of acceptors and nonacceptors in three postpartum programs in Medellín. Two articles were published in Spanish in 1973; one in English is in press and another has been submitted for publication. At present, the two groups are engaged in a follow-up survey of family planning acceptors in the three national program, the first study of this type undertaken in Colombia.

Dr. Luis Hernando Ochoa, an economist-demographer, and Dr. Germán Ochoa, an Ob-Gyn with public health training, head the two groups and provide the leadership. The leadership is moderately influential, especially Dr. Germán Ochoa by virtue of his prestige among the medical profession. Both groups are gaining strength and recognition over time and have been very successful in contributing to and stimulating population activities in other parts of the university and outside agencies.

The objectives of the teaching program are to expose all students to the fields of demography and MCH and family planning, to an extent commensurate with their future functions. The research program was designed to contribute new knowledge and evaluation of ongoing programs to the health sector responsible for population policy and family planning programs, especially the Ministry of Health. These objectives are consistent with the needs of the country, especially in view of the mandate of the school, and have been largely achieved. The objectives are well articulated within the school, but less so in the university at large by virtue of its size and the physical location of the school away from the main campus. From time to time the program has been criticized and opposed by some faculty and students as "Yankee imperialism" - the same kind

of opposition noted with regard to the medical schools. The separation of the teaching of demography from that of family planning has helped to allay this criticism, and there is general acceptance of the importance of the teaching program.

There were no population activities to speak of until Council support began in 1970. The impetus for the program came from Dr. Luis Fernando Duque, then subdirector of the school, later director and now rector of the university. On the basis of a five-year general development program for the school, a population program of similar duration was worked out jointly with the Council. The teaching program is highly regarded by others, although no formal evaluation has been undertaken.

This population program is closely related to the Ministry of Health's and family planning program, since the school is responsible for training the public health physicians and nurses who direct the national program. The teaching program is now well institutionalized, and future Council support is expected to be based on specific research or demonstration projects, or possibly innovative teaching programs. All school activities are periodically evaluated by a team of professors; there is no separate internal evaluation of the population program. Dr. Charles Westoff will visit the program in January 1974, as part of a USAID evaluation.

Current population activities are considered to be making an important contribution to the preparation of health personnel in population-family planning. It is hoped that more demographic research will be undertaken in 1974, and beyond. Research capabilities and activity in the area of family planning are considered to be satisfactory.

The two population groups work together in a coordinated manner, with an absence of conflict and a high level of commitment. Both groups operate

basically as teams with the leadership encouraging individual initiatives.

In summary, the major strengths of the population activities are: (1) the teaching program is now strong and institutionalized; (2) the institution has assumed the majority of salary costs (six out of eight faculty) and will take over all costs in 1975; (3) there is a well-trained, highly motivated faculty; and (4) the prestige, influence and importance of the institution in training health personnel are high.

Major weaknesses include lack of experience and proven capability in research, especially on the demographic side.

Ranking (in-country basis) are:

Overall quality of school: excellent

Quality of population programs: good

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in reaching program objectives: good

Overall rating: excellent

#### Paramedical Personnel Training Institutions

Colombia has 10,317 physicians, 2,700 nurses (of whom 1,886 are active), 12,300 auxiliary nurses, and 2,690 rural health promoters. Over 70 percent of the physicians are located where approximately one-third of the population lives; the distribution of nurses is even worse, with the great majority being clustered in three major cities. Clearly, health services in general and clinical family planning services in particular cannot at present be provided by physicians and nurses. Nor can the situation be expected to improve in the near future -- only 494 physicians graduated in 1972, and 130 to 150 nurses are expected to graduate in 1973. The Ministry of Health is basing its plans on the increased production and utilization of both auxiliary nurses and rural health promoters. It is expected that 1,400 nurse auxiliaries will graduate in 1973 (in 1972 there were 1,200), and accelerated training plans call for 7,000 health promoters to be employed by 1977.

of the eleven schools of nursing, seven are four-year degree courses, while four are three-year diploma courses. Expert opinion is that the schools at the universities of Valle, Antioquia, and Nacional (in that order) are the best, while Cruz Roja and Nacional are the largest. Unlike the schools of auxiliary nursing, these institutions are not the direct responsibility of the Ministry of Health, and the curriculum is not standard. In 1964, 100 nurses graduated and the ratio was 0.9 per 100,000 population. The 1972-73 output of 130 to 150 nurses gives a similar ratio to population, and this is not expected to change by 1980, according to Mrs. Nell Carzón, president of the Nursing School Association. In view of the low output of nurses, it was decided to report on only one school of nursing. Nacional was chosen because of its size and quality, its location in Bogotá, and because Mrs. Nell Carzón was dead.

Escuela de Enfermería, Universidad Nacional de Colombia (Bogotá)

The school forms part of Universidad Nacional and is located on the main campus. Approximately 150 students are enrolled, with entrance based on the university examinations. Eighty students were admitted in 1973, the majority coming from middle-class families. There are many more qualified applicants than places. Approximately 50 graduates are expected in 1973 (two groups of 25), and in 1974 the number should rise to 80. The faculty numbers 47, of whom 9 are part-time and the remainder full-time. The physical plant is in need of repair but is adequate.

This should be considered a high priority, established institution, but higher priority is accorded schools of auxiliary nursing.

Students receive the following instruction in population related subjects: health and population (six hours), the Colombian family (six hours), human sexuality (eight hours), demographic trends (two hours), family planning (six hours), and sex education (fifteen hours). This instruction is the

responsibility of the Department of Public Health and MCH, which has a faculty of nine, seven of whom have received special training in family planning from the PROFAMILIA international course (two weeks). Three of the eight have Masters of Public Health degrees. Overall, MCH and family planning occupies approximately 10 percent of the curriculum. In the fifth semester, there are 60 hours of theory and 30 hours of practice; in the sixth semester, 90 hours of theory and 270 of practice in MCH and family planning.

Each student performs ten to twenty multiparous deliveries but is not permitted to carry out an episiotomy. Students also provide sex education classes for primary and secondary school students and mothers. Finally, each student spends one to two days in the postpartum family planning clinic at Instituto Materno-Infantil.

Almost no research is done in this or the other ten nursing schools. According to Mrs. Garzón, this is because of lack of funds, capability, and confidence. The school did contribute to ASCOFAME's study of human resources in health and to a recently completed "Macrodiagnosis of Nursing," which will be published by the Ministry of Health.

Mrs. Nelly Garzón, the dean, and Mrs. Inés de Sanabria, head of the MCH group, are the leaders. The leadership is influential and enjoys excellent relationships with other faculty. They have successfully expanded the teaching program over a period of time, as conditions permitted.

The objectives are to prepare future nurses in the areas of family planning and sex education, since these are considered fundamental parts of MCH and have priority because of high fertility rates in Colombia. The students tend to oppose family planning as "United States imperialism" until they enter the clinical years, when their views rapidly become favorable as they see the effects of having large families. All eight faculty are strongly in favor of family planning, and all have two children.

Family planning material was first introduced over five years ago,

but the subject was so controversial in the university as a whole that it was treated in a diplomatic way with voluntary classes, many of which were run by the students themselves. The situation is now much less difficult than even two or three years ago, and all students receive instruction unless they object.

RANKINGS (all-country basis) are:

Overall quality of schools: good

Quality of population program: good

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in program objectives: excellent

Overall rating: good

#### Schools of Auxiliary Nursing

The first school was founded in Bogota in 1948, by which time it had become clear that the supply of nurses was totally inadequate, and many functions were being carried out by nurses' aides with little or no formal training. A large and unqualified proportion of the 12,300 auxiliary nurses now working in Colombia never attended a formal course. Originally, the new personnel category was named "auxiliary nurse midwife," and indeed these women carry out a very large number of deliveries, especially in the more rural areas. However, "midwife" was dropped, presumably because of opposition from the medical profession. Officially, Colombia has no such category as midwife or auxiliary nurse-midwife.

All thirty-two schools of auxiliary nursing come under the authority of the Ministry of Health, although they have a variety of institutional affiliations. Eleven are affiliated with state health departments, six with hospitals, four with SEEA (the National Vocational Service) three with armed forces and police, two with universities, one with Seguros Sociales, and so on. Until recently the majority were administered by nuns, many of whom had no formal nursing qualifications. However, during the past five years faculties have

grown, salaries have increased, and almost all faculty members are now qualified nurses, many with training in public health. The Ministry of Health provides financial support (\$1.2 million in 1973) for those schools affiliated with the state health departments. The remainder look to their respective institutional affiliations and are often more adequately financed (for example, SENA and Seguros Sociales). The Ministry of Health has budgeted \$2 million for 1974 and an equal sum for 1975 and in addition has been construction of seven of the eleven new schools programmed for completion by 1975.

A Ministry of Health study in 1973 found that fourteen of thirty-one schools had an inadequate physical plant, 40 percent were located at a considerable distance from where practice training was carried out, and 20 percent lacked a nursing demonstration area. In practically all cases there were insufficient teaching material and inadequate libraries; none of the schools received professional journals. The study also noted that during the two years of training (one of theory and practice and one of supervised practice) family planning was not formally included in the curriculum. Since 1972, students have been required to have completed two years of secondary school, with exceptions only in the case of nurses' aides. Most students receive fellowship support from health institutions and are then obligated to work for the institution for a period equal to or longer than the fellowship.

With a view to upgrading the schools of auxiliary nursing, the Ministry of Health put into effect in 1973 a program of construction, increased financing, measures to improve the level of teaching, the most important being a three-month course for instructors at Valle Nursing School. Perhaps the most important change was the total redesign of the curriculum. The new curriculum, which goes into effect in all schools in January 1974, is divided between medical-surgical nursing and MCH. Forty percent of the new curriculum is devoted to MCH and fifty-six hours to family planning.

Reports are made here on two schools: one was selected to represent the average situation (San José Hospital) and the other (Centro de Servicios Hospitalarios - SENA) because SENA, which operates four schools, is responsible for approximately 25 percent of the annual output of auxiliary nurses.

Escuela de Auxiliares Mercedes Samorano de Barberi,

San José Hospital (Bogotá)

This private institution is located in what was previously the maternity section of the hospital. There are thirty-one students at present and on the average twenty-five per year graduate. The students usually come from the lower urban socio-economic strata. Ten students receive fellowships of \$8 per month, five each from San José and Misericordia hospitals, and are obligated to work for one year in the hospital after graduation. Students without fellowships pay \$1.20 per month tuition. All students are required to have completed two years of secondary school. It was reported that students turned down by this and other schools are frequently admitted by SENA.

The faculty consists of a director and three instructors, all nurses with degrees but none with training in public health. All work full-time (7 a.m. to 1 p.m.), but at least two hold other nursing positions. The hospital provides faculty salaries and the fellowships but almost nothing else. The Ministry of Health provides \$1,500 annually to the hospital for the school, but this budget never reaches its destination. There are no funds for books. The physical plant is entirely deficient, consisting of three small offices (the converted maternity suite), one shared classroom in the hospital basement, no space for practical teaching, and very few educational or clinical materials. The new Ministry of Health curriculum will be introduced in 1974.

This is a high-priority, developing institution. At present there

is no formal population training program. The amount of teaching and practice in family planning depends on the instructor, the clinic, and the student -- no exact data were available. Two of the instructors told me that all the faculty were very favorable to family planning and the students were generally very interested. Students discuss family planning on post-partum home visits and with abortion patients on the ward and rotate through the hospital family planning clinic for an average of two days. Students are not permitted to perform deliveries because of physician opposition. No population research is carried out.

There did not appear to be any leadership in the population field. No objectives have been articulated, but an effort is made to acquaint the student with the need for family planning and provide some knowledge of the methods available.

Rankings (in-country basis) are:

Overall quality of school: average

Quality of population program: weak

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: average

Overall rating: average

The major constraint operating is the lack of resources -- physical plant, funding, educational materials. Without additional support, one cannot expect major benefits from the new curriculum.

Centro de Servicios Hospitalarios - SENA,

Hospital San Juan de Dios, Bogotá

SENA (Servicio Nacional de Aprendizaje) is a decentralized institution attached to the Ministry of Labor. This public institution was founded in 1962 and operates in an old building at the rear of the hospital. Admissions have increased rapidly since 1965 at government insistence. One thousand applications a year are received, and ninety students are admitted

every three months on the basis of an entrance examination and interview. I was informed by Mrs. Leonor Daza, the director, that two years of secondary school are required and that most students have completed three to four years. (Other informants, clearly hostile to SENA which pays higher faculty salaries, claimed that students with completed primary were accepted and that everyone graduated.) Mrs. Daza stated that the students come from the lower socio-economic strata and arrive with very little idea of what auxiliary nursing implied, so that the rate of desertion is high. Twenty-five to thirty graduate from each group of ninety, for a total output of approximately 120 per year. The course was reduced from eighteen to twelve months in July 1973, compared to two years in most schools. Students have to provide everything for themselves (uniforms, board and lodging, and so on) but pay nothing. Most come from Bogota, and those from outside the city have half their living costs paid by SENA; the latter are required to return to their home towns.

The faculty consists of sixty-three full-time nurses with degrees, and a priest who is professor of ethics. SENA has its own budget from the presidency derived from the contributions of public and private companies, which pay a levy of 2 percent of their payroll. The physical plant was adequate until 1973, when the school was asked to again increase its output. As a result, conditions are now crowded and an effort is being made to increase the number of classrooms.

The school has followed the standard curriculum of the Ministry of Health and will use the new curriculum in 1974. There is no formal teaching program and no research in population. Students spend over 50 percent of their time in practical work, and the amount of family planning training received varies with the hospital to which they are attached. Personnel from the postpartum program at Instituto Materno Infantil give talks on family planning for an undisclosed number of hours, and four faculty members teach MCH. (The old curriculum was unavailable at the time of my

visit and will be sent to me in January 1974).

There is a consensus in favor of family planning among the faculty but no leaders.

There are no announced objectives but the faculty favors exposure to the subject of family planning.

Some teaching-training in family planning began in 1965-66 with much diplomacy; prior to that it was opposed by a high-ranking priest on the board of SENA. Students were never opposed to the teaching of family planning, but interest has grown over time and is now general. They began to ask for family planning teaching and went to PROFAMILIA to obtain educational materials. After this demonstration of interest the training became more formalized.

Deliveries are not programmed for students, but occasionally they do attend births for lack of other personnel.

Rankings (tentative, because based on inadequate data) are:

Overall quality of school: average

Quality of population program: average

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: modest

Overall rating: average

#### B. DEMOGRAPHY AND RELATED SOCIAL SCIENCES

Thirty universities were surveyed by the COLCIENCIAS team in its analysis of the social science faculties. The excluded universities were not relevant for the purposes of the study.

There were thirty-five teaching programs in the thirty universities surveyed: nineteen in economics, six in sociology, four in anthropology, and three each in history and political science. Ten of these included demography

in the undergraduate curriculum, including each of the six sociology departments, three of the nineteen economics departments, and in one anthropology department. With minor exceptions, demography was taught as a one-semester course of about forty-eight teaching hours. There was no teaching of demography in graduate programs. Six of the nine persons teaching the demography courses were without formal training in demography, and six of the nine, but not necessarily the same ones, were contracted part time to teach this course, and were not regular faculty members of the universities where they taught the course.

In an additional nine faculties, there were plans to establish the teaching of demography, and in a few of them, the course had been authorized, but professors had not been recruited for the lectures. The COLCIENCIAS report concludes that there is a serious deficiency of trained personnel in the country, and which may be recommended.

As regards research, 152 research projects were identified. Of these, thirty-seven were in the field of demography and population. Of the thirty-seven projects, seven are narrowly in the field of demography, and six in family planning. The twenty-four other projects follow the interrelationship between demographic factors and education, health, or sociological or socio-economic factors. It should be noted that these figures do not include studies which only casually refer to or report demographic information, incidentally to the main point, so that the thirty-seven projects classified as demographic are seriously involved in this field.

TABLE I. NUMBER OF RESEARCH CENTERS, BY TYPE, AND NUMBER OF PROJECTS BY FIELD OF STUDY

	<u>Research Centers</u>			
	<u>All Centers</u>	<u>University</u>	<u>Non-university</u>	
			<u>Public</u>	<u>Private</u>
<u>No. of Centers</u>	16	7	2	7
<u>No. of Projects</u>	37	12	4	21
<u>Field:</u>				
Demography	7	2	1	4
Education	6	2	-	4
Health	8	3	3	2
Sociology	1	-	-	1
Economics	9	2	-	7
Family Planning	6	3	-	3

TABLE II. NUMBER OF SOCIAL SCIENCE TEACHING FACULTIES BY DISCIPLINE AND STATUS OF DEMOGRAPHIC COURSE

<u>DARSS Field</u>	<u>Number of teaching faculties surveyed</u>	<u>Exists</u>	<u>Demography course;</u>		<u>Neither</u>
			<u>Contemplated</u>		
Sociology	6	6	-	-	
Economy	19	3	5	11	
Anthropology	4	1	2	1	
History	3	-	-	3	
Political Science	3	-	2	1	
TOTAL	35	10	9	16	

Source: COLCIENCIAS, Inventario Nacional de Actividades En Demografía, 1974 (unpublished draft).

TABLE III. NUMBER OF RESEARCH PROJECTS UNDERWAY, BY FIELD OF INTEREST

<u>Field</u>	<u>Number of research projects</u>	<u>Field</u>	<u>Number of research projects</u>
Economics	38	Urban & Regional Planning	2
Sociology	9	Information & Documentation	2
Anthropology	6	Health	21
Demography & Population	37	Agriculture	5
History	11	Engineering	12
Political Science	7	Ecology	2

A careful analysis of the project permitted a classification of the field of application of the research findings, and a different concentration emerges. Seventeen of the projects relate to the field of health including family planning, distributed in the following way:

Text Table in COLCIENCIAS report, page 25

<u>Fields of Application</u>	<u>Number of Projects</u>
Education	6
Economic and Social Development	7
Regional Development	6
Health	17
Government	<u>1</u>
	37

Individual universities are not reported on below for DARSS interest, because there is so little current activity in population within the social science faculties. The planning institute and COLCIENCIAS in Colombia promote and negotiate expansion, but they feel that it would be appropriate for donor agencies to work through them and not to attempt at this time bilateral activities in DARSS.

## IV. CONCLUSIONS

### A. HEALTH/FAMILY PLANNING

The foregoing has indicated the relatively advanced state of institutional development in the health fields of population achieved to date in Colombia and little in the social science (DARSS) areas. There can be little doubt that the nine medical schools and the School of Public Health occupy a leading position in Latin America in terms of teaching and research in the public health-family planning aspects of population. As indicated earlier, future efforts should emphasize a consolidation of progress to date, rather

than major new program initiatives. (However, funding agencies should remain alert to unique opportunities for research or new teaching programs in these universities). Continued support is recommended for ASCOFAME on a declining basis for a period not less than two to three years. In the case of the School of Public Health, support should be provided on the basis of individual projects.

The above remarks clearly do not apply to the schools of nursing and auxiliary nursing. Given their low annual output and the relatively marginal role of the nurse in Colombia's health system, lower priority is assigned to schools of nursing. The schools of auxiliary nursing deserve high priority in future institutional development activities. Discussions have been underway for several months with the Ministry of Health, with a view to developing a two-year project to strengthen the teaching of family planning in two to three strategically placed schools of auxiliary nursing. It was expected that the Ministry would submit an institutional development proposal which would include funds for personnel, fellowships, teaching materials, and audio-visual equipment. To date, no proposal has been forthcoming. This may be due to changes in personnel which resulted from changes in government.

ASCOFAME will soon begin to use its member medical schools as training resources to develop a broad program for training medical and paramedical personnel in all facets of family planning, in cooperation with the Ministry of Health. Courses will be offered in such areas as service delivery, information and education, and program management, all at various levels from the physician to the health promoter. These training facilities would be offered to all the entities in the public sector, and hopefully to other health institutions within the region at a later time. Given the level of development in the population area in Colombia, it seems reasonable to expect that a regional training capacity might be developed.

B. DEMOGRAPHIC AND RELATED SOCIAL SCIENCES

The need for development of the DARSS areas was documented in the inventory of human and institutional resources recently completed. COLCIENCIAS and the planning institute now have the basic resources to complete a development plan to assist some of the universities. There is a great need to promote graduate training in DARSS in Medellín or Bogotá, and to support through an ad hoc teaching program the upgrading of the professors currently lecturing in undergraduate courses. The distribution of teaching materials also should be improved. International assistance can be helpful if provided in coordination with the governmental agencies interested in these areas.

SOURCES OF INFORMATION

The health and family planning portion of this report is based on numerous visits to the various medical schools and the School of Public Health over a period of three and one-half years, and on site visits to one school of nursing and two schools of auxiliary nursing. In addition, data was generously provided by personnel of the Ministry of Health, ASCOFAME (The Colombian Association of Medical Schools), and the Regional Population Center. The DARSS section is based primarily on the COLCIENCIAS inventory.

December 1973

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## COSTA RICA

by Margarita Bertado Leverton and Axel Mundigo

### 1. INTRODUCTION

Costa Rica, Central America's smallest country (Panama excluded) had in 1972 a total population of 1.2 million. Since 1950, when the population stood at less than 700,000, it has more than doubled its population. Prior to 1950, the population grew at a rate of 1.5 percent per year but in the inter-war period it fell to just 0.9 percent, reaching 1.2 percent during the country's boom in the 1940's. Since then, although Costa Rica's rate of growth has declined to 0.7 percent, Central America as a whole remains the fastest growing region in the world, with a rate of 1.2 percent per year which implies -- under favorable demographic conditions -- a doubling every twenty-two years.

Good health conditions and a favorable period of economic growth and social development contributed to accelerate demographic growth in Costa Rica during the past twenty years, and especially during the 1960's. Mortality was reduced from 16 deaths per thousand population in the 1940's to 12 in the 1950's and to 6 in the 1960's. Today the death rate stands at the very low level of 6.6 deaths per thousand inhabitants.

The country's overall low mortality can be explained partly by the

youthfulness of its population -- a half is below age 15 -- while only 4 percent are past age 65. Yet infant mortality (an excellent indicator of health conditions) stands at 57 deaths per 1,000 live births -- indicating that additional gains in environmental sanitation and health could be accomplished. Still the average baby boy born today in Costa Rica can expect to live to age 64 and females to age 67. Unofficial estimates of life expectation based on the 1973 census (obtained from the Ministry of Health and considered tentative) indicate that for males the figure has climbed to 70 years and for females to 72.

Fertility remained at very high levels while mortality was experiencing a rapid decline. During the 1950's, the birth rate remained at about 48 births per thousand population and even in 1963 this rate still stood at 45, but thereafter a marked downward trend in fertility was in evidence. For the remainder of the 1960's birth rates continued to decline, and since 1971 the birth rate has levelled at 32 births per thousand inhabitants. The explanations for this trend in Costa Rican fertility lies in a change in the reproductive behavior of younger women. The age-specific fertility rate of women 20-24 was reduced by 140 points (from 355 per thousand) between 1960 and 1972 and by 155 points (from 362) for women aged 25-29 years. Today, Costa Rica has the lowest fertility in Central America. The role of family planning programs in the decline of Costa Rican fertility is probably small, reinforcing a trend that was already established several years before they became operative, in 1967, and were able to open clinics and provide services.

From 1966 to 1970, a period of economic expansion unparalleled in the nation's history, the annual increases in per capita income were 3.1, 5.3, 6.3, 6.2, and 4.2 percent per year, respectively. Per capita income was estimated at US\$537 in 1970 and it stands at \$560 in 1973. This economic boom resulted from

an increase in the export of primary products and a growth spurt in industrialization. Both of these received an additional stimulus after 1962 when Costa Rica joined the Central American Common Market.

Most of Costa Rica's population is of European descent, the nineteenth century brought Spaniards, Germans, and Italians. In addition, large groups of Jamaican blacks were brought in for the cultivation of bananas and for railroad construction in the Province of Limon. The census of 1950, the last to ask about race, indicated that 97.7 percent of the population were either white or "mostly" mixed and 1.3 percent were black. In 1950 the number of Indians was estimated at 2,000 or 0.8 percent of the total population. Although recent statistics are not available, there is a particular reason to believe that the ethnic composition has changed significantly since 1950.

The majority of the population is concentrated in the cities of San Jose, Cartago, Heredia, and Alajuela, all located on the central plateau. In the last few decades these urban centers have grown substantially, but at the same time the population has begun to disperse and occupy the lowlands of the coastal provinces of Limon, Puntarenas, and Guanacaste.

About 80 percent of the population aged ten or older are literate. Illiteracy appears practically non-existent in the urban areas and sex differences are insignificant. This high literacy places Costa Rica in an unusually advantageous position in a region characterized by high illiteracy.

While questions on religion are not included in national censuses, it is estimated that approximately 95 percent of the population are Catholics. The people, without being strict observers, maintain a respectful and considerate attitude toward the church.

## II. HEALTH POLICY AND PROGRAMS

The health sector is made up of the Ministry of Public Health, which is in charge of preventive medicine and offers its services in health units throughout most of the country; the Medico-Social Assistance Administration, a semiautonomous institution that manages hospitals and rural centers; and the Costa Rican Social Security System, which provides medical services to insured workers and their families and which, in 1973, covered approximately 61 percent of the total population. Various other institutions, such as Children's Hospital, provide specialized medical aid. In 1973 there were 34 hospitals and 13 rural assistance centers with a combined total of 7,380 hospital beds (about 4 beds per 1,000 inhabitants), 78 health units, and 37 dispensaries and health posts. At present Costa Rica has a ratio of 5 doctors to every 10,000 inhabitants, and a similar figure is estimated for nurses.

Currently being carried out with official approval is a project to integrate all the assistance services of the Costa Rican Social Security Fund, in order to develop a unified health system to serve the entire population. Financing is contemplated through the imposition of obligatory payments.

## III. POPULATION POLICY AND PROGRAMS

Concern over rapid population growth and its possible negative effects is a recent phenomenon in Costa Rica. In the past, the general attitude was that Costa Rica had a great deal of available land with neither sufficient capital nor sufficient laborers to develop it. As a result, the general attitude was favorable to demographic growth and to measures for stimulating it, especially through foreign immigration and the development of uncultivated lands by both citizens and foreigners.

It was not until the early 1960's, however, that concern appeared over

population growth and its possible adverse effects on the economy, public health, housing, and education. Earlier concern, especially among doctors, was over a possible increase in abortion, as a response to rapid population growth. During the last decade population growth and food resources, induced abortion, and family planning began to be discussed more frequently, and articles in the press on the demographic "explosion" and the problems it generates became more common. Certain groups favored fertility limitation while others opposed it.

The first organized family planning activities began in 1962 when the Clinica Biblica, a private institution, offered the IUD to women interested in regulating their natality. At this time various professionals working in the Interamerican Institute for Agricultural Sciences (IIAS), located in Turrialba, initiated, as a private endeavor, a pilot family planning program that offered contraceptives to the wives of IIAS farm workers. Some doctors in their private practices also began to dispense IUD's and oral progestogens.

The decline in the birth rate, which preceded organized family planning efforts by at least five years is attributed to socio-cultural changes influencing the reproductive behavior of younger women. Better educational facilities, a prosperous economy and job opportunities, a population that prides itself on its European roots and which eagerly adopts foreign patterns of behavior, all might have contributed to the change. No doubt the high literacy achieved by Costa Rica has made the diffusion of family planning an easier concept to adopt and practice effectively.

Already by 1964, evidence suggested that a big proportion of women living in legal or free unions were or had used some type of contraceptive. Only about two years elapsed between the time the pill appeared on the market and its widespread acceptance and use by Costa Rican women.

Abortion rates, although lower than those of Chile and Uruguay, were in 1963 accounting for the third largest cause of hospitalization: complications associated with induced abortion. They totaled 111 per 1,000 pregnancies and 127 per 1,000 live births.

While there has been no official pronouncement by the Costa Rican government on population policy, what might be conceived as an official working agreement has existed since April 1967 when the Office of Population was created by presidential decree as a branch of the Ministry of Health. Representatives from this office as well as of many public and private institutions (such as the Costa Rican Demographic Association, the Center for Family Orientation, the Center for Family Integration, the Costa Rican Social Security Fund, the Ministry of Education through its Office of Counsel and Supervision on Sex Education and Family Planning, and the University of Costa Rica through the Center for Social and Population Studies), make up the National Committee on Population (CONAPO), a voluntary group that coordinates population activities in Costa Rica.

The Population Office designed a national plan that was set forth in the "national program of population policies" published in October 1967. After discussing Costa Rica's rapid population growth and its economic and social implications, the document proposed a family planning program to diminish the risks of maternal and infant mortality, to educate the population on contraceptive methods, and to arouse a sense of responsible procreation. The creation of the Population Office signaled the beginning of official government participation in family planning and the formal inauguration of the National Family Planning Program (to be discussed in the following section).

While the "national program of population policies" refers to the

economic and social problems associated with population growth, its recommendations refer exclusively to family planning and do not include other measures necessary to an integrated population policy. Thus, it represents a partial statement without objectives and not clearly connected to social or economic level present planning policies.

The Costa Rican family planning and related population activities are coordinated by UNFPA. Its committee meets twice a month with sessions being directed on a rotating basis by delegates from each of the participating institutions. The national population program objectives are based on the various official declarations on population which the Government makes through its different ministries (health, education, labor).

The working guidelines which stem operative are:

1. Knowledge of family planning is a basic right of every citizen.
2. A couple has the right to decide on the number of and spacing between their children.
3. No one, not even the state, has the right to interfere in or to regulate marriage relationships.
4. Family planning is an educational process, the adoption and practice of which is a basic right of the family.
5. A balance between the world's population and the rational exploitation of natural resources is a necessary condition for preserving the moral and material values of family and society.

The population program of Costa Rica, in accordance with the statutes of the National Population Council, carries out its educational aspects of research and service through the member bodies of the council, each of which has specific responsibilities and duties.

The Costa Rican Demographic Association, represented on the CONAPO by Dr. Victor Morgan, is the most important administrative structure. It channels financial assistance, distributes contraceptives, and stimulates awareness and teaching about family planning through publications, visual aids, and personnel training courses. Its responsibility in the program is fundamental and decisive.

The Center for Social and Population Studies (CESPO) is a branch of the University of Costa Rica, and engages in applied research, diffusion of information, and teaching.

The Latin American Training Center for Population and Family Planning Workers, which until 1973 was located at CESPO, has moved over in its entirety to the Costa Rican Demographic Association.

The Costa Rican Social Security Fund provides family planning services to its members.

The participation of the Catholic Church in CONAPO is through the Center for Family Integration and the Center for Family Orientation (an organization which until a year ago was directed by a priest from the Bishop's office and whose activities were centered in the fields of sex education and preparation for marriage). These regular contacts provide CONAPO and the national population program the opportunity for discussing projects as they are being developed and of reaching agreements that are compatible with different points of view.

The Population Office of the Ministry of Health, under the direction of Dr. Oscar Alfaro, currently coordinates the family planning clinic network.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

University of Costa Rica

The country's most important university is the University of Costa Rica with an annual enrollment of approximately 18,000 students. The university is located in a sprawling campus known as "Ciudad Universitaria Rodrigo Facio." About half of the students enroll in the School of Arts and Sciences (Escuela de Artes y Ciencias) which is a school for careers in education, and commerce occupies the third place with about 2 percent of total enrollment.

Demographic research and research has been carried out almost exclusively by the University of Costa Rica. In 1957 the Statistical Institute, in the School of Economic and Social Sciences, began teaching demography in the Central American course "Basic Training in Statistics." In the following two years, this institute conducted research on population projections and life tables and carried out, together with the Technical Statistics and Censuses, the 1960 Fertility Survey of the Metropolitan Area of San José (Costa Rica's first RHP study). The analysis of this survey, published in 1968, is one of the institute's most important studies. It showed an average total family size of almost five children by the end of a woman's reproductive life, a general acceptance of the idea of family limitation, a widespread knowledge of contraceptive methods (90 percent), and a current use of contraceptives by 50 percent of the women interviewed. The contraceptive methods most in use were condoms, withdrawal, and rhythm. The pill was rarely used and the IUD was not yet known.

Courses in demography are presently being offered at the School of Economic Sciences, the Department of Human Sciences in the Faculty of Arts and Sciences, and the School of Medicine. At the Economics Research Institute of the university, and also at the Department of Statistics (both are part of the School of Economic Sciences), there is a strong interest in developing a professional curriculum with a specialty in demography and strong emphasis on

methods, especially biostatistics. There are currently about forty students in the professional program in statistics (Licenciatura) and the program could be expanded to incorporate a small number of demographic specialists. Dr. Naranjo, the dean of the School of Economics, and Dr. Umana, chairman of the Department of Statistics would like to develop professional studies in demography at their school, and also to incorporate some of the courses that already exist into a structured program.

#### The School of Medicine

The School of Medicine enrolls about 120 students a year, and the total enrollment for 1974 was 420 students. At present there are 60 students completing the last year of a sequence of seven years duration: two years pre-medical, four years of medical training, and one year of internship.

The physical plant and facilities at the School of Medicine reflect conditions elsewhere at the university where a scarcity of space is felt. The physical plant would be adequate if the new classroom building at the Hospital Mexico, where part of the medical training takes place, were taken into account. The university does not have a teaching hospital; however, teaching activities are carried out conveniently in Ministry of Health and Costa Rican Social Security hospitals. For teaching obstetrics and gynecology, the Costa Rican Social Security and Mexico hospitals, Calderon Guardia, the national hospital system's San Juan de Dios, and Carit Maternal-Child Institute are preferred. The present limitations in the areas of computer facilities should be overcome in the near future with the arrival of at least an IBM 360-30.

The Department of Preventive Medicine of the Medical School, directed by Dr. Marcial Fallas, runs an educational program in biostatistics and demography with a total of fifty-six course hours (three hours per week) in theory

and laboratory work distributed over the first semester. Population subjects take up about two-thirds of the total course content. Dr. Ricardo Jimenez of ICSPE and Dr. Augusto Berera teach the course, and Dr. Victor Gomez and Dr. Jose Carratal assist.

In the area of clinical aspects of human and physiological courses, Dr. Jose Manuel Gomez, Director of the Hospital General de Ginecologia y Obstetricia and Dr. Francisco Hernandez, Director of the Hospital General de Ginecologia y Obstetricia, both teaching head and the faculty members have a primary interest in carrying out research in their fields.

It is not only in the Department of Obstetrics, Gynecology, and Sterilization of the Hospital General de Ginecologia y Obstetricia that interest and activity in the area of family planning exists. The following doctors are working on a Sterilization by Laparoscopy program. Dr. Carlos Prada, obstetrician and first and second dean of the school, definitely the most important leader within the School of Medicine, Dr. Mario Pacheco Rana, co-director of ICSPE, consultant to the Amillo Foundation, and coordinator for undergraduate and graduate education in family planning at the School of Medicine, and Dr. Teodoro Mangel, a young and enthusiastic obstetrician-gynecologist with sound professional training. The program of sterilization by laparoscopy has been extended to cover postpartum cases since January 1973 at the instigation of Dr. Cecilio Aranda, head of the Obstetrics Gynecology Department. Dr. Carlos Prada's wish is that his program (which has now done more than 1,000 sterilizations by laparoscopy and 200 by culdoscopy, with a daily average of four to five) will become a training center for Latin America in this area. This training program would offer some advantages over the programs in Mexico and Salvador. The program in Guadalajara, Mexico, is begin-

ning to get underway and has a smaller number of clients, and therefore its potential for training and research is less developed. The program in Salvador is not related to the university and does not have the full support of the Salvadorian authorities, whereas the program in Costa Rica is both related to the university and supported by the Ministry of Health.

With regard to reproductive biology, there are a sufficient number of well-trained and highly qualified personnel who, for budgetary and administrative reasons, have not been able to team up, despite a real interest and the existence of a plan by the dean of the school, Dr. Rodrigo Gutierrez Saenz, to create a reproductive biology unit in the School of Medicine.

Center for Social and Population Studies (CESPO)

The Center for Social and Population Studies (CESPO), a university institution, was organized to advance sociocultural research, to promote interest in social and demographic studies, and to train personnel in the field. It established a training department in 1968 and a research department concentrating on basic demographic studies in 1971. In July 1973 CESPO's program of training in family planning and sex education, consisting of one or two-week courses for doctors, nurses, nurses' aides, and social workers, as well as preparation of undergraduates in health fields was transferred to the School of Medicine. CESPO is currently continuing to cooperate in these training programs, but the coordination of teaching activities is now in the hands of Dr. Mario Pacheco Mena (former director of the CESPO), professor of gynecology at the Hospital Mexico of the Costa Rican Social Security Fund. CESPO also manages, under the auspices of the Ministry of Education, the training program of teachers in sex education.

CESPO has received financial assistance from the Ford Foundation for

a number of studies, one of which was on social strata and family planning carried out by the Institute for Psychological Research and the Department of Human Sciences of the University of Costa Rica.

CISP is also one of the participant institutions at CONAPO. Dr. Ricardo Jiménez, CISP's director is also its representative at CONAPO.

#### Other Institutions in the Population Field

##### INSTITUTO NACIONAL DE ESTADÍSTICA Y CENSOS

The National Statistics and Censuses, a government organization, has participated in its own data but has frequently participated in studies and analyses. It participated in the 1966 Fertility Survey of the metropolitan area of San José, and has also prepared population projections and life tables. In 1969, in cooperation with ICFM, it carried out a Survey of Rural Fertility. The results of this survey indicated a crude reproduction rate of 3.53, compared with 2.75 for the metropolitan area in 1966. Sixty percent of the women knew of at least one contraceptive method, and 25 percent of these women had practiced some method of contraception in the year preceding the survey. Contrary to what had been found five years earlier in the metropolitan area, the contraceptive method most in use was the pill.

##### CELADE: Costa Rica Sub-Center

A branch office of the Latin American Demographic Center (CELADE) was established in 1966 within the University of Costa Rica. CELADE's goals include counseling governments and national institutions in Latin America on subjects related to population. The branch office has offered intensive courses on demographic techniques since 1970. Since 1972, this office has offered an eleven-month course aimed at training demographic analysts. (The same course was offered from 1958 to 1971 in CELADE's headquarters in Santiago, Chile).

V. CONCLUSIONS AND RECOMMENDATIONS

In the public health-family planning area, an activity that deserves special attention and support is that carried out by Dr. Prada and his teaching-assistance team at the obstetric-gynecology service of the Hospital Mexico. This program has the potential to become an international graduate training center in sterilization by laparoscopy and culdoscopy. Dr. Prada's project also contemplates placing, counseling, and close supervision of his students.

The dean of the School of Medicine should be encouraged in carrying out current plans for a reproductive biology unit.

Interviews with staff at the Medical School revealed an interest in developing programs for maternal-child care at the community level, in which family planning activities and direct control of the pregnant woman and new mother could be delegated to auxiliary personnel. There appears to exist some interest or commitment between the University of Costa Rica and Stanford University of California in developing paramedical and auxiliary personnel to assume responsibilities. Further details on this plan, however, were not available.

In the study of demography and related social science, the University of Costa Rica, although somewhat limited, has excellent potential, especially if the adjoining CELADE facilities and staff are used as support resources. Faculty interest, research, courses and related efforts at the Department of Statistics and at the Economic Research Institute should be monitored since if graduate demography programs are to develop at the University of Costa Rica they would find a natural home at the School of Economic Sciences.

CESPO's training activities are limited but its research contribution is important and growing. CESPO has worked closely with CELADE on migration research; it is doing research on law and population, and conducting analyses of the 1973 census -- all of which will undoubtedly contribute to the under-

standing of demographic processes in Costa Rica.

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## DOMINICAN REPUBLIC

Eileen Ward.

1. GENERAL

The Dominican Republic occupies the eastern two-thirds of the island of Hispaniola in the Caribbean Sea, the western third being occupied by Haiti.

The total area of the area is approximately 48,442 square kilometers (18,700 square miles), with a coastline of about 1,392 kilometers. It is crossed east to west by a range of mountains and separated by central valleys, the most important of which is the Cibao.

The economy is mainly agricultural. The country is one of the leading producers of sugar, and its cane processing (1,120,950 metric tons in 1964) is the principal industrial activity, source of foreign exchange, and source of employment. Sugar, coffee, cacao, and tobacco are the principal agricultural exports. Various minerals such as iron, nickel, and bauxite are found there. Manufacturing consists of processing agricultural commodities (sugar refining, production of rum, chocolate, peanut oil, and cigars), food canning, and meat processing.

In the census of 1960 there were 3,047,070 inhabitants; by the 1970 census the total had risen to 4,006,405, and the estimate for 1973 is 4.8 million. The population density was 82.6 inhabitants per square kilometer in 1970 and the estimate is about 90 per square kilometer in 1973.

The scarcity of data on internal migration does not allow an analysis of this phenomenon. There is considerable international migration, especially toward the United States. Between 1961 and 1969, 84,830 Dominicans were admitted

as immigrants to the United States, and an unknown number have remained there illegally. During 1974, the United States consulate has granted 14,515 immigrant visas to Dominican citizens.

The crude birth rate is estimated to be 49 per 1,000 and the crude death rate 15 per 1,000, giving a growth rate of 3.4 percent. Infant mortality is estimated to be 64 per 1,000 live births. Forty-seven percent of deaths occur in children under 5 years old and 32 percent in persons over 50. Sixteen percent are perinatal deaths and 7.8 percent (or, according to another source, 5 percent) are caused by malnutrition. Life expectancy at birth is 51 for men and 54 for women, compared to 48.2 in 1960.

According to the 1973 figures, about 47 percent of the population were less than 15 years old, about 50 percent between 15 and 64, and about 3 percent over 64. This distribution is very similar to that of 1960. In 1970 there were 99.6 men for every 100 women; in the cities there are 89.5 men per 100 women, and in the rural areas 106.9 men per 100 women.

The urban population was 16.6 percent of the total population in 1920 and rose to 40 percent by 1970. From 1960 to 1970 the annual urban population growth rate was 5.9 percent. About 30 percent of the population lives in cities of 20,000 or more inhabitants, and almost 17 percent lives in Santo Domingo, the capital (42.3 percent of the urban population).

No question of race was asked during the 1970 census. According to data from 1950, the bulk (60 percent) of the Dominican Republic's people are of a mixed white (mostly Spanish) and negro descent, 12 percent are negro, and 28 percent are white.

Ninety percent of the population is Roman Catholic. The remaining 10 percent is mainly Protestant.

An important proportion of deaths is not reported, especially in rural

areas, because the dead are buried in cemeteries that are not included in the information network, or that irregularly hand in incomplete information, and an unknown number of dead are buried close to their homes. The yearly figures of deaths registered fluctuate widely.

Over 50 percent of registered deaths have no medical certificate. This makes a classification of deaths according to cause unreliable and means that the information on mortality changes must be critically analyzed.

Data on hospital discharges also are incomplete, especially since there is no reporting from private hospitals.

In the population over age 10, the literacy rate was 65.8 percent in 1960 and increased to 77.8 percent in 1970. A significant difference in literacy is observed between urban and rural areas. Of those who live in urban areas, 81.7 percent can read and write, whereas only 57.9 of those in rural areas can do so. People who have finished 7 or more years of school represent 26.8 percent of the urban population and only 3.9 percent of the rural.

The Dominican Republic's active labor force in 1960 was 856,470 persons (28.1 percent of the population), increasing to 1,241,000 persons (30.0 percent) in 1970. Of these, 549,315 were employed in agriculture, 100,989 in industry, 77,064 in commerce, 43,297 in transportation and communication, and the rest in services, mining, construction, and utilities. Fifty-two out of every 100 males are economically unproductive, as are 84 out of every 100 women. According to the last census, 24.1 percent of the economically active population was unemployed.

The gross national product in 1970 was RD\$1,157 million, for an average of 337 dollars per capita in 1970, and estimated at 350 for 1973.

If the expected increases in fertility and decline in mortality rates take place, the crude growth rate will probably continue increasing until 1980-1985, reaching levels of 35 or 36 per 1,000. The growth rate would slow down to

31 or 34 per 1,000 by the end of the century, depending on the rapidity of the fertility reduction. Population growth will continue above an annual 3 percent during the next 30 years unless a substantial fertility reduction is experienced or mortality does not continue to decline. Nevertheless, the actual increase of the population will also depend on future migration trends.

## II. HEALTH POLICIES AND PROGRAMS\*

The largest proportion of physical plant and manpower resources in health depends on the Ministry of Health and Public Welfare. The ministry has a total of 47 hospitals, 44 subcenters for maternity care (two to three maternity beds), 11 rural clinics, 40 rural posts, 5 urban sanitary centers, and 160 nutritional centers.

Its human resources include 831 physicians, 70 dentists, 40 pharmacists, 188 registered nurses, 792 auxiliary nurses, 1,068 practical nurses, and 4,900 other employees, for a total of 7,889 in 1973.

The Dominican Social Security Institute has 13 general hospitals, one maternity hospital in Santo Domingo, and in addition, it has 130 outpatient clinics, the majority located in rural areas and served by paramedical personnel.

The armed forces also has a health service system, with medical posts at each army camp, serving the military and their immediate families. There are two fairly large hospitals, one serving the National Police, the Navy and the Army, and the other the Air Force. The three branches of the armed forces and the National Police give medical services to the nonmilitary population as a social extension in several localities.

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\* The USAID is presently preparing an extensive study of health resources in the country, which should be available in the near future.

Finally, the state's Sugar Council, which controls the greatest part of the sugar industry, has its own medical services in about a dozen sugar cane mill locations.

The MHPW initiated in 1973 a program of regionalization and regional health planning, with the technical assistance of PAHO/WHO. The system divides the country in five health regions, corresponding approximately to the traditional geographic divisions. Each region should gain increasing administrative and planning independence while retaining technical dependence on the central headquarters, which is responsible for preparing norms for the country as a whole.

Until now, only Region Two in the northwest has entered into this system. It is expected that the regionalization process will be completed in four years.

### III. POPULATION POLICY AND PROGRAMS

The Dominican population policy has gone through several stages. Until 1961, the official and private attitude was in favor of population growth. This attitude was strengthened by the Catholic Church's doctrine and by fear of an invasion from more heavily populated Haiti.

A gradual change was observed from 1962 to 1966. The first contraceptive services were initiated by persons related to the Dominican Evangelical Church and a few doctors who started providing family planning services in their private offices.

As a result of these private efforts, the Dominican Family Planning Association was founded. During this period, the government maintained a "laissez-faire" attitude, allowing Church World Service to import contraceptives tax free. There was no opposition to the Family Planning Association's receiving financial help from USAID, and no restrictions were put on the sale of contraceptives in

drugstores.

In 1967, the government publicly acknowledged the existence of a demographic problem. The president mentioned this problem during a meeting of American Presidents in Punta del Este, Uruguay, and later that year signed the Heads of States Statement on Population, sponsored by the United Nations. During the same year the Dominican government officially adopted a policy of providing free family planning services through the maternal and child health programs of the Ministry of Health and Social Welfare.

Between 1968 and 1973, definite measures to meet the population problem were taken. The National Population and Family Council was established in 1968 with interministerial representation including the Minister of Health as the ex-officio head of the government council. It had two main purposes: (1) to study all aspects of the Dominican population problem so as to design population policy and (2) to coordinate and administer a national family planning program. The Council designed and initiated a five-year family planning program, which aimed to reduce the crude birth rate from 48 per 1,000 in 1969 to 38 per 1,000 in 1973.

Technical and financial aid for the Council's program during 1968-1973 came from three main sources: IPPF through financing of the collaborating private Family Planning Association's activities; a U.S. \$7.1 million loan (terminating in 1974) from USAID to the Health Ministry to increase its maternal and child health programs including a national family planning program; and technical assistance and financial support from the Population Council for professional staff and support services for the National Population and Family Council. By mid-1973, there were 60 physician-oriented family planning clinics associated with the council's program. To date, however, the available data indicate that the program did not meet its goals for the first five years.

A Second Four Year Plan was prepared and implementation began in

late 1973 with UNFPA assistance; the Population Council is overseeing this support program for the P.N. The size and scope of the program will be expanded, including the development of alternative models of service delivery with greater reliance on paramedical staff and community resources.

The main local institutions currently operating with coordination from the National Council are the Council itself, the private association, and a Protestant church group.

National Council of Population and the Family (CNPF)

Executive Director is Lic. Luis González Fabra and the Council is located in the Ministry of Health (SESPAS) in Santo Domingo. It also has a full time Medical Director, supervisors, and other staff for training and communications activities, research and evaluation, and administrative matters.

Its official functions authorized by Presidential Decree are:

1. Coordinate or carry out the national family planning program;
2. Coordinate or carry out appropriate educational and communications activities;
3. Coordinate or carry out necessary training of health personnel;
4. Coordinate or carry out research and evaluation of the program activities;
5. Coordinate or carry out basic population research useful for the development of national population policies.

The Council is the institution representing the Government in the execution of the Second Four Year Population Plan assisted by the UNFPA and the Population Council, New York.

The Dominican Association for Family Welfare (ADPBF)

Executive director is Dr. Orestes Cucurullo, and the association is

located in Santo Domingo. This is a private association affiliated to IPPF since 1968. IPPS has contributed U.S. \$203,000 for 1974.

Principal activities at present are:

1. Family planning promoters program. This program started in 1973 and will continue at least until 1975. The National Population and Family Council finances it by an annual donation of RD \$40,900.

2. Radio School. Initiated in 1972 as a special project and now a regular activity of the association.

3. Evaluation of the Radio School. This is a research project under the direction of Lic. Manuel Ortega, who is paid by the association.

4. Family planning training of doctors and nurses. All training activities are undertaken in collaboration with CONAPOFA.

The association participated in a United Nations Seminar on the Status of Women in May 1973.

A bimonthly bulletin is published, as well as the contents of the lectures given through the Radio School; occasional monographs and pamphlets are also published. The association has a small semipublic library, used by many university students.

#### Servicio Social de la Iglesias Dominicanas (SSID)

The social service agency of the Protestant churches is associated with Church World Service (CWS) and is developing a family planning service in selected rural regions of the country in coordination with CNPF. It receives some program support from FPFA.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

There are five universities in the Dominican Republic: the Universidad Autónoma de Santo Domingo (UASD), the Universidad Nacional Pedro Henríquez

Ureña (UNPHU), and the Instituto Tecnológico (INTEC) in Santo Domingo; the Universidad Católica Madre y Maestra (UCMM) in Santiago; and the Universidad Central del Este (UCE) in San Pedro de Macorís.

Estimates show over 40,000 students, with approximately 30,000 in the Universidad Autónoma de Santo Domingo and 5,240 in the Universidad Nacional Pedro Henríquez Ureña. About 80 percent of the professionals now in the country have graduated from ASD.

All the universities are subsidized by the government. Most recent funding data available are:

ASD	1974	RD \$8,400,000
UNPHU	1973	RD \$1,205,321
UCMM	1973	RD \$1,445,321
INTEC	1974	RD \$ 180,000
UCE		Unknown

The Universidad Católica Madre y Maestra is the only university that does not have a School of Medicine, but it has a School of Social Work. There are two schools of nursing in the country, one under the auspices of the Ministry of Health and Public Welfare, and the other affiliated with the UCMM.

The following table shows the number of medical science graduates from 1954 to 1972.

	1954-1963	1964-1972
Physicians	1,113	857
Dentists	184	152
Pharmacists	455	128
Graduate nurses	-	218
Medical technicians	-	246
Auxiliary nurses	For entire period...1,000	

Political disturbances seem to be the primary explanation for the reduction in the number of physicians trained recently.

There are 43 persons with master's degrees in public health; many were earned in Puerto Rico. There are four postgraduate courses related to medicine in the Dominican Republic:

- Cardiology, in the Cardiology Institute (private)
- Obstetrics and Gynecology in the Maternidad Nuestra Sra. de la Altagracia, Director: Dr. Vinicio Calventi
- Pediatrics, in the Robert Reid Cabral Hospital. The admission examination has been eliminated because of the small number of physicians interested in the course
- Dermatology, in the Instituto Dermatológico (private)

Migration of trained physicians is a continuing problem. The Dominican Republic (Cuba and Haiti send more) accounts for the third highest number of physicians immigrating to the U.S. from Latin America. It is estimated that in the last 13 years, about 1,600 doctors have left the country (36 percent of the 2,808 who have graduated since 1914). (During the Trujillo era (1930-61) very few doctors were allowed to leave the country.

#### Universidad Autónoma de Santo Domingo

This is a public university, situated in Alma Mater, Ciudad Universitaria, Santo Domingo. It has one campus.

There is no admission examination. Any candidate who has finished high school, has a health and a birth certificate, and has an Internal Revenue income certificate of his own or his parents may register for the first year of pre-faculty school. Approximately 30,000 students have registered for the 1974-75 academic year. Data on the socioeconomic characteristics of the students are not

considered reliable, because it is felt that they try to appear as poor as possible in order to pay the lowest fee.

The faculty totals 1,181, including professors' aides. There are 129 full-time faculty, 300 part time, and 752 who are paid by the number of hours they teach.

Students must pay a fee that varies between RD \$15 and RD \$50 per semester. The first time they register, an extra fee of RD \$10 (Faculty of Medicine) or RD\$5 (other faculties) must be paid. Foreigners studying medicine or dentistry pay RD\$500 per semester. These fees add about RD\$600,000 to the university budget.

The university has three libraries, nine-five laboratories, and an IBM 1130 computer, although programming problems seem to affect the use of the computer.

Students make up one-third of any organization within the university. They have occasionally opposed the promotion or hiring of a professor, usually for political reasons.

The university has three regional centers, mainly for training of teachers: the Centro Universitario Regional del Este, in San Pedro de Macorís; the Centro Universitario del Suroeste, in Barahona; and the Centro Regional Universitario del Noreste, in San Francisco de Macorís. The exact number of students in these centers is unknown.

The Faculty of Medical Sciences: (Dean, Dr. José D. García Ramírez)

There are about 3,385 students registered in the School of Medicine for the second semester, 1974. Medical training includes one year of prefaculty, five years of medical school, and one year of rotating internship.

The dropout rate is estimated at 10 percent a year, so that during the

next six years, approximately 2,250 doctors will graduate.

The Department of Preventive Medicine:

This department has eight professors, but only two are fulltime: the director, Sonia López de Schott, and the coordinator, Dr. Amino Pérez Mera. The department gives a preventive medicine course to third-year students and an epidemiology course to fourth-year students. Because of the large number of students (estimated 1,000 to 1,200), twelve groups are organized and three groups are taught each trimester.

The preventive medicine course includes seminars on maternal and child health, health education, and other related subjects. The seminars occasionally touch upon population programs and family planning.

During the epidemiology course, students must participate (four hours a week) in epidemiological studies, through sample surveys, of the most prevalent infectious diseases in the country. A recent study (1973) of infant mortality included questions on desired number of children, attitude toward family planning, and contraceptive practice. The data has not been analyzed, however, because of lack of computation facilities.

The department has given two one-week, full-time, postgraduate courses on demography, sponsored and financed by FEPAFEM (Pan American Federation of Medical Schools).

According to PAHO reports, there are deficiencies in the organization of the School of Medicine and in its curriculum. There are too many courses and a lack of sequence between them, as well as little interdepartmental coordination. Too much time (80 percent) is dedicated to theoretical teaching. In the hospitals, professors demonstrate to students instead of allowing them to take an active part.

Faculty of Economics, Statistical Technicians

This is a four-semester course, during which students receive about 238 hours of demography-related subjects. Two-thirds of the time is dedicated to theory and one-third to practice. The subjects are:

First semester: sources of demographic data and fertility.

Second semester: mortality and theoretical population models.

Third semester: population characteristics and distribution; internal migration.

Fourth semester: population projections.

Other Faculties

Students of sociology, history, and economics are taught demography for one semester, three hours per week.

Scientific Research Administration

Director: Sr. José del Castillo (sociologist). This organization was created in 1961, to approve all research initiated by university professors. Any professor or group of professors that wants to carry out an investigation must present the project to the Scientific Research Administration. If the proposal is approved, the researchers will obtain funds from the university.

About 13 projects are underway at the present. None are related to population, and apparently no proposal related to population has ever been presented.

Universidad Nacional Pedro Henríquez Ureña (UNPHU)

This is a private university, founded after the 1965 revolution by a group of professors who were displeased by the changes taking place in the PASD.

UNPHU is financed by a government subsidy, along with a few private donations and students' monthly fees. The fees vary according to the parents' income

and cannot exceed RD\$400 a semester.

An admission examination is required, and a fixed number of students is admitted to each faculty. In the 1966-67 academic year 458 students registered. During 1970-71, there were 3,413 students, and during 1972-73 5,240. These figures do not include students who attend special Saturday classes or provincial centers. There are no student socioeconomic data available, though this is said to be the University of the rich.

The faculty totaled 454 in 1973. Sixty-five were full-time professors,\* 65 worked part time, and 324 were paid according to the number of hours taught.

Administrative matters that need computation are run on the computers of either the Ministry of Agriculture or the racetrack.

UNPHU has centers (mainly for teachers) in San Juan de la Maguana, La Romana, La Vega, and Montecristi, and there are two campuses in Santo Domingo. There is a central library and a library in the Faculty of Economics.

#### Faculty of Health Science

Dean: Dr. M. E. Pimentel Tubert.

#### School of Medicine

Director: Dr. Humberto Sangiovani. In 1966-67, 83 students registered in the School of Medicine; there were 300 in 1971, 499 in 1972-73, and 633 in 1974-75. The last figure includes 299 students attending three years of pre-medical school.

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\* Full-time means they dedicate as many hours to the university as the course demands. This does not mean exclusive dedication; they usually have other commitments.

To graduate as medical doctors, students must attend three years of premedical school, pass an examination, and attend four years of medical school including one year of rotating internship.

Data from two presumably reliable sources on the number of graduates do not coincide. According to the first source, out of a total of 83, 32 graduated in 1973 and 12 in 1974. The second version is that from a total of 50, 19 graduated in November 1973 and 11 in July 1974.

The dean estimates that each year about 4 percent drop out of each class. Thus, about 377 medical students will probably graduate during the next four years. It is also estimated that about 60 percent of those already graduated have left the country.

An agreement is being sought with the Ministry of Health and Public Welfare (SPS) for medical students to work and be trained in the hospitals belonging to the SPS and be supervised by the university. So far the agreement has not yet become a reality.

#### Research Institute of SPS

The Institute was created during the 1970-71 academic year with the following purposes: to coordinate research done by SPS, to supervise the teaching of research methodology in the different faculties, and to provide professors and students with training in research methodology.

The Institute functions in three offices on campus No. 1. It is directed by an engineer, Mr. Ezequiel García. Other personnel include a secretary and directors of the different departments: social, economic, population, and biomedical studies. The Institute uses the facilities of the Centro de Investigaciones y Cómputos Electrónicos of the Colegio Dominicano de La Salle.

The Department of Population Studies is headed by Mr. Manuel Ortega,

a political scientist. The following research projects have been carried out.:

1. 1970-71: A study of "Valores y Actitudes de Padres de Familia" for CNPF with the assistance of the Transnational Family Research Institute. The study investigated "machismo," "religious and ethical norms," "communication among family members," etc.
2. 1973: A comparative study of the Family Planning Radio School, sponsored by IPPF and The Dominican Association for Family Welfare. The study was designed to measure change in the attitudes of heads of households toward family planning and the influence of the Radio School in these changes. Results will be available in 1974.
3. 1973-74; "Social and personal costs of induced abortion." This study was carried out for the National Institute for Sexual Education (INES) and the Transnational Family Research Institute. The study was done in one hospital in Santiago and one in Santo Domingo.

Institute for Biomedical Studies Dr. Sergio A. Bescome:

This institute was established in 1972 on the initiative of a Dominican physician, Dr. Sergio A. Bescome. At present, Dr. Bescome is professor of pathology at Queens University in Kingston, Ontario, Canada.

The institute is directed by Dr. Rafael González Gautreaux. It has its own new building in the UNPHU's campus, and an electron microscope has been installed. The main area of research is breast cancer, in collaboration with Queens University, financed by a four-year grant from the Canadian International Development Agency (CIDA).

The institute has begun to organize a biomedical documentation center. This initiative is of great interest, for the country does not have an up-to-date medical library.

Universidad Católica Madre y Maestra

This university is organizing a medical school, which will graduate about 100 students every year.

Fees vary between RDS120 and 150 a semester. The medical school would include one year of general studies, four years of medical school, and one year of work in rural areas. There is an agreement between the UCM and the MPPW for the training of students in regions two and three.

Department of Health Services

The School of Nursing:

Directed by Lic. Carmen Medrano. Founded in 1966

Students must have finished high school and must take an admission examination. No information is available on the number of students registered each year.

Nursing is a four-year course (eight semesters and one eight-week summer session). Students pay a fee that varies between RDS150 and 200 a semester (RDS10 for each credit).

Dropout is very high after the first year, because many students use the nursing school as a means of entering another faculty. It is estimated that at this rate, about 50 nurses will graduate during the next four years.

Of the 62 nurses already graduated, eight have left the country.

Students have a course on gynecology-obstetrics during the first semester. During the last semester they are taught public health and sanitary administration, biostatistics, and epidemiology.

Complementary course for nurse licensing:

This course is designed so that nonuniversity nurses can obtain a license. The course lasts approximately four semesters. At present there are

18 students from different sections of the country taking the course, with two-year fellowships. During the lectures on maternal and child health they are taught family planning.

#### Universidad Central del Este

The university was founded in 1971. Admission requirements are the same as those for the UASD. Dominican students pay an annual fee of RD\$40; foreigners pay RD\$250 each semester.

About 2,000 students are registered, 1,000 in the Medical School (95 percent of whom are Puerto Ricans).

Gulf and Western, a private American company with interests in sugar cane, land, and tourism, has offered US\$200,000 toward building a campus. The Medical School is scheduled to open in October 1974.

The MHPW and the Dominican Social Security Institute are planning to build two hospitals in San Pedro de Macorís, which would be the first university hospitals in the country.

#### Instituto Tecnológico

##### The Faculty of Health Sciences

It has four professors who teach 45 hours of classes per week.

The School of Medicine started in 1973, and 40 students per year are accepted. The annual fee is RD\$700. Before graduating, students must take two years of medical education, six months of work in a rural area, and two more years of medical education. Studies emphasize preventive medicine and public health. Students take one trimester of social sciences.

#### National School of Nurses

(Ministry of Public Health and Social Welfare)

Director: Lic. Amanda Peña de Santana

This school was founded in 1958 as the result of an agreement between the Pan American Health Organization and the Ministry of Health and Social Welfare. After some time, the school was to be transferred to one of the universities, but this has not yet happened, though great pressure seems to have been exerted. This means graduates from the school are not considered licensed nurses and must attend one extra year of classes at the Universidad Madre y Maestra to obtain the degree of licensed nurse.

There are 11 full professors and between 12 and 13 professors paid by number of lectures. The reason for such a large number is not clear.

Since 1964, students have been required to finish high school, and there is also an admission examination. Students pay no fees. There are many more candidates than can be admitted. Students are paid RD\$ 9 per month and must agree to work for the MOPC for two years after graduating.

In 1958 there were 14 students. In 1964 there are 53 students in the first year, 36 in the second (16 males), and 17 students in the third.

Students graduate after attending classes for six semesters and two summer sessions. A credit system is used.

Family planning is taught in the course on maternal and child health. The course includes 288 hours of practice in family planning clinics (Criscoco-Puello, Maestra Sra. de la Altagracia). Certain demographic subjects, such as fertility, population growth, and others, are included in the third year course in public health.

An average of 21 nurses have graduated from each three-year program. Up to 1973, a total of 195 nurses had graduated; of these 16 have left the country.

The dropout rate is estimated at about 40 percent; thus, about 75 nurses will graduate during the next three years.

Auxiliary Nurses Training (Ministry of Health and Social Welfare)

Director: Lic. María Teresa de Pérez.

Until 1953, all nursing work was done by persons with practical experience. In that year SESPAS organized the first course for auxiliary nurses in Santo Domingo. In 1966 a second course was instituted, in Puerto Plata. In 1970 this course was revised and lengthened from six to nine months, but in 1974 it was again reduced to six months.

Students must finish eight years of schooling and be between 17 and 32 years old. Candidates from rural areas and those who have done volunteer work are preferred. Students are paid a monthly salary that varies between RD\$30 and 60. Training takes place in the Moscoso Puello Hospital.

As of 1973, 1,076 auxiliary nurses had graduated. At present there are about 60 students in each of the two schools run by the MHPW.

Other Auxiliary Nurse Training

1. A school for auxiliary nurses, sponsored by the armed forces, has been organized in San Pedro de Macorís. The first course graduated 30, and at present there are 26 students registered. Training consists of 250 hours of basic nursing, 300 hours of medicosurgery, and 290 hours of maternal child health. There are 590 hours dedicated to clinical practice. No family planning is taught in the regular curriculum, but students who will be working in this area are given a two-week course.

2. In 1973 local three-and-a-half to five-month technical courses for untrained nurses were organized with the support of AID. There are about 1,000 untrained nurses working for the MHPW, and it is planned to have them all trained by 1978.

Ninety-four nurses took this course in 1973, and it is estimated that 500

will do so in 1974. After graduation they are paid the same salary as those who take the six-month training course.

3. Three-month courses have been organized, in Dr. Dario Catteras Hospital, Santo Domingo, for auxiliary nurses with no formal training, who work in rural areas.

The first course ended in September 1974. Eleven female and eight male nurses attended. Plans call for training all the rural area nurses in the country (240). While attending the course they are paid RDS 70 a month. When they return to their place of work they continue receiving their regular RDS 110 monthly pay. The course includes family planning.

#### 4. CONCLUSIONS

There are institutions in health and the social sciences with research interests and teaching activities in family planning and DARSS, but there are major shortcomings in the quality and spread of these activities. Rather than the intensive development of any one or part of one institution, support for new developmental activities should be spread around and renewal of external assistance should be conditional on accomplishment of specific, limited goals. Clearly, UNASD, especially its Faculty of Economics, the CNPFF and Madre y Maestra are capable and interested to upgrade DARSS activities and could be assisted in developing staged plans of development, although probably they are not yet in condition to absorb large new support for DARSS without comparable inputs to upgrade the related disciplines. The health institution's, especially medical school, ability to absorb new inputs to add family planning and related substantive material in teaching is probably greater than in the social sciences. The family planning material is more conspicuous by its weakness in or absence from the health curriculum than is DARSS in the social sciences, and special efforts should be made to assist its incorporation in appropriate places in all health curricula. The CNPFF is best suited to promote and

administer a project to accomplish this; the CNPF would also be the indicated institution to promote a DARSS effort, but this would necessarily require a longer time schedule for completion. In summary, under the local promotion and subgranting by the CNPF, substantial progress could be expected from investments made through it, which in the course of several years should aim at establishing national self-sufficiency in population training through the medical school basic degree and the bachelor degree level in the social sciences. It appears unrealistic to expect to establish graduate training in the near future.

Sources of Data

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October 1974



ECUADOR

Anthony R. Measham

I. COUNTRY SETTING

Ecuador was estimated to have a population of 6,800,000 in July 1973. With a geographic area of 106,508 square miles it is the most densely populated of all South American countries. The crude birth rate is estimated to be 45 per thousand and the crude death rate 11 per thousand, giving a growth rate of 3.4 percent. Infant mortality is estimated to be between 76 and 80 per thousand live births, and maternal mortality approximately 3 per thousand live births. The net migration rate is negligible. Forty-seven percent of the population is under fifteen years of age and 3 percent over sixty-five. It is estimated that 42 percent of the population is urban and 58 percent live in the rural areas. Life expectancy at birth is 56 for males and 59 for females.

It is usually stated that 40 percent of the population is Indian, 40 percent mesitzo, 10 percent black, and 10 percent Caucasian. UNESCO estimates that 32 percent of the population over fifteen years of age is illiterate. Approximately 98 percent of the population is nominally Roman Catholic.

The economic status of Ecuador is improving markedly because of the recent finds of petroleum deposits. The main products come from the agriculture and fishing sectors, the industrial sector is poorly developed. Per capita income is estimated to be US\$290 but the distribution is highly skewed.

## II. HEALTH POLICIES AND PROGRAMS

Until 1968 there was no Ministry of Health, and the health system was fragmented among a very large number of provincial health authorities, charitable organizations, decentralized government institutions, and the private sector. The data regarding physical and human resources in health are not reliable but the best estimates are as follows. There are a total of 206 hospitals, 80 of which are in the private sector, 66 belong to the government (37 to the Ministry of Health), 18 are religious, and 12 belong to the social security system. The total number of hospital beds is approximately 13,000. In total, there are approximately 2,800 physicians, 685 nurses, 3,700 auxiliary nurses, and 500 midwives. The Ministry of Health has divided the country into four health areas. In addition to its hospitals, the Ministry has 11 hospital health centers, 65 health centers, 203 health subcenters, 32 health posts and 5 mobile units. In terms of human resources, the Ministry has 787 physicians, 321 nurses, 2,483 auxiliary nurses, and approximately 80 midwives. The military has the next largest infrastructure with 6 hospitals, 2 hospital health centers, and approximately 70 dispensaries.

## III. POPULATION POLICY AND PROGRAMS

Concern regarding population arose almost entirely within the medical profession especially as a result of the efforts of Dr. Pablo Marangoni and Dr. Francisco Parra. These and other physicians were concerned about the high rates of maternal and infant morbidity and mortality, the prevalence of illegal abortions, and the wretched living conditions of the majority of the people of Ecuador. In November 1966, Drs. Marangoni and Parra formed APROFE, the Ecuadorian Family Welfare Association, which became affiliated with IPPF. Several other groups such as the Women's Medical Society in Quito became involved in

similar efforts. Thus, numerous efforts were undertaken in the educational and family planning service fields, but perhaps more important were the efforts of Drs. Marangoni and Parra to influence key public and private institutions. In 1968, Dr. Parra became Minister of Health and in early 1969 a Department of Population was created within the Ministry. At approximately the same time, the Ministry of Defense established a family planning program service families of military personnel.

The government, however, has never accepted fertility reduction as a desirable goal for Ecuador. The Ministry of Health and the National Planning Board have made statements opposing the goal of slowing the population growth rate. Family planning services are made available for health indications and because the number and spacing of children is felt to be a right of all parents. In 1973, the National Planning Board did not approve a proposal to the UNFPA, because it was felt that the family planning services envisaged would result in a too rapid decrease in the population growth rate.

Drs. Marangoni and Parra, by virtue of their large influence with many individuals and institutions, were usually able to overcome potential opposition. The church in Ecuador, especially the archbishop of Guayaquil who attended the first National Family Planning Seminar in 1969, has generally been supportive of responsible parenthood. No major opposition has come from either church groups or political parties. The main opposition is from university students and faculty, which culminated in an effort in 1971 to suspend all the population teaching programs in the universities. However, this effort did not meet with success.

Ecuador has abortion laws which call for fines and prison sentences but these are enforced only rarely. There is no legislation regarding sterilization.

Since its establishment in February 1969, the National Department of Population of the Ministry of Health has been responsible for the control, supervision, and evaluation of all public and private family planning programs in Ecuador. The objectives of the government program are:

1. To make family planning available as a human right and as part of an integral health plan.
2. To make information and education available so that the couple can make a free, conscientious, and responsible decision.
3. To make available programs for the detection of gynecological cancer and the study and treatment of infertility.

The Department of Population is one of several units under the Division of Health Promotion which in turn is under the National Direction of Technical Services. Two months ago, Dr. Hugo Corral, head of the Department of Population, was put in charge of the Division of Health Promotion and asked to make recommendations for integrating MCH and family planning services.

From February 1969 until May 1972 the Department of Population made little progress in integrating family planning and other health services. Since that time, however, significant progress has been made. Dr. Corral hopes to be able to integrate MCH activities within the Department of Population and feels that this will be more than enough to occupy the staff of both divisions. Dr. Corral is an Army physician and it remains to be seen in the coming months whether he will remain at the Ministry. The probabilities are that he will. Within the Department of Population there are five sections: coordination and supervision, training, information and education, evaluation, and administration.

The three main family planning programs in Ecuador are those of the Ministry of Health, the Armed Forces, and APROFE. The Ministry has a total of 311 health dependencies, in 184 of which family planning services are offered.

The Ministry of Defense provides services at twelve centers within military hospitals and seventeen subcenters at peripheral army posts. APROFE has four clinics -- one in Quito, one in Cuenca, and two in Guayaquil -- and concentrates much of its effort on information and education programs, training, and promotional work. In addition, the Women's Medical Society operates two clinics, the Ecuatorian Social Security Institute two, and the Department of Agriculture five family planning clinics. Up to March 1973, 50,926 women had adopted a method from one of the programs -- 24,822 the IUD, 21,738 orals, and 4,366 other methods.

APROFE had accounted for 52 percent of the acceptors, the Ministry of Health for 37 percent, and the remaining 11 percent were shared by the other programs. An evaluation study carried out in 1971 by the Ministry of Health showed an overall continuation rate of 49.7 percent of all the acceptors up to the time of the study.

Other programs in the public sector are carried out by the Ministry of Social Welfare which has a program in responsible parenthood and sex education, the National Malaria Service which is using malaria control workers as family planning motivators, and the Ministry of Education which is active in the area of family life and sex education. Finally, postpartum family planning programs have recently been started at the Maternity Hospital in Quito and the Ambato regional teaching hospital of the Ministry of Health. There are also plans to start a postpartum program at the Enrique Sotomayor Maternity Hospital in Guayaquil on May 1, 1974.

In the commercial sector contraceptives are freely available from drug stores. Oral contraceptives cost between \$.55 and \$1.70 per cycle and condoms retail at \$.04 each.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

There are approximately fifteen universities in Ecuador. It is estimated that there are 69,000 students, with approximately 15,000 at Universidad Estatal de Guayaquil and 12,000 at Universidad Central, Quito. The universities have a system of co-government by which the students are equally represented in the decision-making process. Students can and do at times cause professors to be dismissed. This is reflected in a cautious approach to the field of population on the part of professors since it is a controversial issue. Under the present military government, which has been in power for nearly two years, none of the universities exert much influence at the national level. However, the universities of Quito and Guayaquil are the most influential in Ecuador.

The social science faculties are the most highly politicized and difficult to interest in serious teaching and research in demography and population studies. The Council decided to make no special effort to canvass these faculties for their interest in the development of these specialties.

The medical schools of the Universidad Central of Quito and the Universidad Estatal of Guayaquil are the two most important of the six in the country (Table I). A third medical school, at Cuenca, has a complete course in medicine while the one at Loja does not provide all the courses necessary for graduation. In addition to these four, another medical school with a four-year curriculum recently began at Universidad Católica de Guayaquil. So far this medical school has not been accredited by AFEME, the Ecuadorian Association of Medical Schools. Due to the open admissions policy, the medical schools of Ecuador now have 8,500 students.

TABLE I

MEDICAL SCHOOLS IN ECUADOR

1. Facultad de Ciencias Médicas  
Dr. Leoncio Cordero  
Universidad de Cuenca  
Ave. 3 de Noviembre 681  
Apartado 4908  
Cuenca
2. Facultad de Ciencias Médicas  
Dr. Guillermo Wated  
Universidad de Guayaquil  
Ciudadela Universitaria  
Ave. J. Kennedy, Apartado 471  
Guayaquil
3. Facultad de Ciencias Médicas  
Dr. Enrique Garcés  
Universidad Central del Ecuador  
Avenida Colombia  
Quito
4. Facultad de Ciencias Médicas  
Dr. José Manrique  
Universidad Católica de Guayaquil  
Ave. C.J. Arosemena  
Guayaquil
5. Facultad de Ciencias Médicas  
Dr. Enrique García, Director  
Universidad Nacional de Loja  
Loja
6. Facultad de Medicina  
Universidad Católica de Quito  
Quito

Universidad Central, Quito

This state institution is located on two campuses, one for the health sciences and one for general studies. Since 1971 no entrance examinations have been required so that the size of the student body and the number of dropouts have increased greatly. The majority of the students come from the middle class and the urban areas although all segments of society are represented. At the present time this institution does not enjoy major institutional impact. The Faculty of Medicine, the School of Nursing, and the School of Midwifery will be treated separately.

The Faculty of Medicine

This medical school had a total of 3 041 students in 1972-73 and the first year class numbers 1,000. There are 283 faculty members of whom approximately 85 percent work part-time and the remainder full-time.

This should be considered a high priority, developing institution. There is a Department of Demography headed by Dr. Gorky Estrella that gives all medical students a 45-hour course. In October 1971 the National Federation of University Students strongly attacked the provision of family planning services within the university hospitals and the teaching of family planning and demography. As a result, AFEME passed a resolution that the medical schools would not provide family planning services. Since that time, the Department of Obstetrics and Gynecology has given no formal classes in contraception, although there is no university policy concerning the teaching of family planning and demography. However, a family planning clinic is in operation in the Ministry Hospital and all students are sent there for two weeks for practice in family planning. Contraception and family planning were first introduced into the curriculum in 1965. In the Pediatrics Department a two-hour seminar is given regarding the general

health and demographic situation in the country.

There have been no research activities in the area of population, presumably because so few of the faculty are employed full-time in the university. A number of the faculty are interested in population and family planning, but despite their personal conviction, they are cautious about teaching and research activities in view of the opposition of the students and the inflammatory nature of the issue in Ecuador. Family planning in this, as in most Latin American countries, is frequently considered to be a United States imperialist strategy to keep the country weak. There are no plans for expansion of the current teaching program.

It cannot be said that there has been any institutional leadership in this university since Dr. Carlos Mosquera, the original pioneer of the teaching of family planning, left the faculty and dedicated himself to the School of Midwifery and other pursuits. The teaching program aims to make the medical students familiar with the contraceptive methodology available and to provide them with a background in demography in order to know the conditions in the country especially as they affect the provision of health services.

Physicians are not well paid in Ecuador and there is a shortage of work so that many physicians are underemployed and most hold several positions.

On a country basis, for the Faculty of Medicine, the school would rate excellent, the population program weak, staff interest in the population program modest, the likelihood of reaching program objectives weak, and the overall rating would be modest.

#### The School of Nursing

There are five schools of nursing in Ecuador (Table II). The two Catholic schools of nursing in Guayaquil and Quito are better organized, better

TABLE II  
SCHOOLS OF NURSING IN ECUADOR

1. Escuela de Enfermería de la  
Facultad de Ciencias Médicas  
Universidad de Guayaquil  
Ciudad Universitaria  
Guayaquil, Ecuador
2. Escuela Nacional de Enfermería  
Facultad de Ciencias Médicas de la  
Universidad Central  
Junto al Hospital Eugenio Espejo  
Quito, Ecuador
3. Facultad de Enfermería  
Pontificia Universidad Católica del Ecuador  
12 de Octubre y Robles  
Quito, Ecuador
4. Escuela de Enfermería de la  
Facultad de Ciencias Médicas  
Universidad de Cuenca  
Cuenca, Ecuador
5. Escuela de Enfermería  
Universidad Católica de Santiago  
Guayaquil, Ecuador

equipped and do not have the political problems present in the state universities. The graduates are roughly of equal caliber but the students from the Catholic schools have more practical teaching and are therefore a little better prepared. The probable rank order of the five schools in terms of quality is first Catolica in Quito, then Catolica in Guayaquil, Universidad Central in Quito, Universidad Estatal in Guayaquil, and finally Universidad de Cuenca. The nurse has low status and is poorly paid in Ecuador. Approximately 128 a year graduate, half of them from Universidad Central. Most students come from the middle class and although 60 percent come from the provinces they almost all stay in the cities, so that Guayaquil and Quito have 90 percent of Ecuador's nurses. Because of the poor conditions in Ecuador a great number of nurses graduate and emigrate, particularly to the United States.

Since 1972, Universidad Central has encouraged students to take the short course in nursing of two years and eight months plus the obligatory rural year. There is no entrance examination and students pay US\$10.00 per year. In all there are 220 students in the course; 84 began in 1973 and 44 dropped out or failed. The faculty numbers 20, all of whom work full-time, 15 in the teaching of nurses and 5 in the teaching of auxiliary nurses. Three work in the area of maternal and child health and one took the postgraduate course in Cali.

This is a high priority, developing institution. Because of the ambiguous situation in the university there is no formal teaching of family planning in the 90 hours of theory and 300 hours of practice in MCH. The faculty is reluctant to officially incorporate family planning into the curriculum at present. However, because they believe in the importance of family planning, they make sure that the students are exposed to practice in the health centers and maternity clinics. The curriculum is now more or less

standard in all of the five nursing schools. Practical training in family planning began approximately two years ago. There is no teaching of demography or sex education. No research in the area of population has been carried out other than an occasional student thesis.

There is not any leadership in this area in the school. The objective of the practical training in family planning is to prepare the nurse to counsel and motivate women to adopt family planning. There are no plans at present to expand the activities in the field of population but the school would like to receive the Council publications and also Spanish books regarding population.

On a country basis, the school would rate good, the population program weak, staff interest in the population program modest, the likelihood of reaching program objectives modest, and the overall rating would be modest.

#### The School of Auxiliary Nursing

Eighty-five percent of the auxiliary nurses in the country have received no formal training. During 1973, 300 were given a six-month in-service training course. The national MCH plan calls for the training of 1,500 auxiliaries between 1973 and 1977 but the only existing school is at Universidad Central which trained 50 auxiliaries in 1973. Plans call for a school of auxiliary nursing in all five schools of nursing but this will depend on receiving funds from PAHO or USAID. It has been estimated that an auxiliary nurse costs on the order of \$500 to train.

The students are required to have completed their primary education, and the majority come from the lower socio-economic strata in the rural areas, to which they usually return and work without supervision. There are five full-time faculty, all of whom are graduate nurses.

The students receive ten hours of family planning methods and a week of practice in a family planning clinic. They receive no instruction in demography or sex education. No research has been carried out in the area of population. This is a high priority, developing institution. The faculty believe that family planning is an important area for the auxiliary nurse and wish to prepare her for her later work. The student receives eight months of training, 25 percent of which is theory and 75 percent practical and laboratory work. At present there are sixty-four students in the school.

On a country basis, the school would rate excellent, the population program modest, staff interest in the population program good, the likelihood of reaching program objectives modest, and the overall rating would be modest.

#### School of Midwifery

There are approximately 500 midwives in Ecuador of whom only 20 percent work in the public sector while the other 80 percent either have a private practice or are unemployed. It is estimated that more than 200 are substantially without employment. Of the total of 500, approximately 250 are in Guayaquil and 170 in Quito so that very few work in the rural areas. Eighty are employed by the Ministry of Public Health. There are three schools of midwifery which are, in order of prestige and quality, Universidad Central in Quito, Universidad Estatal in Guayaquil, and Universidad de Cuenca. The midwives are anxious to work in the public sector and the Ministry of Health is hoping to contract a large number of them to work in the area of family planning.

These professionals are very much in favor of family planning and forty of them have received training abroad. In addition, the 14 midwives who were trained at Downstate Medical Center have carried out two courses which provided

a total of fifty midwives with one month's training. At the present time, approximately thirty midwives are being graduated from the three schools per year, but given entering classes of fifty in Quito, one hundred in Guayaquil, and ten to fifteen in Cuenca the number of graduates is expected to increase. It may reach fifty in 1974

The majority of the students come from the middle class and are equally divided between urban and rural areas. There is no entrance examination at the Universidad Central and the course is four years plus a year of obligatory rural service. The students are required to complete their secondary education before entering. The faculty number five, two of whom work full-time, two half-time, and one part-time. They are all midwives and one is taking the FEPAFEM 4-month course in Demography and Health at Javeriana University, Bogota.

This is a high priority, developing institution. The students receive approximately ten hours of demography, twenty hours of sex education but no classes in family planning. Family planning is not taught formally because the university is opposed to such teaching. However, the subject is considered to be important and is covered informally in the practical work. No research has been carried out in the population area.

Many midwives later specialize in the provision of family planning services but the objectives of the teaching program are to prepare them in this as well as all other areas of human reproduction

It is clear that the midwives in Ecuador represent a very important human resource which is not being fully utilized in the health system. There seems to be a good deal of interest in the Ministry of Health and by the Federation of Midwives for a much larger role in family planning activities in the country. More and more of the Ministry of Health centers have a midwife on the

staff, and the Ministry is considering a demonstration project in MCH and family planning which would include a heavy involvement of these personnel. All midwives are taught to insert IUD's during their training and they claim that only they and physicians are officially permitted to do this. However, it seems doubtful that there is any specific legislation or norm in this regard.

On a country basis, the school would rate excellent, the population program modest, staff interest in the population program good, the likelihood of reaching program objectives modest, and the overall rating would be modest.

Universidad Católica, Quito

School of Nursing

This school began to function in 1965 and was at first staffed by eight foreign nurses plus one Ecuadorian. However, the faculty are now all Ecuadorian and of the nine, seven work full-time and five have masters degrees. The program is private although it receives some government support. However, most of its funds come from tuition payments of \$400 a year. The students usually have a middle-class background, and approximately four fellowships are offered yearly. Recent studies showed that 50 percent of the students were not graduating. It has therefore been decided to reintroduce the entrance examination. There are 102 students in all; 17 graduated in 1973 and 22 are expected to graduate in 1974. The students receive seventeen hours of sex education, no instruction in demography, and eight hours in family planning including methods. They also receive practical training in family planning at the maternity hospital. Twenty percent of the students are nuns.

On a country basis, the school would rate excellent, the population program weak, staff interest in the population program modest, the likelihood of reaching program objectives modest, and the overall rating would be modest.

### Universidad Estatal, Guayaquil

This public institution is located on one campus and the major emphasis is on the health sciences, especially medicine. The total size of the student body is estimated to be 15,000 of whom 3,100 are studying medicine. There are no entrance requirements and the majority of the students come from the middle class.

### The School of Medicine

The faculty numbers 334 of whom more than 80 percent work part-time. With the policy of free entrance the number of students in medicine is now as follows: first year - 1,000, second year - 800, third year - 650, fourth year - 180, fifth year - 150, sixth year - 80, and internship 80. Until the present government took power this institution together with the Universidad Central in Quito had the most impact on the government and other elites.

This is a high priority, developing institution. In the Department of Preventive Medicine a thirty six hour course in demography is given during the third year. No teaching in population and family planning is carried out in the Department of Pediatrics but in the Department of Obstetrics and Gynecology a four hour seminar is given in contraceptive methods. During the seminar, population policy and family planning programs are also discussed in an open forum. No research in the field of population has been undertaken in this medical school.

Dr. Pablo Marangoni, the founder and president of APROFE (the IPPF affiliate), pioneered in the teaching of family planning in this medical school. In the fall of 1971, the students at this university and later at the national level attacked what they considered to be a population teaching program which presented only one ideological viewpoint. As a result of this agitation, which led to the decision by AFEME that medical schools should not provide family plan-

ning services, Dr. Marangoni was relieved of his position as professor of the Faculty of Medicine. However, he participates in the seminar given by the Department of Obstetrics and Gynecology, and today there seems to be much less conflict and discussion of the subject.

There are no announced objectives of the teaching program in this medical school. The implicit objectives are to give the future physician a grounding in contraceptive methodology and also a basic knowledge of demography. The medical students receive practice in the area of family planning when they rotate through the health clinics and the Maternity

When Dr. Pablo Marangoni was teaching in the university on a regular basis, he was known as professor of demography. His course was also taught in the Department of Preventive Medicine.

On a country basis, the school would rate good, the population program weak, staff interest in the population program weak, the likelihood of reaching program objectives modest, and the overall rating would be weak.

#### School of Midwifery

There are 200 midwives in Guayaquil of whom 15 work in the Maternity and 10 in the health centers. The majority of the remainder are engaged in private practice.

A total of 192 students are studying this five-year course, which will be reduced to four years to coincide with Quito and Cuenca. In 1973 there were six graduates and fourteen are expected in 1974. There are 96 students in the first year class. Most of the students come from the urban areas and the middle class and the demand for entrance is said to be increasing yearly. There is very little turnover and few dropouts so that most entering students graduate. The faculty numbers seven, all of whom, including the director, work part-time. Students receive most of their classes with the students of medicine,

and the director feels that until two years ago they were not being adequately prepared. It is claimed that the school is now better organized and a separate budget is received from the government.

This is a high priority, developing institution. The students receive eight hours of classes in contraceptive methodology and twenty-four hours of practical work in family planning. No instruction is given in either demography or sex education. This institution has not carried out any research in the area of population.

There have not been any leaders in the area of family planning. The objectives of the teaching program are to give the future midwife a basic knowledge of contraceptive methods.

An overall impression of this school of midwifery is rather poor, given the fact that there are no full-time faculty, most of the classes are taken with medical students, and the output at the moment is very small. The director of the school feels somewhat unrealistically that the students should receive a doctoral degree after completing their studies.

On a country basis, the school would rate average, the population program weak, staff interest in the population program weak, the likelihood of reaching program objectives weak, and the overall rating would be weak.

#### V. CONCLUSIONS AND RECOMMENDATIONS

It is unreasonable to expect that population studies in the social sciences could be successfully promoted without parallel or prior development of the general fields of economics or sociology; a possible exception would be a private center or governmental agency which would be well-buffered from student and national politics, but such did not come to our attention.

The outlook for institutional development in the health sciences

TABLE III

UNIVERSITIES WITHOUT MEDICAL SCHOOLS

1. Universidad Técnica de Manabí  
Portoviejo,  
Ecuador
2. Universidad Laica "Vicente Rocafuerte"  
Guayaquil,  
Ecuador
3. Escuela Politécnica Nacional  
Quito,  
Ecuador
4. Escuela Politécnica del Litoral  
Guayaquil,  
Ecuador
5. Universidad Técnica de Ambato  
Ambato,  
Ecuador
6. Universidad Técnica de Machala  
Machala,  
Ecuador
7. Universidad Técnica "Luis Vargas Torres"  
Esmeraldas,  
Ecuador
8. Universidad Católica de Cuenca  
Cuenca,  
Ecuador
9. Universidad Técnica Particular de Loja  
Loja,  
Ecuador

faculties in Ecuador is not good. A number of factors combine to explain this:

1. The situation in the universities is extremely volatile given the power enjoyed by the students, which literally enables them to remove professors when they so desire. Since employment is scarce in Ecuador the faculty are unduly cautious in their approach to teaching and/or research in the area of population.

2. Lamentably, the great majority of faculty in Ecuadorian universities work part-time with the result that the teaching programs leave something to be desired and a tradition of research has never been built up.

3. Although a great many individuals are committed to family planning on a personal basis, they do not have the cohesion to represent a major force in the university setting.

4. Population and family planning are contentious subjects in the highly politicized universities. When the power of the students is added to this situation, it does not augur well for institutional development in population.

As a result of these factors, none of the institutions visited had plans for expansion or new programs in the field of population. There was a great deal of interest in books and other periodicals, especially in Spanish and arrangements were made for these institutions to receive them. However, no attractive opportunities for institutional development programs were identified in this country.

SOURCES OF DATA:

Site visit to Ecuador, March 11-16, 1974. Apart from information gathered firsthand from the faculty of seven institutions, the writer was given access by the Ministry of Health, USAID/Ecuador and PAHO to a great deal of additional pertinent data.

March 1974

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## EL SALVADOR

Isabel Cordero and Luis A. Sobrevilla

### POPULATION STATISTICS

El Salvador, presently approaching the 4 million inhabitant mark, is one of the smallest and most densely populated countries of Latin America. At mid-1970, El Salvador's population stood at 3.5 million and the corresponding density at 165 persons per square kilometer. The country is a mere 21,000 square kilometers, which is about the size of Indiana, yet it exceeds the latter in density. In contrast to Indiana, El Salvador's rate of growth is very high at 3.2 percent. If demographic conditions do not change, El Salvador will double its population in twenty to 25 years.

Women in El Salvador are having on average of about 6.6 children, and although the death rate is low, 7.1 deaths per 1,000 inhabitants, infant mortality is still high -- 52 infant deaths per 1,000 live births.

In 1971, 46.2 percent of the population was under fifteen years of age, and 34.5 percent of the population was concentrated in urban areas. The largest two cities are San Salvador, the capital, with a population of 500,000 inhabitants, and the nearby Santa Ana, with a population of 150,000. The major religion is Roman Catholic.

Literacy is low, with 51 percent of the adult population unable to read or write.

The per capita gross national product was estimated at US\$290 in 1970. El Salvador's economy is largely agrarian, the main source of foreign revenue being agricultural products, especially coffee and corn. About 80 percent of

the land is being exploited, and there is a high index of productivity per square kilometer. Land is well distributed, and the presence of large estates is minimal, affecting only 7 percent of the arable land.

## II. HEALTH POLICY AND PROGRAMS

The health sector in El Salvador consists of the facilities of the Ministry of Health, the hospitals that belong to the autonomous ISSS, the private sector, and the military hospitals.

In 1972 San Salvador had 882 physicians, 921 graduate nurses, 1,988 auxiliary nurses, and 7,088 hospital beds, with a resulting ratio of 1.8 beds per 1,000 population, one of the lowest on the continent.

The Ministry of Health in 1972 had 182 establishments: 14 were hospitals, 8 health centers, 67 health units, and 92 health posts.

## III. POPULATION POLICY AND PROGRAMS

Most Salvadorians are acutely aware of the problems created by the fast population growth rate of their country in relation to scarce resources. In 1969 a brief war erupted between El Salvador and Honduras because of the expulsion of Salvadorians from Honduran territory, which they have occupied illegally by migrating without the necessary permit. Some observers labeled this a demographic war, since the main issue was the problem created by the migration of the Salvadorians to less densely populated Honduras. Another area of concern is the impact of population growth on the availability and quality of maternal and child health services, which are already overburdened by the expansion of these population groups. In addition, a 1969 survey by the Instituto de Nutrición de Centro América y Panamá (INCAP) revealed that 73 percent of the population under five years had some degree of malnutrition.

At present there is no official population policy, but it is expected that in the immediate future a national population policy statement will be made public by the government. The official planning agency, CONAPLAN, is reported to be working in this area. El Salvador recently received an officially requested visit by a team from UNFPA. Several programs are in operation in the public and private sectors dealing with family planning and sex education. The major opposition to legislation or policies dealing with fertility regulation comes from the Catholic hierarchy, which is strongly opposed to abortion and to the use of some methods of contraception, and from groups on the political left, which oppose "birth control" on the grounds that structural society changes should take place before introducing a program to reduce fertility.

The public sector is represented by the Maternal and Child Health Division of the Ministry of Health, which operates a program of family planning with 114 clinics. Another entity that works parallel to the Ministry of Health is the Instituto Salvadoreño de Seguridad Social (ISSS), an autonomous organization, which operates 12 family planning clinics.

In the private sector, the most important organization is the Asociación Demográfica Salvadoreña (ADSS), which operates two family planning clinics and an active program of training and research.

Other relevant programs deal with sex education and are being carried out by the Ministry of Education with the assistance of the United Nations.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

There are two universities in El Salvador, the National Autonomous University and the private Catholic University. The National University receives all its funding from the state and offers a broad range of professional

careers, including medicine. There are two schools of nursing, both related to the Ministries of Health and Education.

The universities of El Salvador are affiliated to the Consejo Superior Universitario Centroamericano (CSUCA), a coordinating council for most of the universities in Central America. The Asociación Centroamericana de Facultades de Medicina (ACAFAM), which incorporates all the schools of medicine of the region, is also a member of CSUCA. After the 1969 war between El Salvador and Honduras, cooperation among the Central American universities suffered an unfortunate setback.

#### National Autonomous University

This large state university is located in the capital city of San Salvador. It has programs leading to several professional degrees. In the area of population, courses in demography and preventive medicine are offered.

In the past the National University has not accepted foreign financing, its resources coming only from the government of El Salvador.

The university was closed for fourteen months shortly after the president of the country, Colonel Arturo Molina, assumed office. After being reorganized, it reopened in September 1973. Following the general pattern of most Latin American universities, the governing body includes delegates elected by the faculty and students, in the system of "Cogobierno." Under the present reorganization, student participation on the governing council has decreased to 25 percent from the previous 33 percent.

Of the 20,000 students enrolled in 1973, the School of Medicine accounted for varying numbers in its six years, with 1,000 in the first, decreasing numbers in the following years (300 in the fifth and 103 in the sixth). It is expected that only about 50 percent of the students enrolled

in the first year will survive to the sixth.

The leading figure in the area of population and family planning is Professor Angel Quan, recently appointed chairman of the Department of Obstetrics and Gynecology at the Medical School. Dr. Quan, a United States trained obstetrician-gynecologist, was influential in the creation and development of the Asociación Demográfica Salvadoreña and directed its successful training programs. Dr. Quan is presently carrying out programs of research and service at the Maternity Hospital with support from the IPPF and the Association for Voluntary Sterilization.

Dr. Quan's department will be in charge of much of the teaching in the newly created short-term courses in maternal hygiene and pediatric hygiene. He is presently reorganizing the Department of Obstetrics and Gynecology. He is interested in the development of a program of research and teaching on family planning that could be used as a training facility for medical students and paramedical personnel.

The recently appointed rector of the National University is Professor Juan Allwood Paredes, who was formerly chairman of the Department of Public Health and a consultant in public health to the organization of Central American States (ODECA). It is reported that Professor Allwood would be willing to support programs in population.

The Maternity Hospital at San Salvador is the main and apparently only teaching unit for obstetrics and gynecology. The building, erected in the 1950's, occupies an entire block. It houses 270 beds and is reported to perform 18,000 deliveries and 3,000 abortions per year. Dr. Quan, who is chief of service, has secretarial space and facilities for the programs he is now operating. He has trained Dr. Doris de Badia, a member of the staff at the hospital and at the university, in laparoscopy and laparoscopic sterilization.

Before the present reorganization of the university, its governing bodies were dominated by faculty members and student leaders opposed to involvement in family planning programs. Thus, relationships with the FP programs of the Ministry of Health and the ADS could occur only informally, with a few interested faculty and students participating. Under the current reorganization, the newly appointed authorities appear to be interested in developing programs with population and family planning components. The university has recently created a three-year program of maternal hygiene, which will begin in 1973 with twenty-nine students, to train health professionals whose skills will be similar to those of a midwife.

In his capacity of chief of service at the Maternity Hospital, Dr. Ouan conducts two programs in family planning. One, funded by the IPPF, started in April 1973 and deals with the immediate postabortion insertion of intrauterine devices. A US\$15,000 level of financing is available. The second deals with postpartum sterilization. The Pomeroy procedure is being utilized and a set of eligibility criteria have been formulated by the Department of Obstetrics and Gynecology. An interesting feature of this program is that formal authorization from the husband or common law spouse is not required. A third program, now under consideration, is laparoscopic sterilization. This program will be financed by the AVS, at a level of US\$15,000 a year.

#### Catholic University

The Simeon Cañas Catholic University is a rather new private institution supported by the Church. The university has recently moved to its new and modern campus on the outskirts of San Salvador. It does not give degrees in health sciences, being mostly dedicated to the teaching of economics, law, and the humanities. It appears recently to be developing an interest in demog-

raphy and has organized meetings concerned with the demographic problems that face the country. Lic. Guillermo M. Ungo is the director of the Research Institute, an interdisciplinary center that has already been able to attract international funding (World Bank) for its projects. Among its staff are economists and sociologists, but again a major problem in developing demographic research is the lack of trained staff in this area.

#### Nursing Schools

The two nursing schools are located at San Salvador and are independent from the universities, having relationships with the Ministries of Health and Education.

#### The Asociación Demográfica Salvadoreña

Founded in 1961, the ADS has been carrying out an innovative and successful program of service, research, teaching, and training.

The ADS operates two highly efficient FP clinics. At the San Salvador clinic, Dr. Vernon Madrigal, a Johns Hopkins-trained obstetrician-gynecologist, now medical director of the ADS, is carrying out a program of outpatient laparoscopic sterilization. More than 1,300 procedures had been carried out as of September 1973. Of these, Dr. Madrigal has done 1,000 himself and Dr. Enrico Henriquez, a young physician trained by him the remainder.

The laparoscopic facilities at the San Salvador clinic have also been used for the training of physicians in this technique. Another interesting program being carried out deals with vasectomies, with a grant from the Pathfinder Fund. Vasectomies are being performed in about ten to fifteen minutes, also as an outpatient procedure. As of September 1973, about 100 had been performed.

These activities are under the able directorship of Professor Luis Angel Rodriguez, and more than 3,000 individuals have been exposed to the program. Teaching and training are usually done in a one-week course, which changes emphasis according to the audience, composed largely of physicians, nurses, and auxiliary nurses. Training courses have also been given to community leaders, labor force leaders, and priests.

The third area in the activities of the SDA is research and evaluation. Evaluation of the medical programs has not been a strong point, according to Dr. Madrigal, mainly because of lack of funds. The division is presently analyzing the National Fertility Survey of El Salvador, supported by the Population Council and under the directorship of Lic. Querubina de Paredes.

Dr. Madrigal is planning to develop a course of training in family planning for nurses. He feels that his present staff is sufficiently trained and experienced to make up the faculty, although some additional training for higher degrees would be useful. He wants to develop a program in collaboration with one of the local schools of nursing to give degrees in family planning nursing. He feels that unless the paramedics are trained, the task of providing family planning services at the rural level is not going to be carried out adequately.

#### DEMOGRAPHY AND RELATED SOCIAL SCIENCE

The Economics Department at the National University, in conjunction with the National Economic Planning Council (CONAPLAN), has drawn plans for a joint research program in the area of population and human resources. Two initial studies are contemplated: one, a survey of the employment situation in San Salvador's metropolitan area, the other a study of the demographic

characteristics of the country's labor force. Luis Argueta Antillon, an economist at the Institute of Economic Research, connected with the Economics Department, is the main force behind these efforts. The institute has plans to sponsor a CEPRU intensive demographic course and to offer courses in demography for its regular students. As elsewhere in this university, academic activities are in a period of reorganization following the long shut-down and the emergence of a demographic sequence in the Department of Economics, while a good possibility is still in a very elementary planning stage. Another barrier to the development of demography programs at this university is the lack of university trained experts in population.

#### 5. CONCLUSIONS

Although El Salvador does not have an official population policy, concern with demographic expansion has led to the development of family planning services in both the official and the private sector. The National University has until recently been opposed to the development of population programs, but since reorganization, it seems to have changed this position, and now interest in the development of population programs exists at the School of Medicine, specifically in the Department of Obstetrics and Gynecology. The university has recently approved the creation of a three year program in maternal hygiene for professionals in skills similar to those of a midwife. This training will be directed by the Department of Obstetrics and Gynecology. On the social sciences side the Economics Research Institute is beginning to undertake population studies and courses in demography are also planned.

The Asociación Demográfica Salvadoreña, a private IPPF affiliate, has also been developing short training courses for physicians and paramedical personnel. The ADS is interested in initiating training programs in coopera-

tion with the schools of nursing. These schools are independent from the universities related to the Ministries of Health and Education.

The ADS, under the leadership of Dr. Madrigal, has been developing a program of outpatient laparoscopic sterilization, which could serve as an innovative and nonhospital-related training site. The University of North Carolina is collaborating with Dr. Madrigal in his efforts in this direction.

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HAITI

Melvyn C Thorne

I. COUNTRY SETTING

The 1973 population is slightly above 5 million, but there is disagreement about the exact figure, with estimates ranging from 5.2 million to 5.6 million.

Similarly, there is some disagreement over other population measures. The birth rate estimates are around 3.5 percent and the death rate is thought to be about 1.5 percent. Thus, population is expected to grow at a slowly rising rate of between 2.1 percent and 2.5 percent. (Population Reference Bureau estimates for 1973 are birth rate 4.4 percent, death rate 2.0 percent, yielding a rate of natural increase of 2.4 percent.)

Growth rates are lower in Haiti than in most other countries in Latin America because fertility is lowered by illness and unstable common law conjugal unions, and mortality is kept relatively high by malnutrition and infectious diseases. There has also been a significant net outmigration, although exact figures are not available. Dr. R. Pierre-Louis, dean of the Haitian Faculty of Medicine, says that there are about as many Haitian doctors in Canada, and twice as many in the United States, as there are in Haiti. There are apparently sizable settlements of Haitian manual workers throughout the Bahamas. According to the Haitian Institute of Statistics, there were 17,898 emigration visas accorded to Haitians and 282 immigrants in 1969.

About 43 percent of the population is under 15 years of age. Females 15-44 years of age constitute about 23 percent of the population, and about 3

percent of the population is 60 or over.

Although less urbanized than most other countries in Latin America, only about 20 percent, Haiti is beginning to urbanize rapidly. The capital is growing at about 6 percent, the seven other cities of 10,000 or larger at about 2.9 percent. and the country generally at 2.1 percent.

Comparing the censuses of 1950 and 1971:

	1950		1971	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Urban population	337,357	10.9	879,674	20.4
Rural population	2,759,863	89.1	3,434,920	79.6
Total population	3,097,220	100.0	4,314,594	100.0

There are about 3,000 permanent white residents in Haiti. Most are concentrated in Port-au-Prince. The original Arawak Indians were annihilated by the Spanish within 100 years of Columbus' first visit in 1492.

The mulatto upper class, which lives largely in towns and cities where they dominate private business, constitutes less than 2 percent of the population. About 97 percent of the population is black. Haiti was the first black republic in modern history, having achieved independence in 1804 when 450,000 blacks and 27,500 mulatto offspring of black slaves and French settlers defeated the armies of Napoleon. Dahomeans, Nagos, Congos, Aradas, Fans, Ibos, Mandingues, Capalaous, and many other tribesmen had been brought as slaves from the west coast of Africa to Haiti.

There is a saying in Haiti that 90 percent of the people are Catholic and 100 percent vaudou. There are about 400,000 Protestants.

Vaudou, or voodoo, is a widely practiced religious system, which combines symbols and concepts of the Catholic Church and African deities (loas). It has considerable influence on the way Haitians, particularly rural dwellers, view and

treat health problems.

Only about 15 percent of the population is literate. Literate Haitians speak French, the official language, as well as Creole, the common tongue. In 1968, only about 23 percent of children of primary school age were enrolled, and only 6 percent of children of high school age. Most rural schools go only through the fourth grade.

Haiti is the poorest country in the Western hemisphere. The gross domestic product is less than \$100 per year, one-fifth the Latin American average. Following an economic decline in the 1960's, when agricultural production dropped 30 percent, there has been a modest upswing in the past four years. This is due to a large increase in light manufacturing, to moderate growth in tourism and a more favorable attitude toward public sector investment, and cooperation with international agencies. Agriculture employs more than 80 percent of the work force, creates 50 percent of the GDP, and accounts for 60 percent of the value of exports. Most of the population is crowded onto small, privately owned "arreaux," which average 2.5 acres, and resulted from the "parceling out" of plantation lands following independence in 1804, then the further fragmentation of divisions for inheritors. In 1965, population pressure on farmland and pasturage was 178 inhabitants per acre, the highest density in Latin America.

Economic and social development is particularly hampered in Haiti by the paucity and poor condition of existing roads.

The state budget is very low, and more than 70 percent of it goes into salaries. In 1971-72 the total budget was \$29,572,125, of which 13 percent or \$3,951,099 went to health, and 12 percent or \$3,485,616 went to education. Thus total state expenditures for health was about \$0.80 per person per year.

Given the new president Jean Claude Duvalier's open encouragement of private investment and multilateral aid and assistance, and the low debt burden that

results from a long decade of isolation, Haiti is likely to undergo fairly rapid economic growth from its present extremely low level during the next decade. Already one of the most densely populated countries on earth, it is likely to continue growing at more than 2 percent for a number of years. Family planning is not likely to be used by more than a small fraction of the eligible families, perhaps by less than 15 percent of this poor, illiterate population.

## II. HEALTH POLICIES AND PROGRAMS

There are currently about 357 doctors in Haiti, with an average age of 40 years. About 250 of these are in Port-au-Prince, the only place where there is a paying clientele. Because salaries are low for full-time salaried employees of the state, medical students tend to avoid specialties in public health.

A law passed in 1944 established a rural residency, for a minimum of 2 years, for all graduating physicians. However, in 1952 a hospital residency was also created, whereby about 20 of the best graduates were retained in the main hospitals, in order to gradually replenish the faculty professors, and the 40-50 other graduates went off to rural service. The medical infrastructure remains underdeveloped and unattractive to young doctors, who leave as soon as their 2 years of obligatory service are over. They tend to close their health centers, then either come to Port-au-Prince to get caught up, or emigrate to Canada, the United States, the Congo, or other countries where there are a wider choice of jobs, better facilities, and better pay. Many of the Haitian physicians abroad are unhappy and want to return to Haiti, but are dubious about finding adequate material resources to do good medical work. Many specialize abroad.

A plan for a countrywide program of maternal and child health and family planning has been prepared within the framework of the national health plan. This plan provides for the establishment of a central office of the Division of Family

Hygiene with capability and facilities to coordinate, administer, and evaluate the program. It also provides for the gradual establishment of field clinics over a period of 5 years. It is anticipated that the first phase of the plan will begin in the middle of 1973.

The Centre d'Hygiene Familiale has two family planning clinics in operation in Croix des Bouquets and Fonds Parisiens.

The nationwide radio program "Radio Doctor" by the Centre d'Hygiene Familiale, in cooperation with Radio Lumiere, directed by Dr. A. Bordes, reinitiated educational programs in family planning in November 1972 and frequently carries family planning messages.

It is expected that the majority of the private family planning clinics will be integrated into the national plan for maternal and child health and family planning, and authorized by the ministry to begin activities and services within the next 6 months. There are approximately 18 private clinics.

The Center for Family Hygiene, also directed by Dr. A. Bordes, funded by the Unitarian Universalist Service Committee since 1966, runs family planning clinics in a rural development area in the plain of Cul-de-Sac (at Fonds Parisiens, Ganthier, Bas Boen, Thomzaeau, and Croix des Bouquets). It has produced numerous brochures for education of FP clients. The center runs an "interdisciplinary community field laboratory," containing 100,000 in a poor rural area about 1-2 hours drive from Port-au-Prince. Dr. Bordes uses this area for field studies and trials prior to making family planning innovations national policy as head of the Division of Family Hygiene.

The Haitian-American Community Help Organization HACHO is partially supported by Care-Medico, and directed by Dr. William Fougères, chief of the Bureau of Nutrition. HACHO runs five clinics in Northwest Haiti. These have received authorization from Dr. Bordes to do family planning but are not doing it because

they lack contraceptive and other supplies.

Mothercraft Centers, 40 small, locally built huts in the northwest, where a trained local girl rehydrates diarrheic children and teaches basic nutrition, have not received authorization to offer FP services as requested by Dr. Fougères because they lack medical coverage.

An (unknown) number of the 320 private physicians in Haiti offer family planning services to private patients, mostly in the capital and a few large cities.

Peripheral Organizations - "Interdisciplinary Community Field Laboratory" is bounded within the triangle whose auspices are Fonds Parisiens, Croix-des-Bouquets and Thomazeau, each of which have a family planning clinic once a week when gynecologist Dr. York drives out from the Medical school. Each center has a resident general physician. Each center is involved in general health and small economic self-help promotional activities, including family planning and other health education.

Rural health activities in Les Cayes, under the direction of PAHO's Dr. DeLucia, trains village granny midwives (matrones).

Albert Schweitzer Hospital has a family planning and a community medicine program (chief, Dr. N. Barnier), available to 100,000 residents of the Artibonite Valley. Twenty-three villages are visited in a child-weighing outreach program. Due to these programs, including mass immunizations against highly prevalent tetanus, a dramatic drop in mortality has been documented by the Bergrens:

	1967	1972
Infant mortality rate	144	31
Crude Death Rate	18	8

However, fertility in this area has shown a mixed pattern of age-specific birth rate trends, with slight drop in the middle most fertile years and slight rise at the extremes.

### III. POPULATION POLICIES AND PROGRAMS

The current growth rate of between 2.0 and 2.5 percent concerns the Haitian government, which is currently revising the Five Year Plan, 1972-76, published by the National Council for Development and Planning (CONADEP), whose president is President Duvalier. However, explicit governmental support of family planning activities has been proposed publicly for reasons of maternal and child health, not for demographic reasons.

Abortion does not seem prevalent, unlike other countries in Latin America. Vintner cites "The incidence of induced abortions coming to the (Port-au-Prince) hospital is about 5 percent (sic). In the Artibonite Valley, Gretchen Bergren found that induced abortions were practically nonexistent, according to pregnancy histories on 425 women, which was corroborated by the absence of induced abortions or their complications in women's records at the Schweitzer Hospital.

With the passage of the law in August 1971 reorganizing the Ministry of Public Health and Population, creation of a National Council for Family and Population, and establishment of a Division of Family Hygiene within the ministry, the government indicated open support for family planning within the context of maternal and child health. There has been no opposition to family planning activities among top government officials; in fact, the president has taken a public stand in favor of family planning, and the newspapers are in favor of it.

The history of family planning activities in Haiti was recently described by Vintner:

In 1962, a small family planning association was formed with the assistance of the IPPF, with activities in Port-au-Prince for two years only.

In 1964, the government of Haiti established a Department of Family Planning in the Ministry of Social Affairs with one clinic in Port-au-Prince.

Since 1966, the Unitarian Universalist Service Committee (UUSC) has

supported a program of integrating family planning into the activities of the Centre Materno Infantile at the University Hospital in Port-au-Prince. The program was changed to rural areas with the cooperation of Family Planning International Assistance (FPIA) to become an interdisciplinary laboratory for community health including maternal and child health and family planning, and the development of small-scale economic activities. The Centre d'Hygiene Familiale was opened in 1969.

In 1969-71, the Centre d'Hygiene Familiale coordinated its work with the Centre Materno Infantile located at the University Hospital, Port-au-Prince, with maternal and child health and family planning activities and extended its program to the villages Fonds Parisiens, Ganthier, and Bas Boen.

During 1969 and 1970, the area of Port-au-Prince was inhabited by 15,398 people, the majority in the lower income group. The total population in the three villages was 6,500. The activities, procedures, studies, surveys, and mass communication techniques of this program can well serve as a basis for the development of a national family planning program. Considerable basic research for determining a variety of factors involved in gaining acceptance to contraception has been done in this program, both in urban and rural situations.

In 1967, an "Informal Committee" was organized of representatives of different family planning programs in Haiti and other medical and interested persons. One of the purposes of this committee was to coordinate the various family planning activities in the country. The committee, with the assistance of OXFAM, Canada, sponsored in 1970 the first training seminar for physicians, nurses, and nurse auxiliaries.

In 1969, the Pathfinder Fund tried to organize a family planning service program through the "Informal Committee," provided contraceptives, audiovisual equipment, and funded the printing of the "Syllabaires," a series of health education booklets linked to family planning.

During the period 1965-1971, the Albert Schweitzer Hospital and several church groups, mainly in Limbe, Fermathe, and Grande Riviere du Nord, included family planning services in their health programs. Also the Haitian American Community Health Organization (HACHO) included family planning in its health program. The Population Council provided IUD's to the Centre Materno Infantile at the University Hospital. The UN Fund for Population Activities provided funds for a population, housing, and agriculture census and demographic survey.

In March 1971, the government of Haiti ordered that all family planning activities in the country be stopped. The principal reason was to discontinue family planning activities that had developed in an anarchic and scattered manner in order to allow the Department of Public Health and Population to establish standards and to control programs in health, including family planning.

In August 1971, the government passed a law reorganizing the Department of Public Health and Population and establishing a Division of Family Hygiene responsible for the supervision and coordination of all activities, public and private, relating to maternal and child health and family planning. This law also created a National Council of Family and Population, which included representatives of the Special Council of the President, the Ministries of Education, Agriculture, Social Affairs, Justice, Foreign Affairs, and the Director of the Red Cross. The executive director of the council is the chief of the Division of Family Hygiene. In 1972, the government announced the names of the members of the National Council.

In January 1972, the Minister of Public Health and Population issued a "Communique" which stated in part: that after deliberations of the National Council of Family and Population, it was decided that all family planning activities shall be carried out only upon authorization of the Ministry of Public Health and Population, through the Division of Family Hygiene. Further, the division will develop an effective organization with sufficient trained staff and facilities,

prepare detailed program plans, operational norms, technical and administrative procedures for a country-wide maternal and child health and family planning program.

The Division of Family Hygiene, under its chief, Dr. Ary Bordes, coordinates and supervises all family planning activities in Haiti and plans for further development of the system.

Its objectives are:

1. In 5 years to create an infrastructure capable of providing integrated family planning and MCH services to 20 percent of the population.
2. Lower maternal mortality through coverage of 75 percent of pregnant women with three prenatal visits, 50 percent of hospital deliveries being followed by one postpartum visit, and 20 percent of home deliveries to be followed within two days by a home visit.
3. Decrease infant mortality by 50 percent in 5 years.
4. Obtain the adoption and practice of effective contraception by 20 percent of women of reproductive age.
5. A host of other operational objectives, such as "to train indigenous midwives," which do not specify measurable endpoints.

Current personnel includes 6 doctors, 2 social scientists, 2 nurses, and other central personnel, whose annual salaries total \$87,740. With the extension to 7 family planning clinics, only one currently being run from this office, salaries for field personnel are projected at \$141,340, hence an annual recurrent budget for personnel of the Division of Family Hygiene of \$229,180.

The operating clinic is in the Maternal and Child Care Clinic on the grounds of the Faculty of Medicine, Port-au-Prince.

Beginning in December 1967, preliminary discussions were held between the government of Haiti and the Pan American Health Organization. These discussions culminated, in April 1972, with the signing of a project agreement between the

government of Haiti, the United Nations, and PAHO to provide technical and economic assistance for a program of maternal and child health and family planning at the maternity of University Hospital, the Chancerelles Maternity in Port-au-Prince, for training of professional and lay groups and health education for the public. It is anticipated clinical services will start<sup>1</sup> in March 1973.

Several Protestant missionary groups have included family planning in their health programs. A request for authorization to establish a family planning program has been received by the Division of Family Hygiene from L'Action Familiale d'Haiti, a private Catholic group of professionals including doctors and priests, who sponsor a welfare and responsible parenthood program in Port-au-Prince. The program will include clinics utilizing the symptothermic method and an educational program on responsible parenthood, and is supported by the Catholic Church.

The "Family Planning Field Laboratory" sponsored by UUSC has operated family planning clinics at the University Hospital, Port-au-Prince, and in three villages, since 1969. Programs are well received and have encountered no opposition.

A survey made in 1970 among 4,898 women and 1,320 men living in the Port-au-Prince area indicated that about 94 percent agreed with the concept of family planning. Yet only about 11 percent of the women came to the clinics for contraceptive assistance. This indicates a lack of seriousness concerning family planning.

The Malaria Eradication Program (SNEM) is also concerned with family planning. Wide rural dissemination of condoms by malaria field workers has been discussed as one of the possible additional tasks which these field workers might take on.

The Medical Association, which is being reactivated, has taken no position yet on family planning.

The only overt population policy is the active campaign to persuade doctors and other highly trained Haitians living overseas to return to Haiti. Governmental concern over population growth pressure is attested by the following quotation from the "Bases and Priorities of Sectoral Programs of the Central Planning Agency," CONADEP, which is headed by President Duvalier:

"For the years 1971-76, looking toward a substantial takeoff of agriculture to win the population-production race, the strategy adopted concerns the concentration of available resources and efforts to create the infrastructure for several large projects and the establishment of adequate structures and mechanisms of commercialization in order to profit from external markets.

..."Increase in the production of animal and plant foodstuffs shall be pursued to make provision for any deficits of food during the five year (planning) period, given the increase in the population and the rise in income."

Solid governmental support of family planning in the context of general maternal and child health services, and for the purpose of lowering the high infant mortality rate, estimated in some areas to be 148 to 1,000, and the high maternal mortality, estimated at 137 to 100,000 births, is opposed only by some members of the Catholic Church. One Catholic organization, L'Education Familiale, which accepts the idea of restraining family size through use of rhythm, advocates the view that modern contraceptives are dangerous and destructive of conjugal responsibility.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

The first schools of health in Haiti were created in 1808. The first full Medical Faculty began turning out doctors in 1850. Funds for further expansion of facilities, \$300,000, were committed by the president in 1967, and construction is now underway.

The Faculty of Medicine, Port-au-Prince

The Department of Gynecology and Obstetrics (chief, Professor Fils-Aime) refers cases from the University Maternity to the adjacent MCH Center and teaches contraception to medical students.

The Department of Community Medicine (chief, Dr. Victor Laroche) is responsible for training medical students in family and community medicine.

Dean Pierre-Louis explained that of the approximately 235 first-year students in 1972, 200 were medical, 25 were dental, and 10 were laboratory. These 235 were chosen from among 700 applicants. The previous year there had been 500 applicants, and about 400 two years ago, showing a rapid growth in number of applicants. About 35 percent of students drop out in the first year, leaving about 130 second-year students. Seventy to 80 doctors finally graduate each year.

There are many Haitian physicians overseas: about 600 in the United States, 300 in Canada, 200 in France, 100 in England, and many working in UN agencies.

Admissions to the Medical Faculty have grown: they have averaged about 175-200 per year, 180 in 1971, 240 in 1972. The faculty is currently graduating about 70 doctors per year.

The optimal number of admissions would probably be about 150, which was the case about 6 years ago, although more can be accommodated when current construction of more rooms is completed. Both the size of the medical student body and the size of the faculty have grown rapidly from 100 students and 25 teachers in 1944 to 825 students and 70 teachers in 1972.

The trend has been toward more specialization, each teacher giving fewer total hours of his time to teaching, more fragmentation, more specialty questions on examinations.

Present census of the medical students is about:

Physics, Chemistry, and Biology (premedical year) - 240 students

First year - 240 students (including repeaters)

Second year - 130 students

Third year - 97 students

Fourth year - 108 students

Fifth year - 76 students (interns)

Total - 891

Since each of the teachers gives separate examinations, there has been an attempt to coordinate these through the Central Committee of Medical Education, composed of the chiefs of the thirteen departments. The dean, who is the president of this committee, is also president of the Faculty Council. The latter, composed of 70 persons, is too unwieldy for discussion, good only for taking a vote on a particular issue, and meets once or twice per year. There are subcommittees of the central committee on equivalency of the diploma, examinations, and finances.

Some of the main problems facing medical education in Haiti are:

There is debate in the medical council on the basic objectives of the faculty:

1. To train doctors in the pathology of Haiti, particularly the problems and limited resources of the rural sector. A doctor who adapts well to such a milieu is capable of doing a little of everything, has an emphasis on preventive and community Medicine and a basic orientation to taking care of the needs of the Haitian people. But he does not necessarily keep up with the advance of specialized information in medicine, and cannot compete with physicians in other countries.

2. To create doctors capable of following scientific medicine, of discussing articles and following cases in the modern scientific sense. Such doctors are useful everywhere, can take care of tourists, or Canadians or Americans

who live in Haiti and who want high quality medical care.

Not to train doctors in the first way is to betray the people; not to train them in the second way is to betray the young Haitians who have chosen to train in Haiti. The dean felt that both objectives must be met by medical education in Haiti. Some years ago there was a project to teach medical students in rural areas, but it failed largely because of logistical problems. The dean feels that it would be worth reexamining the possibility of medical training in rural areas, but all of the logistical and administrative details should be well worked out in advance and it should not be underfinanced.

Low Salaries: At existing low salary levels, about \$200 for the dean, \$60 for professors, and \$30 for help, most employees need and maintain second jobs.

Education of Nurses: Though the Medical Faculty has been asked to give basic science training to nursing students, the dean has refused because there is a lack of facilities. First-year students are very crowded in their lecture hall. The dean has a very small, and perhaps inadequate administrative staff to assist him in the discharge of his responsibilities.

There are evidences of growth, including: New chemistry laboratories for teaching have been completed and are ready for use. A new library facility has been created and is being brought gradually into operation by a Canadian WHO expert. Considerable construction is underway at the Faculty thanks to a grant arranged by the American Ambassador.

#### The National School for Auxiliaries

Since 1968 the School for Auxiliaries, the only school authorized for auxiliary training in Haiti, has trained the following numbers of graduates from its 8-month course, October-May:

1969 - 48 graduates (4 male)

1970 - 39 graduates

1971 - 50 graduates

1972 - 50 graduates (1 male)

There are 5 appointed teachers; other lecturers are invited occasionally. Their basic salary is \$40/month, which dwindles to \$33 (165 gourdes) take-home pay after taxes. Mlle. Carducci, the director, feels that this is discouragingly low.

Only 15 percent of students are married. These young girls come from all over the republic, and 80 percent of them return to work in their own regions. They work in all the health facilities. There is a large and growing number of candidates, but many must be turned away. Educational requirement for entrance is 10 years of schools, i.e., 3 years after the Certificat d'Etudes (7 years). Candidates apply, however, with higher levels, with second or first parts of the Baccalaureate.

Auxiliaries must be trained to be polyvalent. They often must work alone with no doctor or nurse to supervise or advise them, hence need good and complete training. They must know all the basic nursing techniques, and especially normal deliveries and basic sanitary procedures. Training is one-third theory and two-thirds practice.

Auxiliaries may not, in general, aspire to improve themselves to become nurses, although some who had finished 12 years of basic education had been able to do this.

Mlle. Carducci had planned a reunion of auxiliary graduates last year, for a workshop and in-service training. However, this proved impossible because of lack of funds for transportation, lodging, and food for a one-week meeting. The auxiliary graduates have never had a recycling or follow-up meeting since their graduation, although Mlle. Carducci has been trying to promote this for two years.

Present facilities are too small. They do not permit any students to live at the school, despite the inconvenience that most students come from outside Port-au-Prince. Mlle. Carducci feels that the school should have more students, more professors, more classes, and more laboratories.

Audiovisual materials and equipment are needed, according to Mlle. Carducci. They do not have a projector or films. She has only one slide projector. She would like to have a book or teaching manual prepared from the written lectures now in the courses.

#### National School for Nurses

The nursing school has a physical capacity for 70 students. However, the three-year course currently has:

44 third-year students

45 second-year students

130 first-year students (from 250 applicants)

Since 1918 the nursing school has produced more than 800 graduates. Mdme. Francois, the director, feels that the output of graduates should remain around 45 per year.

Entrance requirements are the Baccalaureate (13 years, with considerable mathematics and science) or the Brevet Superieure (higher general culture level, less science and math, preparation for Ecole Normale or teacher training).

There are no common courses for nurses and medical students, which remain two clearly separated disciplines and educational programs.

Four years ago WHO responded to a request for a review of the school's program. Mdme. Baudry has since worked with them on reorganization of the program, but the restructuring envisioned will not be possible unless more professional teaching time is made available. The principal need is for more

regularity and more reliability of teaching time, rather than more teachers. Mdme.

Francois' present staff and needs are:

	<u>Present</u> <u>Staff</u>	<u>Additional</u> <u>Needed</u>	
	10	3	teachers, all nurses, full-time
	4		monitors, "young nurses"
	20		part-time professionals, e.g., doctors, psychologists, sociologists, laboratory technicians, etc.
	<u>0</u>	<u>2</u>	educational supervisors
TOTALS	34	5	

More training fellowships are needed, both at the university and the three-months observation levels. A basic problem for Haitian nursing is that the country is in Latin America, but most nursing students do not speak Spanish. Training in Canada is good for theory, but their problems are so different and their methods so standardized that practical training there is misleading. The Haitian Nursing School was created largely along American lines, but now needs major revision.

Mdme. Francois said that training must be made more functional. There must be more participation in community medicine. There must be more training in rural settings. Last year HACHO initiated this, and it worked very well. This year they are hoping to extend rural teaching through: HACHO, Nutrition Bureau centers, and the Center run by Dr. Bordes at Croix des Bouquets. One major problem is that there is no special budget for transportation, lodging, and food for the students.

The nursing school needs a large bus to hold 40-50 persons, plus funds for gas and a chauffeur.

Although HACHO nurses are ready to receive students, there are no teachers from the school available to go to the field with them to orient them and to help them reflect on their experiences in the rural setting. There should be

provision for an experienced teacher to accompany the students in the field.

The students should have a seminar on the geography of Haiti, its governmental structure, needs, resources, and so on.

Audiovisual materials needs are: an overhead projector and a tape recorder to allow students who were unable to grasp all the details of a lecture the first time an opportunity to go over it again.

The nursing students would benefit from a textbook program like the one now run in the medical school whereby medical students pay only half the cost of their textbooks. There are no textbooks now used by nursing students, but these are very much needed. Both auxiliary and nursing schools should create their own, Haitianized textbooks.

#### Demography and Related Social Sciences

There are 5 Haitians trained and working in demography in Haiti:

1. Mr. Jacques Vilgrain, Director of the Haitian Institute of Statistics.
2. Mr. Yves Blanchard, demographer attached to CONADEP and chief statistician to the Center of Family Hygiene.
3. Mr. Gardiner, presently at INSEE (Paris), ordinarily chief of the Demographic Section of the Haitian Institute of Statistics.
4. Miss Danila Moise, assistant chief of the Demographic Section of the Haitian Institute of Statistics.
5. Mr. Celestin, statistician in Division of Family Hygiene.

Among them, these persons teach courses in demography at the following institutions:

1. Haitian Center for the Training of Statisticians (40 students).
2. Faculty of Law and Economic Sciences (15 students).
3. National Institute of Administration, of Management, and of Advanced

International Study (50 students).

4. Institute of Advanced Commercial Studies (15 students).

5. Faculty of Medicine - a course in Statistics, taught by Mr. Gardiner for 2 years, but there is now discussion of creating a course in elementary demography.

Programs to study population characteristics are under way at:

1. The Haitian Institute of Statistics, which collects all routine national statistics and which is still analyzing the 1971 Census (Jacques Vilgrain).

2. The Haitian Center for Investigation in the Social Sciences (CHISS), which studies urbanization, sociology of the family, and sociologic aspects of family planning.

CHISS (Centre Haitien d'Investigation en Sciences Sociales) is perhaps the best private Haitian institution engaged in social science research. Its director, Dr. Hubert de Ronceray, is well-trained abroad, and has an interest in population, although this is not his principal concern. The Population Council funded assistance of a non-Haitian expatriate family sociologist for the period August, 1971 to May, 1973, in order to write a book and consult on the Haitian family and population, and to provide consultancy services for the development and evaluation plans for family planning clinics. The results have apparently been inconclusive, as the Principal Investigator became seriously ill, hospitalized for an extended period in New York, and has returned to the country partially paralyzed.

The institution has had support from the Ford Foundation, and appears to be a significant resource in the country, but the prospects for significant local funding for work in population have not appeared good.

3. The Institute of Ethnologie (CRESCH), survey on indigenous midwives (Dr. Young).

V. CONCLUSION

The Dean of the Medical Faculty and the directors of the Auxiliary and of the Nursing Schools appear to have a good grasp of their problems, and of what needs to be done to improve the operation of their institutions.

The Medical Faculty and the Nursing School have had consultation from technical experts, but I am not aware that consultation has been made available to the Auxiliary Training School; if not, it should be considered. Auxiliary services would appear to be a possible avenue for development of low cost medical services in rural areas. This is being successfully implemented in other developing countries, where the health budget is very limited and populations are dispersed. If the auxiliary services for rural areas of Haiti are to be developed further

- an adequate supervision system
- some form of in-service follow-up training
- and training of more auxiliaries per year through expansion of already overburdened teaching resources

would seem advisable.

Programs to develop Haitian textbooks in both Nursing and Auxiliary schools would probably yield high returns in quality of education for modest investment. All three schools would benefit from some basic audiovisual equipment.

A program of teaching of good care in rural settings with limited facilities, where medical, nursing and auxiliary students can get practical experience in a team approach to community health, would seem very desirable. This effort would need adequate funding, management, transportation, lodging, and on-site teachers in order to succeed.

As Vintner has noted, 24 different donor agencies have expressed interest in assisting maternal and child health and family planning activities in Haiti. Such offers are coordinated through Dr. Bordes and the Division of Family Hygiene,

to which any further donors should address themselves.

Despite two years of effort to develop a plan for the building and extension of MCH-FP services in Haiti, the current situation is very uncertain for the following reasons:

1. USAID, which had originally encouraged the Haitian government to expect about \$400,000 to \$500,000 per year of aid to FP-related activities, appears to be down to zero to \$150,000 for fiscal year 1974 due to delay in core costs support to Division of Family Hygiene from UNFPA. However, it appears at this time, according to John Peabody, AID, that adequate funds from both UNFPA and USAID will be available in 1975.

2. Communicated ceilings to its potential aid, UNFPA has set its ceilings on development aid to FP/MCH in Haiti, but the exact extent and form of projects and aid is still being actively renegotiated. As of 1974, PAHO has proposed the following revisions:

a. Expanding the time frame for FP/MCH development from 2 to 5 years.

b. Increasing the financial inputs to about \$23 million over this 5-year period, with this breakdown, roughly:

\$8 million - UNFPA  
6 million - Government of Haiti  
2 million - UNICEF  
2 million - World Food Program  
2.2 million - International Development Bank  
0.360 million - USAID  
? - UNESCO

c. Objective of 212 functioning FP service outlets in 5 years.

I have no way of knowing what will be the reaction of Dr. Bordes or the Haitian Department of Public Health to such an ambitious proposal. Loan proposals from the Government of Haiti to AID are supposed to be in Washington on May 10. A PAHO/IDB team is supposed to go to Haiti for a field assessment this June.

3. The new Minister of Health, Dr. Beaulieu, who was appointed in August 1973, has just begun to review and to reconsider the Health Plan developed by his predecessor, Dr. Theard. There are some indications that he feels that Dr. Bordes' plans for MCH/FP are too ambitious.

From my contact with the Haitian program, the following impress me as reasonable areas for further exploration and possible investment, despite present uncertainties:

1. Computer analysis of the census - Mr. Vilgrain, although aided by the UNDP and the excellent services of their Mr. Brenez, has been obliged to send his punch cards to the United States for analysis, which has slowed down the final results. These are still not available. Some arrangements for computer analysis of census in Haiti should be feasible.

2. Materials, travel, and per diem for workshops and consultant costs to make family planning instruction a standard part of the curriculum in medical, nursing, and auxiliary schools would be productive.

3. Small costs of projects to train village granny midwives in cleanliness and simple MCH/FP in several areas would probably be welcomed by the Chief of the Division of Family Hygiene.

4. Some donor who had the flexibility to make sizable supplies of contraceptives available to the program without having to wait for finalization of large, multidonor accords, would produce large returns on a small investment.

5. Neither population education nor family planning education has yet been tried in the Haitian schools, but Dr. Bordes is currently thinking of contacting them. A small grant for teacher sensitization conferences would probably start a useful interaction.

6. Rural training of medical students is an underdeveloped part of medical training, but it would lead quickly to an appreciation of the need for

family planning. This would primarily involve provision of travel costs.

7. The present director of the Division of Family Hygiene has an extraordinary talent for the creation of educational materials for laymen, and for training of personnel. Material essential to these activities should be made readily available.

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JAMAICA

MARJORIE NICOL

B. COUNTRY SETTING

Jamaica has an area of 4,244 square miles and a population estimated in 1973 at 2.4 million. The crude birth rate was estimated in 1973 to be 35 and the death rate to be 7. The rate of increase is below 2.5 percent allowing for net migration.

Statistics are given for marital status, but according to these the average is 62.2 percent married women and 34.3 percent men not living with spouse. The age structure in 1973 showed 20 percent of the population under fifteen, and less than 3 percent were 65 or over. Life expectancy in 1973 was 70 for females and 67 for males.

Most of the people live in the rural areas, but in and around Kingston, the capital, there is a concentration of population, about 25 percent, or 376,590. Most of the people are of African lineage (76 percent), descended from West African slaves brought over to work on the sugar plantations in the eighteenth and nineteenth centuries. There are some small Chinese and Indian elements, as well as some descendants of British settlers. Most of the population are Christians of various denominations, and there are a small number of descendants of runaway slaves, called Maroons, who live in the hills. A back-to-Africa movement has also resulted in a sect called the Ras Tafarians.

The literacy rate for the island has been estimated differently, at 85 percent by Ebanks and at 53 percent by Bolland.

Economic progress since independence (1962) has been considerable, but since the high level of emigration to the United Kingdom stopped some four years ago, there has been a great deal of unemployment on the island. This is true of the entire Caribbean, especially of the smaller islands, where acute unemployment and poverty have been reflected in a growing wave of violence. The GNP for Jamaica was US\$497 in 1968.

The future outlook is not hopeful, but the government is hoping to increase revenue by increasing the tax on an important primary product mined in Jamaica (bauxite) several times.

## II. HEALTH POLICY AND PROGRAMS

The health policy of the government of Jamaica is to provide free or low-cost adequate medical and health services to the whole population of the island. Government health services come under the portfolio of the Minister of Health, who is a member of the cabinet.

The country is divided into nine hospital regions, subdivided into forty-five districts. Most of the facilities are situated in and around Kingston, but there are small health centers or dispensaries in all the rural districts.

The Kingston Public Hospital (450 beds) is the main general hospital, and there are also in Kingston the Jubilee Maternity Hospital (160 beds, very overcrowded), Bellevue Mental Hospital (2,737 patients in 1967), the Children's Hospital (200 beds), and the George V Sanatorium (228 beds). There are altogether on the island twenty-two general hospitals, ninety health centers, and fifty-six dispensaries. Outside of Kingston, the smaller hospitals average 100 beds. There are also five private hospitals. Treatment at hospitals and

dispensaries is free to the poor, who receive tickets for outdoor dispensary attendance. There is a sliding scale of charges, according to income, for both out and inpatient treatment for those who can afford to pay.

In 1966 there were 1,077 doctors in the country, with a ratio of 1 doctor to 1,514 people. The majority of doctors are concentrated in the Kingston area. For example, at the Kingston Public Hospital in 1967 there were 1,200 inpatients, 250 emergency beds, 100 specialists, while covering the 17 other districts there were only fifty-two government medical officers, mostly the general practice practitioners in the Kingston area.

Most of the doctors have been trained abroad, but in recent years more have been trained in the U.S.S.R., Mexico. In the past the majority were trained in English medical schools, but new students do not study at schools abroad for fear of being rejected their own admission.

#### III. POPULATION POLICY AND PROGRAMS

The case for population control started in the 1950's when the doctors started the first family planning clinic at East Street, Kingston, as a health measure and in attempt to a great illegal abortions. It was first known as the National Family Planning Association and later joined by IPPE. Government interest grew quickly, because of increasing concern with the growth rate and the reduction of emigration, and the government assumed responsibility for the entire Island program in 1965. There have been no ethnic difficulties for government in coming to this decision, as the population is more or less homogeneous. In this respect it is different from Guyana and Trinidad, for example. Abortions have always been illegal, and are present to an unknown extent.

The government formulated a National Family Planning Act in 1970 and a statutory body, the Jamaica National Family Planning Board (NFPB), was set

up to run the program. The board is appointed by the Minister of Health and is responsible to him. Government is responsible for all family planning services on the island, although the voluntary Family Planning Association still runs the oldest and largest daily clinic in Kingston. There is widespread support for the program, and very little opposition. Major constraints are illiteracy, poverty, and the low standard of infant health care, especially in country districts.

The program has set a target of lowering the rate of growth to 1.4 percent by 1980. The program of the National Family Planning Board is highly organized, a daily clinic being run in each of fourteen parishes and four full-time clinics in Kingston. The total number of clinics on the island is 160. Some of the clinics include maternal and child welfare, and it is hoped that eventually most of the clinics will include this service. A prominent information and education program is also put out by the NFPB.

All methods are used, the pill still being the most popular, although its use is decreasing (61 percent to 41 percent now). Depo-provera injections were 22 percent, condoms 18 percent (they have been widely publicized), while the IUD was 7 percent and equal to vaginal methods.

Dr. Wynant Paterson is in charge of the program, and under her there are medical officers (part time), administrators, nurse-midwives, field workers, and others. Services at all clinics are free.

The postpartum program in a few hospitals, introduced about four years ago, is still running, although its popularity is on the wane. The budget of the NFPB is almost entirely from government sources, but there is help from USAID in special areas. a USAID consultant on administration is present at their headquarters, and there is some USAID help with supplies and

equipment. The Ford Foundation is also helping with evaluation and record keeping, and a small helps with the postpartum program. The World Bank has just concluded a five loan agreement for the construction of rural maternity centers and the extension maternity facilities at the Jubilee Hospital in Kinross. The United Methodist Church (UMC), Church World Service, the British Red Cross, and UNICEF are also involved with the national program.

The little research and evaluation has been done to date. Much work is being done by the Institute of Family Planning (IFP) has been started by the Institute of Social and Economic Research at the University of the West Indies. It is generally felt that the program has not been effective in Kinross in the West Indies.

The program is being maintained by the continued existence of the Jamaica Family Planning Association (JFPA). This organization also runs a family planning program and has made a film with the help of the Kinross program.

The program is also being maintained at private clinics, mostly in Kinross. A national sale of contraceptives is growing for those who prefer not to attend clinics.

## II. UNIVERSITY LIFE

The University of the West Indies (UWI) started in 1948 as a public federal institution with thirty three medical students at Mona, Jamaica. It now has two other campuses, at St. Augustine, Trinidad, and Cave Hill, Barbados. There are faculties of Arts, Education, Engineering (Trinidad), Agriculture (Trinidad), Law, Medicine, Natural Sciences, Social Sciences, and Extramural Studies. Also attached to the university is the Institute of Social and

Economic Research, which is part of the Faculty of Social Sciences. It is concerned with research on economic, social, and political questions affecting the whole Caribbean area, and its staff is located throughout the region.

The university is supported by the governments of the English-speaking Caribbean, with the exception of Guyana, which now has its own university. UWI is now an independent university, but had a special relationship with London University from 1948 to 1962. The student body number over 6,000, all full-time students attending the three campuses, and there is an undetermined number of extramural students. The total size of the teaching staff, full- and part-time, is 724, of whom 383 are in Jamaica, 262 are in Trinidad, and 79 are in Barbados.

In addition to the principal contribution from the island governments, there are several research projects funded from external sources, such as the United States and United Kingdom foundations. The physical plant is extensive: at Mona, Jamaica, at St. Augustine, Trinidad, and Cave Hill, Barbados. There are two computers available, one associated with the Census Research Bureau, housed in the Department of Sociology, Jamaica, and the other in the Biometric Division of the Department of Agriculture in Trinidad.

The impact of the UWI is considerable in the region; it is a prestigious institution and its reputation is excellent abroad. Graduates go far afield for postgraduate and permanent appointments, and there is a lively interchange with many other universities all over the world.

The medical school has been run on the lines of the British system, where students spend at least five years studying medical subjects after passing the preliminary requirements in physics, chemistry, and biology. Efforts

are being made to modify and adapt the curriculum to better suit local needs and to integrate subjects more carefully.

UWI is a positive institution, which does a considerable amount of teaching and research in the field of population. Most of this teaching and research is centered in the Department of Social and Preventive Medicine of the Faculty of Medicine at Mona, Jamaica. This department teaches medical students at the postgraduate and undergraduate levels, nursing students, public health nurses, and social welfare students. There are plans for doubling the intake in the next few years.

The department has forty teaching hours at the preclinical (first year) stage, when students are introduced to community health and family planning within a broad social spectrum, with outside speakers invited. The program is still in being.

In the second year - or second clinically, one-tenth of the class (about ten to twelve students) spends five weeks on a rotational clerkship throughout the year in the department. There are also thirty lectures on man and his environment and epidemiology, given one hour per week over three terms. During the five-week clerkship students do a community health project in a rural or urban setting, usually working in pairs. There is an opportunity during the fifth (final) year for a student to choose to work for twelve weeks on an elective, which may be a project in this department or under the auspices of the department in any part of Jamaica or the Caribbean.

At the postgraduate level, forty hours of family planning-population dynamics are taught to a small class of doctors preparing for the Diploma in Public Health.

Other teaching inputs of the department are:

Social Welfare Students, two to six hours teaching in family planning or a four month course with the Extramural Department;

Third Year Nursing Students, ad hoc, but includes two weeks of attendance at clinics run by the department, including family planning clinics; about thirty-nine to forty-five in each class, twice per year;

Trainee Midwives, four to six hours teaching;

Public Health Nursing Students, two to four hours teaching in family planning (about twenty-eight per class); and

Consultations in family planning-population dynamics by members of the department on a fairly large scale, and a member of the department sits on a curriculum-reviewing committee covering all training institutes, at the request of the NFB Board.

Cooperation with government is maximal in this department. One of the department's experimental projects, the training of community health aides, has now been accepted by the Jamaica government and two other Caribbean governments, which have asked for help in this direction. Essentially, it is a method of using available help in a community, usually women, as all-purpose health aides, training them for two to three months at a time. With their breadth of experience in raising their own families and their knowledge of the people and conditions of life within the village or community, they are able to assist doctors and nurses and supplement their work in specific areas.

Professor K. Standard is head of the department, Dr. Karl Smith is in charge of the family planning program, Dr. O. Minnett is in charge of community medicine, and other faculty include Dr. D. Morris (biostatistician), Dr. M. Thorburn (part-time) (mental retardation), Dr. N. Davidson (medical officer), Dr. Jarrett (medical officer), Miss O. Ennever, S.R.N.,

(community medicine), and Mrs. R. Hall (public health nurse-social worker).

Research projects of the department are:

1. Study of perceptions and attitudes of health professionals in Jamaica City respect to abortion.
2. Study of preparation of new clients at the family planning clinic for new methods.
3. Pilot project to demonstrate new approaches to family planning.
4. Health education study in child health and care.

In addition, Dr. Frank Ramsey, senior lecturer in social and preventive pediatrics in Barbados, has obtained a Macy Foundation grant for social and preventive pediatrics in the Eastern Caribbean.

There are several leaders engaged in this ongoing program. Personal relationships appear very good between members of the department and also between members of different departments connected with family planning. For instance, Professor Hugh Syner of the Department of obstetrics and gynecology, who is advancing the endoscopic sterilization method, posterior vaginal approach.

The impression gained was that creative, vigorous leadership was being given by people who understand the local problems and are dedicated to the institution. Occasionally, future planning appears somewhat unstructured, but this may be due to the uncertainties of funding in the future.

The objectives of the teaching and research program are closely tied with the government aims of reducing the rate of population growth. There are also the well-recognized aims of reducing maternal and infant mortality and of improving the general standard of community health care in all the islands. An understanding of the underlying motives of human

behavior pertaining to population in the widest sense seemed an important element in the thinking of the department.

These objectives will need clearer articulation, and help will be needed with drawing up plans for future expansion, before funds can be seriously requested.

At present there seems to be no conflict on the political level in Jamaica, but in some of the other islands there are some differences of opinion regarding population growth. Social factors, however, would appear to be more important than political factors; for instance, the status value of children to the single-parent matriarchal family, common throughout the West Indies.

The population-centered activity of the department has been relatively recent, and most of the research is ongoing and continuing. Some past publications of the department are:

K.L. Standard, Problems of Health and Disease in the Commonwealth Caribbean

K.A. Smith, Prevalence and Effectiveness of Family Planning

K. A. Smith, The Need for a Family Planning Programme in Dominica, West Indies

K. L. Standard and Miss O. Ennever, A Community Health Aide Program and Manual for Community Health Workers

M. Thorburn, Family Planning and the Prevention of Mental Retardation

The impact of this research is important and becoming more important. Especially stressed is the community health aide program, which has wide implications for all developing countries.

Other teaching activities include:

Two rural research projects in which medical students from Cornell University and Pittsburgh University Medical School participate for several weeks each year.

A monthly in-service course by Dr. St. Minnett in various aspects of community medicine for local medical practitioners.

The teaching and research are part of the postgraduate degree, D.P.H., and a two-year graduate programme leading to M.B.S. Undergraduates number about 100 and some of whom are women.

Another department committed with research and teaching in family planning is that of obstetrics and gynecology, also within the Faculty of Medicine.

All medical students learn the techniques of family planning in the family planning clinics of this department. All methods are used. In addition, Professor Hugh Wynter, head of the department, has developed the culdoscopic method of female sterilization (a posterior vaginal approach done as an out-patient procedure). It is becoming increasingly popular, and the department has been approved for the teaching of culdoscopic sterilization at the post-graduate level. The first postgraduate fellows were due to arrive in January 1974. There is a good relationship with the Department of Social and Preventive Medicine, but activities are separate.

There are also relationships with government projects (for instance, Dr. Karl Smith was a member of the Jamaica National Family Planning Board). The UWI essentially belongs to the entire Caribbean and not to Jamaica only.

There are many plans for the expansion of ongoing research, chief of which are studies of the sociological background pertaining to fertility

and an evaluation and study of medical education in family planning.

There are many plans for the expansion of ongoing research, chief among which are studies of the sociological background pertaining to fertility and an evaluation and study of medical education in family planning.

Evaluation and similar procedures of ongoing research appear to be weak, mainly because most of the current staff has not been trained or their work load is too heavy to allow for evaluation time.

Current population activities in the university are going well but need more support from the general body of the Medical Faculty. A process of education for the whole Medical Faculty in current population thinking would help, as would more attempts to relate population activities to other departments, for example, the Department of Pediatrics and the Department of Internal Medicine.

Outside sources of financial support for the Department of Social and Preventive Medicine for population work are urgently needed. The internal university sources of revenue from the constituent governments are unlikely to be increased to support much-needed expansion and inflation, and therefore external sources are essential to the survival of population activities. At present, a USAID grant supports the work of the family planning program under Dr. K. Smith, thus releasing Dr. Smith's salary to employ another member. The salary of Dr. Owen Minott is paid by a British Leverhulme Grant. These are all short-term grants, with uncertainty as to the future. Other foundation sources have been solicited. It is important for donors to realize that the UWI serves the entire English-speaking Caribbean, and not Jamaica only, and also that its research has important applications to larger populations of similar ethnic background, for example, those in many parts of Africa. Careful

and well-thought-out programs must be developed, with expert help.

Working space is quite inadequate for the present functioning of the Department of Social and Preventive Medicine, as well as that of the Department of Obstetrics and Gynecology, let alone any future expansion. The Department of Social and Preventive Medicine is located in a community health center building donated by Kingston to the community. Apart from being too small, it is isolated from the main buildings of the Medical Faculty. Quite nearby, however, are the Caribbean Food and Nutrition Institute and the Extramural Department, which can be drawn into research projects of the department.

Supporting staff are also inadequate, and many of them have double functions.

The functions and legal status of the program provide no conflict within the university. They are acceptable to all. Although the student body is highly articulate, it has not voiced any opposition to family planning. There is also no faculty opposition, though possibly some faculty misunderstanding. The general accepting climate of Jamaican government policy and support for family planning helps greatly. Relationships are good, but the university carefully keeps its activity separate and autonomous. The Department of Social and Preventive Medicine is dedicated to the wider community of the Caribbean but in fact provides considerable services to rural areas in Jamaica as well as to its immediate neighborhood in Kingston.

Students come from all over the Caribbean islands and also from farther afield. Requests for consultant services and research are many, from within and without the Caribbean. About half the graduates go back to their island homes and abroad. They work for governments or private companies or agencies.

The program is a highly prestigious one, highly approved of by the

community, the island governments, and the public and private sectors. It will have an increasing and continuing effect on society at large.

#### V. CONCLUSIONS

The present situation is promising, given the continuing enthusiasm and support of government community leaders and university departments aided by funding from abroad.

There are obvious unmet needs and many plans for future projects, which need to be studied now in order to find resources and personnel to meet these needs when the time comes.

It may be fortuitous that in Jamaica no one institution or single department within an institution has the sole or the major responsibility for developing population studies and family planning priorities. If the future of any of these institutions should be at stake, its functions would hopefully be carried out by another interested body. Future development should therefore be spread out over a wide area in all the institutions now actively engaged in the field.

The future of any regional organization depends on the constituent countries, and it is not impossible that individual parts of the UWI may in time be separated from the main body in Jamaica. This has in fact already happened in Trinidad and Barbados, and Guyana has its own university. Population studies therefore may also follow this pattern, and while it may be a bit premature to suggest, for example, a demographic center in Barbados, it is important at present to ensure that training schemes should cover individuals from all over the English-speaking Caribbean, and as much support as possible should be given to original research that can benefit the entire region. Such research needs to be well done and well documented, to provide a frame of reference for

future planning on any island.

The Department of Social and Preventive Medicine in its last Annual Report lists the research in progress, for instance, research on evaluating preparedness of new clients at family planning clinics to use methods prescribed, a pilot project to demonstrate new approaches to family planning, and an island-wide GNP study in depth where workers will live among the people and evaluate attitudes to family planning. The latter will require a trained sociologist, perhaps Dr. Herman Kiserich of the Department of Sociology, who is a "medical" sociologist now sabbatical in the United States while I was there.

The precarious funding of the Department of Social and Preventive Medicine needs to be strengthened.

The Department of Social and Preventive Medicine, like the other departments of the university, is on a fixed grant from the university funds, to which each of the islands contribute, although some of the smaller islands have difficulty in paying their quotas. Each two or three years there is a slight crisis over overdue commitments. The chairman must constantly be on the lookout for further sources of funding.

The family planning section, which is not really a unit, hopes to become one, but should remain within the department to coordinate its work with other aspects of the work of the department, especially community medicine. Funds for the latter are badly needed, as student projects are funded on an ad hoc basis by local businessmen, and the training scheme for community health aides exists mainly on paper. Several governments including Jamaica have shown interest, but none have yet budgeted for it. This might be an important breakthrough in the training of health personnel, and these women are ideally suited for the transmission of information on family planning.

The culdoscopic sterilization technique has been shown to be a popular and acceptable method of female sterilization, and expansion will probably take place here. More space is needed for beds, teaching, training, and research in the Department of Obstetrics and Gynecology.

The Centre for Demographic Research may be separated from the Department of Sociology, to enable both to grow. Another center for the Eastern Caribbean will probably soon materialize under Dr. Jack Henwood of Trinidad. Coordination of social work research and teaching methods, at present done in three separate institutions (two departments of the university and one government department), seems a likely development, under a suitably qualified person. The needs of the Caribbean region as a whole will be the most important issue, and insular differences may have to be forgotten. In any event, much of the work in population dynamics-family planning done here will have some relevance for many parts of Africa.

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## MEXICO

Axel Mundigo and Adaline P. Satterthwaite

### I. COUNTRY SETTING

Latin America's second largest country and largest among the Spanish-speaking nations, Mexico, has an estimated population of 56.2 million living in a territory of 2 million square kilometers (corresponding density: 27 persons per square kilometer). Most Mexicans are concentrated in the Central Plateau where the best farmland and most important settlements are located. Over eight million people live in the metropolitan region of the capital, making Mexico City the most populous city between New York and Buenos Aires.

Even in pre-conquest times Mexico occupied a preeminent position in the Americas. The pre-Columbian population - estimated to have been as high as 20 million people - would have made it larger than any other nation or group. The vast majority (an estimated 80 to 90 percent) of this Indian population died during the two centuries of war and disease that followed the Spanish conquest. The interaction of the surviving Indians with the 300,000 Spaniards who immigrated resulted in a racial restructuring of the population to the present predominantly Mestizo, or hybrid one. Today only 8 percent of the Mexican people speak an Indian language, and, in actuality, the majority of these speak Spanish as well.

Mexico's population growth rate has increased steadily in recent times. Rapid mortality decline combined with persistently high fertility levels has resulted in one of the highest growth rates in the world. From 1.6 percent in the 1920's, the average annual rate of growth became 2.7 percent in the 1940's and

3.3 to 3.5 percent in the 1960's. Since immigration is minimal, in fact less than emigration, this increase is entirely from an excess of births over deaths. In 1973 the birth rate was 43 births per 1,000 and the death rate 10 deaths per 1,000 inhabitants. The corresponding annual rate of increase is 3.3 percent.

Mexico has a very young population; 46 percent are under 15 years of age. About 24 percent of the adult population is illiterate with female illiteracy reported to be substantially higher, but among today's children of primary school age an estimated 55 percent are in school.

In addition to high population growth, the relative distribution of the Mexican people is changing rapidly. Mexico City, the capital, grew from 4 percent of the nation's population in 1900 to 16 percent in 1970. The disproportionate size, or "primacy," of the capital is illustrated by the fact that Mexico City is about five times the size of the next largest city. Yet migration to this region continues; many states have over 40 percent of their lifetime out-migrants living in Mexico City and about one-third of the city's population lives in squatter settlements.

Migration is also taking place to other cities, although usually at a slower pace. Mexico has 40 cities of over 50,000 population, 15 of which had more than 100,000 inhabitants by 1960. Guadalajara, Monterrey, Ciudad Juarez, Mexicali and Tijuana are the largest of these. By census definition (places of 2,500 or more inhabitants) 50 percent of the population is urban; more realistically 35 percent live in places of over 5,000.

Mexico is a federal union of 29 states, 2 territories, and one federal district. During the past decade Mexico has enjoyed a healthy period of economic growth, and the joint forces of industrialization and modernization have made considerable gains. Today, per capita income is close to US\$700.

## II. HEALTH POLICIES AND PROGRAMS

Mexico has approximately 35,000 physicians, 20,000 of whom work part-time in the public sector (health services, Social Security, national companies, and defense services). Medical education in Mexico is provided by the 22 publicly supported (state or federal government) and 3 private medical schools. In addition there are 3 more public and 7 private medical schools in the process of development. In 1974 there will be approximately 3,000 graduates. Medical education in Mexico includes 5 years in the medical school, one year of hospital internship, and one year of rural service in a government health center. This is spoken of as "social service," and the doctor who is serving is known as a "pasante." This requirement must be fulfilled before the license to practice is granted. There are no national or state professional examinations. Once the diploma has been earned in the medical school and the internship and rural service requirements have been completed, the license will be granted. Neither the Secretariat of Health nor the Secretariat of Education has any statutory responsibility to evaluate the curricula of the medical schools. The Mexican Association of Medical Schools is a private association, which has been trying through collaborative educational efforts of the member schools to work for better and more uniform standards. But as in every voluntary endeavor, many schools do not cooperate.

There are about 90 nursing schools, some affiliated with universities, which grant a professional degree. For these students there is also required a year of rural service before receiving the degree. These nurses are also known as "pasantes."

According to 1969 data there is one physician per 1,400 population, one nurse per 1,500 and one hospital bed per 500. As in many countries, however, the distribution of services is skewed in favor of the federal district and the urban

areas.

Institutional child births are still only about 20 percent for the country as a whole. The public health authorities have accepted the fact that the traditional midwife, or "empírica," must be trained and supervised if the level of maternal and child care is to be improved within the next 20 years. These empíricas represent all levels of education and preparation, from the illiterate "granny" to hospital aids and nurses who have set themselves up with small private clinics and maternity homes in the villages. There are also some males among the group who have trained with correspondence courses from one of the two homeopathic schools in Mexico City.

Auxiliary nurses, who are the backbone of the rural health service (in the "C" level health centers located in towns between 2,500 and 10,000 population), are usually trained on an informal apprentice basis in "C" rural health centers where a "pasante de medicina" and a "pasante de enfermería" have also been assigned. If possible, before these girls are actually appointed by the State health service they will receive a three-month course in one of the five institutes for training medical auxiliaries. Unfortunately, these institutes are overcrowded and there is often a waiting list.

The Mexican Institute of Social Security and the ISSSTE (the Social Security system for government employees) provide good care. Since they operate on a higher budget level than the public health services, they have better hospitals, better equipment, and better salaries. However, they serve only about 10 percent of the population.

### III. POPULATION POLICIES AND PROGRAMS

Traditionally, government policy has been consistently pro-natalist, in an effort to better utilize a large territory as well as increase production and

the nation's wealth.

Although historically there has been a separation of church and state in Mexico, the influence of 400 years of Roman Catholicism has shaped the attitudes of the population against birth control. However, today it is in Marxist ideology and not in faith where the greatest opposition exists toward family planning programs, especially because organized family planning efforts are conceived as representing foreign intervention in the internal policies of national states.

Only a few years ago, the current Mexican president made public statements favoring continuing high population growth as necessary for economic development. Recently, however, he has reversed his previous stance and opposition to birth control to initiate, in 1973, a "National Family Planning Program." In January 1974 a new General Law of Population was passed. The first article defines its prime objective: "regulating those phenomena which affect the size, structure, dynamics and distribution of the population. . ." In introducing the bill to the Mexican legislative chamber, the Secretary of the Interior, Lic. Mario Moya Palencia, noted that "we should plan our demographic growth in such a way that it cannot dilute our efforts toward modernization." This position represents a remarkable change. The change was gradual. First, in 1972, President Echeverría, encouraged and supported by Lic. Moya Palencia, began to soften his public stance. A research study reported by the Mexican Institute of Social Studies, demonstrating that even Mexican Catholics held favorable attitudes toward family limitation, led the government to work on a revised population law. Furthermore the demographic studies and projections of economists at the prestigious El Colegio de Mexico, which demonstrated that present growth rates would result in doubling the population by the turn of the century, had an impact on government planners.

The new population law establishes a National Population Council at the cabinet level, to be presided over by the Secretary of the Interior and composed of

the Secretaries of Education, Health, Treasury, Foreign Relations, Labor and Social Security, Agriculture and Colonization, and the Presidency. Technical consultants may be consulted from nongovernmental agencies as required. Through this law, the Secretary of the Interior is empowered to implement programs of economic development which will influence the structure, dynamics, and distribution of the population. At the same time he can carry out family planning programs through the educational and public health services and monitor programs directed by private agencies so that they preserve fundamental human rights and the dignity of families. The object is to rationally regulate and stabilize population growth to improve the utilization of human and natural resources.

In the early 1950's, through developments in biochemical synthesis, the Mexican yam (*dioscorea*) was found to be the raw material from which progesterone could be produced, thus providing a relatively cheap and abundant source for steroids. Earliest family planning efforts to offer an alternative to criminal abortion were started by a "precursor" of the Maternal Health Association (APSAM), a private nonprofit organization, which has concentrated on clinical research and training of physicians in clinical contraception. Collaborating in these research efforts were the research departments of the Mexican Social Security Institute, the National Nutrition Institute, the ABC Hospital, and the Women's Hospital (Hospital de la Mujer). Many of these institutes received research grants from the Ford Foundation, the Population Council, and the Pathfinder Fund.

The second agency to offer family planning services was the Foundation for Population Studies (FEPAC), which was organized as an IPPF affiliate. By the end of 1973 this foundation was operating 90 clinics throughout the country and in that year registered 109,000 acceptors, preponderantly of hormonal methods. FEPAC follows the usual pattern seen in Family Planning Association free-standing clinics. These are usually located in rented premises, offer solely contraceptive services,

and are staffed by a physician, receptionist/secretary, nurse, and two social workers responsible for client education and follow-up.

As the Mexican government edged closer to a population policy and manifested official concern for voluntary family planning and responsible parenthood, UNFPA concluded an agreement with FEPAC to support 24 hospital postpartum programs in the state of Veracruz. When the Sanitary Code was modified in 1973 to permit government health institutions to provide family planning advice and services as an integral part of maternal and child health care, the General Directorate of Maternal and Child Health (DCAMMI) was designated as the division within the Health Secretariat to prepare a national family planning project for support by UNFPA. An \$8.4 million project has been prepared by the Mexican government and, although not yet formally approved by the governing council of the UNFPA, is already in operation with the assistance of PAHO and some preproject funding. This project includes training and supervision of health providers in service delivery, public information, and research and evaluation. It now covers the Secretariat of Health administered hospitals and "A" level health centers in the urban areas. Already, 188 of these are functioning, with over 40,000 acceptors during the last quarter of 1973. During 1974 the 500 "B" level health center staff will be trained and supplied with contraceptives. In 1975 the training will extend to the "C" level health centers located in towns of 5,000 population or larger, but this project does not contemplate the delivery system for the rural areas.

The other important service delivery system is that of the Mexican Institute of Social Security (IMSS), which also started to train its gynecologists in family planning in the fall of 1973. In addition to family planning sessions in all its regular service outlets, a generous budget has been set aside by IMSS to establish 50 free "barrio clinics" for the general public. Services will be

provided on the FEPAC model, with specially trained family doctors, nurses, and social workers. Twelve such clinics have been opened in Mexico City, 4 in Guadalajara, and 4 in Monterrey. The IMSS is recommending that 70 percent of acceptors be fitted with intrauterine devices. (Both Lippes Loops and Dalkon Shields are being used).

Other official but smaller systems which are including FP services are ISSSTE (government employees social security), FFCC (National Railroad employees), PEMEX (National Petroleum of Mexico), Defense Ministry, and armed forces. Each of these networks has its own training system for personnel. The most highly sophisticated and best organized is the teaching program of the IMSS.

Contraceptive methods available in all programs include IUD's, low-dose combined oral contraceptives, vaginal suppositories, and diaphragms. Condoms are not as generally available. Abortion is not legal. However, sterilization, both male and female, is becoming more popular, especially in certain selected clinics. Dr. Gutiérrez Najer while at the Hospital de la Mujer popularized the culdoscopic method. He was supported in providing an international training course by the Ford Foundation. Laparoscopy is being promoted through Johns Hopkins University training teams in Guadalajara and Monterrey. Dr. Rudolfo Quinones at IMSS is working on hysteroscopic tubal occlusion with WHO support.

In the past ten years external assistance (primarily Ford Foundation and Population Council) to Mexico in the field of demographic and social science research and training for El Colegio de Mexico and the Mexican Institute of Social Studies has amounted to \$780,000. External assistance to biomedical research during the same period has exceeded \$1.8 million. Much of this has gone to the Department of Investigation at the Mexican Institute of Social Security, to the Hospital de la Mujer for the culdосcopy program, and to the National Nutrition Institute for the postgraduate course in human reproduction. More recently the

IDRC (Canada) has also been assisting this program. PAHO/WHO have also assisted the Secretariat of Health (SSA) in several research and training efforts. In addition there has been considerable private assistance from the pharmaceutical industry.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

Although Mexico was one of the first countries of the New World to have a university (founded in 1551), by 1910 the country still had only one real university. Since 1940, however, the rate of founding of new universities has been exceptionally rapid; Mexico had 7 universities in 1940; 12 by 1950, 33 by 1967, and 50 by 1974. (This figure contrasts with 160 for the United States.) The autonomy of higher learning and research is constitutionally established, although the Federal government does exercise strong leadership, especially because of the dominant role it plays in funding.

Historically, early universities in Mexico were law schools. In fact, the median date for the founding of law faculties is 1854, while all other faculties have a median founding date that is post 1940. In particular, economics and humanities are among the youngest "schools" or "faculties" having generally developed after 1957.

As is typical for Latin America, Mexican students follow professional "carreras" (programs) even at the undergraduate level. That is, they spend four to six years studying a single subject (e.g. medicine, law, economics, sociology) toward a professional degree. In most "carreras" it is customary for a thesis to follow a basic period of course work; therefore, a sizeable number of quasi-graduates become "egresados" who have completed course work for the professional degree but who have not yet completed a thesis.

In 1967 Mexico had 154,000 registered students at the professional

("carrera") level, the third largest enrollment in Latin America (behind Argentina and Brazil). Well over half of these students were located in the capital city, many of these at the enormous National Autonomous University of Mexico (UNAM). This is not surprising, however, since the demand for university education is a recent one, one that at least initially was strongest in the capital city. In 1930 only 3.4 percent of Mexicans in the age group 15-19 were enrolled in middle education, while this figure was 27 percent for the Federal District. Even in 1960 these figures were 12.7 percent nationally and 37 percent in the Federal District.

Basically, university education is still only for a small elite. The 1970 census reveals that only 12 persons per 1,000 ever attended a university. Still, this figure compares favorably with other Latin American countries (e.g. a rate of 9.5 for Brazil). And the growing middle class in Mexico insures that the demand for education will continue to increase.

Most funding for education in Mexico, comes from Federal sources - and most, in fact, goes to the Federal District (which receives six to seven times the federal monies for universities that state universities do). State support, of course, is directed only to state universities (which often include secondary level students); however, even when all sources of funding are taken into account, the institutions in the Federal District still have twice the financial support of state ones.

There is evidence of increasing national concern for the over-centralized distribution of resources, including education. President Echeverría places emphasis on decentralization and regional development. Federal budgetary allocations to the provinces have increased, especially in the educational sector in which high priority is placed on the development of provincial universities.

Today, the list of major Mexican public universities would have to

include not only the National Autonomous University of Mexico (UNAM) and El Colegio de Mexico (an Independent graduate school of social sciences and humanities) which are located in Mexico City, but also nine regional or state campuses. Five large regional universities are located in the states of Jalisco, Nuevo Leon, San Luis Potosí, Veracruz and Sonora. Four additional state-supported institutions are in Guanajuato, Mexico State, Puebla, and Michoacán. There also is a major private university in Nuevo Leon, (The Technological Institute of Monterrey) which should be mentioned since it has three-fourths of all postgraduate students outside the Federal District.

The National University - UNAM - is located in the outskirts of Mexico City in its own sprawling university city. It is the oldest Mexican institution of higher learning and as many large public universities in Latin America, it is highly politicized. High university officials are elected with student participation and the candidates run on regular political platforms.

To meet an increasing demand for health manpower, provincial universities are organizing new medical schools. Oftentimes when new universities are launched the first department or faculty to be organized is the medical school. The state governments provide the major portion of the budget for these universities, although there is often some assistance from the Federal Education Secretariat. Today, there are 22 public (federal or state) medical schools, with three more in the process of development.

All institutions in Mexico charge fees, although tuition is much higher in the private universities. There are many private universities which do not have medical schools. At present, there are three private medical schools in operation and seven more in the process of development.

There are, then, many institutions which can develop to meet the growing demand for higher education in Mexico. The relative newness of both this demand

and supply, however, implies a long-term adaptation to the pressure of growth in the system. The relative locations of and funding for universities, as well as to the curriculums they offer, are all in a dynamic stage characterized by change and constant innovation.

#### Medical Schools

Table I lists the medical schools by state (alphabetical order) in which they are located, source of financial support and number of students enrolled.

Table II lists the medical schools and the number of professors involved in the population program teaching. The number of academic hours devoted to demography, family planning, and human reproduction are listed, along with an indication whether there is opportunity for family planning clinic practice or any research in progress.

There follow individual reports on these medical institutions which have shown most interest in the teaching of demography, human reproduction, and family planning. This is often because of the interest of the particular faculty members concerned. Four faculty members from the department of Ob/Gyn or Medicine (endocrinology) at Durango, Guanajuato (Leon), San Luis Potosí, and Yucatán (Merida) have completed the two-year course in human reproduction at the National Institute of Nutrition. These professors are now conducting clinical research in family planning and human reproduction at their respective medical schools, for which they are receiving a small subsidy from the SSA/DCAMMI. Together with the INN these four units have been designated as official clinical research centers for the Secretariat of Health (SSA) and General Directorate of Maternal and Child Health (DCAMMI).

Six other professors have also attended the FEPAFEM course in Colombia

TABLE I  
MEDICAL SCHOOLS IN MEXICO  
 (arranged according to the state  
 in which they are located)

State	Financial Support	Enrollment	Official Name and Address
1. Aguascalientes	State	150	Escuela de Medicina Instituto Autónomo de Ciencias y Tecnología de Aguascalientes Aguascalientes, Ags.
2. Baja California	State	300	Escuela de Medicina Universidad Autónoma de Baja California, Mexicali, B.C.
3. Baja California	Private	n.a.	Escuela de Medicina de Tijuana Tijuana, B.C.
4. Chiapas	State	n.a.	Escuela de Medicina de Chiapas Tuxtla Gutierrez, Chiapas
5. Chihuahua	State	400	Escuela de Medicina Universidad Autónoma de Chihuahua - Chihuahua, Chih.
6. Chihuahua	Private	n.a.	Escuela de Medicina Universidad Autónoma de Ciudad Juarez - Ciudad Juarez, Chih.
7. Coahuila	State	600	Escuela de Medicina Universidad de Coahuila Torreón, Coah.
8. Durango	State	400	Escuela de Medicina Universidad Juárez de Durango Durango, Dgo.
9. Guanajuato	State	400	Escuela de Medicina Universidad de Guanajuato Leon, Gto.
10. Hidalgo	State	400	Escuela de Medicina Universidad Autónoma de Hidalgo Pachuca, Hgo.
11. Jalisco	State	900	Facultad de Medicina Universidad de Guadalajara Guadalajara, Jal.

State	Financial Support	Enrollment	Official Name and Address
12. Jalisco	Private	1,500	Facultad de Medicina Universidad Autónoma de Guadalajara - Guadalajara, Jal.
13. Mexico	State	500	Escuela de Medicina Instituto de Ciencias de la Salud de la Universidad Autónoma del Estado de Mexico Toluca, Mexico
14. Michoacan	State	3,000	Escuela de Medicina Universidad Michoacana de San Nicolás Hidalgo Morelia, Mich.
15. Nuevo Leon	State	2,000	Facultad de Medicina Universidad Autónoma de Nuevo Leon Monterrey, N.L.
16. Nuevo Leon	Private	550	Escuela de Medicina Instituto de Ciencias de la Salud de la Universidad de Monterrey Monterrey, N.L.
17. Oaxaca	State	700	Escuela de Medicina Universidad "Benito Juárez" Oaxaca Oaxaca, Oax.
18. Puebla	State	2,500	Escuela de Medicina Universidad Autónoma de Puebla Puebla, Pue.
19. Queretaro	State	n.a.	Escuela de Medicina de la Universidad de Querétaro Querétaro, Qro.
20. San Luis Potosí	State	490	Escuela de Medicina Universidad Autónoma de San Luis Potosí San Luis Potosí, S.L.P.
21. Sinaloa	State	n.a.	Escuela de Medicina de la Universidad Autónoma de Sinaloa Sinaloa

State	Financial Support	Enrollment	Official Name and Address
22. Tabasco	State	350	Escuela de Medicina Universidad Juárez Autónoma de Tabasco Villahermosa, Tabasco
23. Tamaulipas	State	600	Facultad de Medicina Universidad Autónoma de Tamaulipas Tampico, Tamps.
24. Tamaulipas	Private	n.a.	Escuela de Medicina Instituto de Ciencias Biológicas del Noreste Tampico, Tamps.
25. Veracruz	State	700	Facultad de Medicina Universidad Veracruzana Veracruz, Ver.
26. Veracruz	Private	n.a.	Escuela de Medicina Universidad de Veracruz Poza Rica, Ver.
27. Veracruz	Private	n.a.	Escuela de Medicina de Jalapa Jalapa, Ver.
28. Veracruz	Private	n.a.	Escuela de Medicina de Orizaba Orizaba, Ver.
29. Yucatán	State	350	Escuela de Medicina Universidad de Yucatán Merida, Yuc.
30. Zacatecas	State	500	Escuela de Medicina Universidad Autónoma de Zacatecas Zacatecas, Zac.
31. Distrito Federal	Federal (Education)	12-15,000	Facultad de Medicina Universidad Nacional Autónoma de Mexico Mexico 20, D.F.
32. Distrito Federal	Federal (Defense)	500	Escuela Médico Militar Mexico, 10, D.F.
33. Distrito Federal	Federal (Education)	3,000	Escuela Superior de Medicina Instituto Politécnico Nacional Mexico, 17, D.F.

State	Financial Support	Enrollment	Official Name and Address
34. Distrito Federal	Private	450	Universidad La Salle Escuela de Medicina Mexico 18, D.F.
35. Distrito Federal	Private	n.a.	Escuela de Medicina de la Universidad Metropolitana Mexico, D.F.
<u>School of Public Health</u>			
Distrito Federal	Federal SSA	250	Escuela de Salud Pública de Mexico Mexico, 19, D.F.
<u>Schools of Homeopathy</u>			
1. Distrito Federal	Federal (Education)	--	Escuela de Medicina Homeopatia Instituto Politécnico Nacional Mexico, D.F.
2. Distrito Federal	Private	--	Escuela Libre de Homeopatia Mexico 2, D.F.

n.a. Student enrollment not available; these are schools still in the development stage.



on demography and health. Numerous faculty members in departments of preventive and social medicine have had an advanced course leading to a Master of Public Health from the School of Public Health.

School of Medicine  
Universidad Juárez de Durango

This state-supported university is located in Durango. The Medical School is relatively new compared to the rest of the university. The Medical and Nursing Schools have modern buildings and use the Civil Hospital as the teaching hospital. The Medical School enrollment is 400.

As one of the four clinical research centers designated by government (SSA/DGAMMI - General Directorate of MCH), this institution is of high priority. The principal interest in this medical school is centered in the activity of one man, Dr. Roberto Rivera Damm, who is very dynamic and is doing an excellent job in teaching and research.

The director of the Medical School is Dr. Miguel Valle Bueno. Dr. Damm is chairman of the Department of Medical Research and director of the Family Planning Research Clinic, which was originally one of the FEPAC supported post-partum clinics and is now supported by a grant from the Directorate of Maternal and Child Health (DGAMMI). Dr. Damm is a graduate of the course in biology of human reproduction at the National Nutrition Institute (Dr. Carlos Gual). He has also been a coordinator for the FEPAC program in the state. He has been working with DGAMMI and the Downstate Medical Center of New York on an action research project for training auxiliary nurses in rural "C" level health centers to provide family planning services.

Seven professors teach demography, human reproduction, and family planning. The Department of Obstetrics and Gynecology has been closely involved in the FP program. Teaching hours include demography (52) and human reproduction

(35), with 10 hours devoted to family planning theory and practice.

Dr. Damm is particularly involved in research at the present time, both basic and applied. He is working on hypothalamic physiology, contraceptive hormonal activity mechanisms, and progesterone bearing and copper IUD's and their effects on health. The statistical section of FEPAC also conducted a KAP survey in a barrio of Durango with the assistance of the nursing and medical students.

Rating: (All ratings of medical schools immediately follow this section).

School of Medicine  
Universidad de Guanajuato

This state-supported university has its main campus in Guanajuato, where the emphasis is on history and archeology. The Medical School, with 400 students, is located in Leon.

Since this is one of the four institutions named as clinical research centers by the General Directorate of Maternal and Child Health, under the leadership of the National Nutrition Institute Human Reproduction unit (Dr. Carlos Gual), the Medical School merits increasing support. The faculty has already demonstrated interest, although the emphasis is more on human reproduction than demography.

The director of the Medical School is Dr. Santiago Hernández Ornelas; the professor of preventive and social medicine is Dr. Carlos Escudero. Dr. Juan M. Malacara, who is a graduate of the course in biology of human reproduction of the National Nutrition Institute is director of the Family Planning Research Clinic under the Department of Ob/Gyn.

Six professors participate in courses related to demography, human reproduction, and family planning. Demography is taught in biostatistics and community medicine, a total of 28 hours. Human reproduction and family planning are taught in anatomy, physiology, endocrinology, pharmacology, and obstetrics/gynecology for a total of 316 hours. Six hours are devoted exclusively to family planning.

Research interests include a comparative study of family dynamics in urban and rural areas. This has been done partly in collaboration with a project of the Mexican Institute of Social Studies (IMES). Dr. Malacara is pursuing his interest in the effect of LH-RH on the secretion of gonadotrophins and the role of the pituitary in the maintenance of the corpus luteum. There is interest in initiating research in infant mortality and its possible relation to family planning acceptance.

Faculty of Medicine  
Universidad de Guadalajara

This public university, financed by state and federal funds, is located in Mexico's second largest city. Major emphasis is given to health sciences. Medical School enrollment is 900, with about 120 graduates annually.

(This institution is not to be confused with the Faculty of Medicine of the Universidad Autónoma de Guadalajara, which is a private medical school with an enrollment of 1,500 students, largely expatriates - U.S. nationals - who pay very high tuition.)

Because of the interest and support of the chairman of the Department of Preventive and Social Medicine, Dr. Rodolfo Moran, who has also acted as a coordinator for the FEPAC postpartum program, this is a high priority institution. Dr. Moran has also been medical director of the Civil (University) Hospital and has been influential in securing the cooperation of the Department of Obstetrics and Gynecology and the house staff.

The director of the Faculty of Medicine is Dr. Raul Rojas Ruiz (an officer of the Mexican Association of Medical Schools). Dr. Rodolfo Moran González is chairman of the Department of Preventive and Social Medicine. The dynamic leadership in demography, MCH, and family planning is due to the efforts of Dr. Moran. This Medical School and the Civil Hospital have been participating in the

FEPAC postpartum program, which has provided teaching and practice for medical students and resident staff.

Nine professors are concerned with the teaching of demography, public health, epidemiology, human reproduction, and family planning. Seventy eight hours are devoted to demography and 7 hours to family planning related to human reproduction.

Dr. Luis Uribe Ramírez, professor of obstetrics and gynecology in the Medical School and head of the department at the Social Security Hospital (IMSS), is performing laparoscopic tubal sterilizations. He is affiliated with the International Sterilization Program of Johns Hopkins University, Department of Ob/Gyn.

Dr. Rodolfo Moran González has had graduate training in the United States and in Colombia. Ten other professors in the Departments of Preventive Medicine and Obstetrics/Gynecology have had postgraduate courses in Mexico, four have a Master of Public Health from the School of Public Health in Mexico City.

There is definite interest in research in demography, maternal and child health, and family planning in this institution. Dr. Moran has participated in maternal mortality surveys with relation to the problem of induced abortion. In the Department of Preventive Medicine there has been an evaluation of the knowledge and attitudes of the medical students of Guadalajara. Planned research includes a study of the influence of communication media on changes in attitude and practice of FP. One professor is planning to extend the community medicine program to study rural-urban migration and the effect of FP practice.

Institute of Health Sciences  
Universidad Autónoma Del Estado De México, Toluca

This is the state-supported Medical School of the state of Mexico, whose capitol is at Toluca. The state governor is very powerful politically and is

a strong supporter of family planning. This Medical School is part of a complex for training nursing students, medical technicians, and other health professionals. There are 500 students enrolled in the Medical School. The buildings are modern.

This is a high priority school because of the political and intellectual commitment to family planning and the ability to prepare high level graduates. This school is located at a distance of 60+ kilometers from Mexico City. Thus, it is sufficiently isolated not to be involved in student unrest but sufficiently close to draw upon much of the expertise from the federal district.

The Director of the Medical School is Dr. Ramón Arrizabalaga, who is also vice president of ASMEFEM. Professors in the Department of Preventive Medicine and in Public Health Education are Dra. Estela Ortiz Romo and Dra. Yolanda Mansilla de Vega.

Four professors have attended a series of national courses on family planning and demography, and two have participated in courses in FEPAFEM on demography and health and on teaching of demography. This department has been participating in the Family Health Foundation Project (Tulane) in Toluca, and several of the staff have visited Tulane. The Maternity Hospital and the Department of Obstetrics and Gynecology participate in the FEPAC postpartum program, originally supported by the Population Council.

Nine professors participate in courses including demography, family planning, and human reproduction. Hours are as follows: demography 125, family planning 11, and human reproduction 52.

Research activities include: Fertility variables, KAP survey, analysis of population census, community health delivery system combining family planning services with the training of village level workers.

Faculty of Medicine of The Autonomous  
University of Nuevo Leon, Monterrey

This state-supported university with enrollment of 2,000 students is located in Monterrey. (There is also a private medical school in the Instituto de Ciencias de la Salud de la Universidad de Monterrey, enrollment 550 students).

Particular interest at the present time is in the field of female sterilization by laparoscopy. There have been postgraduate training courses initiated by Johns Hopkins Department of Ob/Gyn.

The director of the Medical Faculty is Dr. Marco Antonio Ugartechea. Dr. Leopoldo Garza Ondarza is head of the Department of Preventive and Social Medicine. Dr. Roberto Rodríguez A. and Dr. Rogelio García Flores are in the Department of Ob/Gyn and are participating in the International Sterilization Program with laparoscopy under the Johns Hopkins University School of Medicine.

Three professors participate in teaching demography and human reproduction. Teaching hours include: demography 41, reproductive functions 36, and family planning 4.

In the field of research one professor is studying social factors affecting health, and another plans a KAP survey among parturients at the Civil University Hospital.

School of Medicine  
Universidad "Benito Juárez" de Oaxaca

This state-supported university is located in Oaxaca. The main university campus is in the center of the city while the Medical and Nursing Schools occupy modern buildings near the Civil Hospital (used for teaching). Other faculties of the University include commerce, business administration and law. Enrollment of medical students reaches 700, but only 30 graduate annually. One hundred twenty nurses are enrolled.

The importance of this medical school lies in the close relationship with the State Health Service (Servicios Coordinados) and the plans being developed for special rural action-oriented research projects being promoted by the Directorate of MCH (DGAMMI).

The director of the Medical School is Dr. Hugo Sarmiento. Dr. Carlos Aranda Villamayor in the Department of Preventive and Social Medicine is responsible for teaching demography. Dr. Carlos Ortiz Escorcia is the retiring head of the department and has not been supportive of family planning. The professor of pediatrics, Dr. Mario Pérez Ramírez, is also the state coordinator for FEPAC and has been a champion of family planning. Through his efforts a special university teaching family planning clinic has been organized, in addition to the large FEPAC service clinic in the city.

Dr. Molina, chief of Obstetrics and Gynecology at the Civil Hospital, attended the Johns Hopkins University summer course for professors of Ob/Gyn and is now doing laparoscopic tubal sterilizations under local anesthesia. Servicios Coordinados now operates the family planning clinic in the Civil Hospital and is paying the salary of a doctor and two nurses who are responsible for postpartum motivation and services.

Three professors participate in the formal teaching program. There are 11 hours of demography, 7 of family planning, and 12 devoted to human reproduction.

There is no research activity at present, but with the interest of DGAMMI in stimulating research projects such as the "empírica study in Etlá" and the large MCH/FP project for 7 districts in Oaxaca, there will be opportunity for more involvement for both the Medical School and the Nursing School.

School of Medicine  
Universidad Autónoma De San Luis Potosí

This state-supported university medical school located in San Luis

Potosí has an enrollment of 490 students.

The only importance of this program is that this is one of the four clinical research centers supported by DGAMMI, with Dr. Augusto Díaz-Infante as director. Dr. Miguel Barrios, executive secretary of ASMEFEM, is located here at the Medical School. However, in view of the fact that Dr. Barrios has not been able to overcome resistance within the faculty, and is himself too much involved in private practice to actively do much in FP, and the fact that very little coordination has been developed among activities in separate departments, I would feel that this institution is of low priority.

The director of the Medical School is Dr. Luis Ferrando Rangel. Professor of Preventive Medicine and executive secretary of the ASMEFEM is Dr. Miguel Barrios. He runs a private maternity home and a FP clinic, which he took over from FEPAC.

Dr. Augusto Díaz-Infante, director of a family planning research clinic is attached to the Department of Ob/Gyn. Dr. Díaz-Infante is a graduate of the course in biology of human reproduction of the National Nutrition Institute (Dr. Carlos Gual).

Only two professors teach in the field of demography and family planning. Twenty one hours are devoted to demography and 15 to family planning. There are 30 hours in human reproduction.

The only research activity in progress or planned is that being directed by Dr. Díaz-Infante, who is doing clinical testing of copper IUD's and depoprovera, as well as the usual oral hormonal contraceptives.

Medical School of Veracruz (Faculty of Medicine)  
Universidad Veracruzana

This is the state-supported Medical School of Veracruz, which is one of the faculties of the Universidad Veracruzana. There are approximately 700 medical

students enrolled. (In this state there are three other private medical schools, which are in the process of development at Pozo Rico, Jalapa, and Orizaba.)

History of interest and involvement in FP dates from several seminars conducted by the Maternal Health Association (APSAM) and FEPAC. With UNFPA support, FEPAC opened 24 hospital postpartum programs in 1973.

This is a high priority institution with potential; there is strong faculty interest with good preparation. Since there is already considerable family planning activity in the state, it should not be difficult to provide for closer collaboration between the service delivery systems and the teaching institution.

The Director of the Faculty of Medicine is Dr. Juan Capallera Mateos, and professor of Preventive and Social Medicine is Dr. Arnolfo López Rico, who is also responsible for coordination of teaching.

Six professors are involved in teaching courses in demography, human reproduction, and family planning. Teaching hours include demography 43, family planning in demography 4, reproductive function 163, and family planning in reproduction 5.

Two professors have had international courses in biology of reproduction and human fertility, which probably accounts for the greater emphasis in this Medical School. The 163 hours in reproductive function are included in courses of preventive medicine, pediatrics, and gynecology and obstetrics.

At this time there is no research activity but there is interest in initiating research in mortality, abortion, family size and health, and program evaluation.

School of Medicine of Mérida  
Universidad De Yucatán

This state-supported Medical School is located in Mérida. Enrollment is

approximately 350 students.

This school may have potential for future development, but at present must be given low priority. The greatest activity in Yucatán is the special program of rural clinics being developed by the IMSS among the hemp growers. The FP research clinic directed by Dra. Thelma C. de Cetina is one of the four research centers supported by funds from DGAMMI.

Director of the Medical School is Dr. Humberto Castro Montes de Oca. Dr. Oscar Cuevas Graniel is director of the Department of Research and is assisted by Dra. Thelma C. de Cetina, who has recently graduated from the course in biology of human reproduction of the National Nutrition Institute. She is the director of the Family Planning Research Clinic, which is carrying out research studies for the General Directorate of MCH, which is in charge of the national FP program.

Four professors are participating in teaching demography and human reproduction. Teaching hours include: demography 21, and reproductive function 70, with 8 hours devoted to FP.

Dr. Cetina has recently joined the faculty and is beginning to organize the clinical research, which will include studies on Copper IUD's and depoprovera, among other contraceptives.

National Faculty of Medicine  
Universidad Nacional Autónoma De Mexico, (UNAM)

This federally supported national university is the largest and oldest university in Mexico. It is located in the Ciudad Universitaria (University City). All major disciplines are represented, and there are excellent library and laboratory facilities. There is a computer and statistical center, which is used by many research organizations and institutes within the university and also by outside agencies such as IMES and FEPAC. In the Medical Faculty there are 12,000 to

15,000 students.

This is an important institution, but because of its size, politicization, and lack of convinced leadership, it is not a logical place to expect much impact.

There are no institutional leadership or objectives evident with relation to the population field.

Director of the Medical Faculty is Dr. Jose Laguna García. Chairman of the Department of Preventive and Social Medicine is Dr. Alfonso Argelini.

There are 332 professors and assistants involved in the population teaching program which is divided as follows: preventive medicine 38, human reproduction 49, demography in public health 78, human reproduction in anatomy 85, reproductive physiology 36, and obstetrics and gynecology 46.

The number of hours in the curriculum for demography are 12 and for human reproduction 89. Each class is divided into 30 or 40 sections.

Within the university is the Institute of Biomedical Research (Dr. Carlos Beyer), which collaborates with the Mexican Institute of Social Security (IMSS) in providing an advanced degree in reproductive biology. There is also the Social Science Research Institute, with such strong leftist orientation that there is no interest in demographic studies related to fertility.

There is isolated research particularly in the Biomedical Research Institute, but this has little effect on the undergraduate teaching. Dr. Beyer is studying neuroendocrine regulation of sexual behavior.

Superior School of Medicine  
Instituto Politécnico Nacional

This Medical School, supported by the Federal Educational Ministry, is located in Mexico City, D.F. Enrollment is about 3,000, with an expected graduation of about 400 per year. This is the second largest medical school in the federal

district, and was organized in an attempt to provide a more efficient course than is available in the UNAM, with its 12,000 to 15,000 students and highly politicized atmosphere. (This is known as the Higher or Superior School of Medicine as distinct from School of Homeopathic Medicine, which is also attached to the National Polytechnical Institute.)

This is a high priority institution because of the strong interest and support of Dra. Susana Rivas, chairman of the Department of Preventive and Social Medicine. Dra. Rivas received special training in the FEPAFEM course in demography and health in Bogota.

Director of the Medical School is Dr. Hector Castro Abitia (who is also an officer of ASMEFEM). Dra. Rivas Pastro is head of the Department of Preventive and Social Medicine.

Six professors participate in the teaching program: two in reproductive physiology, three in demography, and one who combines demography, reproductive functions, and family planning. Several of these professors have had special courses in public health, demography, and reproductive physiology.

Teaching hours include: demography 45, (including 5 hours of FP), reproductive physiology 75, and FP related to reproductive function, 1.

In the field of research one professor is directing a pilot KAP and pregnancy history survey, and another is working on a fertility survey with special attention to mortality. It is planned to initiate a study in the area of infant mortality.

There is definite interest in teaching and research in population in this institution. The medical students who graduate and go to the rural areas for "social service" seem to be well motivated to provide education and services to the rural population.

School of Public Health

This professional school is administered by the Secretariat of Health and Assistance (SSA), from which it receives its budget. PAHO has offered some financial assistance and consultation. The school grants approximately 100 masters degrees in public health annually, about 70 to physicians. It also trains nurses, engineers, social workers, and statisticians and hospital administrators who are sent by the public health service. The school is completely independent of the National University. Approximately 15 percent of the student body are foreign nationals who receive PAHO fellowships for study in Mexico.

Located in the same geographic area are the School of Social Work and the School of Nutrition, which also provide preservice training for personnel in these fields who are employed by the Health services. For historical reasons, these two schools maintain their autonomy and there is practically no inter-institutional communication.

The School of Public Health has modern buildings with an auditorium and a fairly good library.

This is a high priority institution, since it has been designated as the official training center for the Health Secretariat personnel who will be providing integrated MCH/FP services. Support for this institution in fellowships for faculty members and consultants is included in the UNFPA grant to the DGAMMI in the Secretariat of Health.

With assistance from PAHO, the School of Public Health will also be strengthened to include a course in family planning program administration, to be offered on a regional level.

Dr. Luis Peregrina Pellón is the director.

Academic courses offered are Masters in public health, hospital administration, and industrial health, and public health nursing degrees. Also there is

specialization in epidemiology, administration of medical care, public health nutrition, and public health administration open to those graduates who have already completed the Master of Public Health degree. There is also a 4 month course in health planning.

The School of Public Health has collaborated with the General Directorate of Maternal and Child Health (DGAMMI) in a special four week training course for the coordinators named to direct the integrated MCH/FP services at the State Health Departments (Servicios Coordinados). PAHO advisors have assisted in this, and lecturers came from IMES and El Colegio de Mexico.

The School of Public Health has also collaborated in the week long training courses organized by the National Rural Womens' Federation (CNC) and the Directorate of MCH (DGAMMI), for the traditional midwives ("empíricas"). Some 1,400 were trained in 1973. These courses included one day devoted to Family Planning - What? and How?

In all the curriculum materials of the School of Public Health, attention is given to integrated maternal and child health, within which fertility regulation and responsible parenthood is discussed. In none of the materials of the regular courses are the words "contraception" or "family planning" mentioned. For ideological reasons the School of Public Health was very reluctant to enter into the population field, but with the passing of the new population law of 1974 the whole field is being legitimized.

Institutional leadership and research capability has not been developed or promoted in the population field. Only with the change of the law is there beginning to develop some responsibility for working in this field.

The School of Public Health has already offered one training course for state MCH/FP coordinators and has offered more than 30 courses for "empíricas" through the Public Health Nursing Department, headed by Sra. María Guadalupe

Frausto Pérez. The school is in the process of conducting an evaluation of these courses and is preparing a manual for the empiricas.

Rankings of Medical Schools

School of Medicine - Universidad Juárez De Durango:

Overall quality of university: average

Quality of population program: good

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in program objectives: good

Overall rating: good

School of Medicine - Universidad De Guanajuato:

Overall quality of university: good

Quality of population program: average

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: good

Faculty of Medicine - Universidad De Guadalajara:

Overall quality of university: excellent

Quality of population program: good

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in program objectives: good

Overall rating: excellent

Institute of Health Sciences - Universidad Autónoma Del Estado De México, Toluca:

Overall quality of university: excellent

Quality of population program: good

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in program objectives: excellent

Overall rating: excellent

Faculty of Medicine of the Autonomous University of Nuevo Leon, Monterrey:

Overall quality of university: good

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: good

School of Medicine - Universidad "Benito Juárez" De Oaxaca:

Overall quality of university: average

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: good

School of Medicine - Universidad Autónoma De San Luis Potosí:

Overall quality of university: weak

Quality of population program: average

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: average

Medical School of Veracruz (Faculty of Medicine) Universidad Veracruzana:

Overall quality of university: good

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: good

School of Medicine of Mérida - Universidad de Yucatán:

Overall quality of university: average

Quality of population program: average

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: average

National Faculty of Medicine - Universidad Nacional Autónoma de México, (UNAM):

Overall quality of university: excellent

Quality of population program: average

Apparent degree of staff interest in population program: weak

Likelihood of achieving success in program objectives: average

Overall rating: average

Superior School of Medicine - Instituto Politécnico Nacional:

Overall quality of university: good

Quality of population program: excellent

Apparent degree of staff interest in population program: excellent

Likelihood of achieving success in program objectives: excellent

Overall rating: good

School of Public Health:

Overall quality of university: good

Quality of population program: average

Apparent degree of staff interest in population program: good

Likelihood of achieving success in program objectives: good

Overall rating: good

Interaction between the Population Program (SSA-DGAMMI), the Medical Schools, and the Mexican Association of Faculties and Schools of Medicine (ASMEFEM): Strategy for the Future

In view of the awakening Mexican government interest in population and family planning, decisions as to strategy will have to await a more clear definition of the functions of the newly created National Population Council. The agencies responsible for the implementation of the various service delivery systems are: SSA/DGAMMI (Maternal and Child Health Directorate of the Secretariat of Health), IMSS (Mexican Institute of Social Security), and FEPAC (Foundation for Population Studies, IPPF affiliate). Other national industries (armed services, etc.) have already developed training programs for their own service personnel. Through the UNFPA grant to the Secretariat of Health (SSA/DGAMMI) the training budget includes 48 man-months of short-term courses (12 per year for 4 years), 170 man-months of academic courses (5 long-term fellowships for the first year and 3 each in succeeding years), \$3,000 per year for observation-study tours, and \$150,000 per year for in-country training of service personnel.

The first group of state/MCH/FP coordinators was trained at the School of Public Health in September 1973. The course included 56 hours of theory and 40 hours of practice, limited to SSA institutions. These state coordinators are then responsible for training the health service personnel within the state. The establishment of regional training centers is under consideration.

The Mexican Association of Medical Schools and Faculties (ASMEFEM), through contracts with FEPAFEM, has stimulated a few medical school professors (usually in preventive medicine) to attend the three-month courses in Demography, MCH, and FP offered in Colombia. Through the Instituto Nacional de Nutricion and the Instituto de Investigaciones Biomedicas de la UNAM y IMSS, researchers and professors in endocrinology and human reproduction have been prepared. However, to date only a limited number of medical schools have an active teaching and

research program. ASMEFEM is recommending that a population division be created to promote coordination and supervision of the medical schools in the institutionalizing of the teaching of demography, family planning, and human reproduction, so that each graduate will have the basic preparation to provide family planning services during his year of rural service in "C" level health centers. To meet the present deficiency, the ASMEFEM and the DGAMMI are collaborating in a summer workshop for two faculty members from each medical school - one from preventive and social medicine and one from Ob/Gyn. It is hoped that this will result in coordinated planning so that fifth-year medical and nursing students can receive practical clinic experience in the SSA health centers as well as in the FEPAC and IMSS clinics located near the medical school. Furthermore DGAMMI and ASMEFEM are planning to offer two weeks of special training in fall 1974 for doctors and nurses entering the rural service in January 1975. Each semester, graduates from ten to twelve states will be trained until the country has been covered. This will take 18 months to complete, and it is hoped that by that time these courses will become a regular part of the medical and nursing curriculum.

Whether the coordination of the teaching of population in medical and nursing curricula should be the responsibility of a strengthened Mexican Association of Medical Schools or whether the National Population Council will delegate this authority to the Secretaries of Education and Health remains to be seen. Implementation will depend upon the appointment of a responsible coordinator for each medical school and adequate budgetary support. In any event, Mexico has already announced a strong population policy, and implementation with institutional development can only be contemplated through consultation with the National Population Council. One thing is very clear: the SSA/DGAMMI will continue to depend on the School of Public Health for the major training of health service providers. SSA/DGAMMI will also depend on the National Nutrition Institute for

technical advice related to contraceptive methodology. It will turn to the Mexican Institute of Social Studies (IMES) for assistance with social and cultural problems and to El Colegio de Mexico for demographic consultation.

#### Demography and Related Social Sciences

Social science in particular is a relatively new field of instruction in Mexico. Historically, some areas of concern to the social sciences were studied only as part of a law school curriculum. Later, "carreras" in business administration began to include the study of economics - which eventually became a separate subject for study, in fact the strongest of the social sciences today.

Mexican universities have three types of divisions: "faculties," "schools," and "research institutions." The "school" is comparable to the United States undergraduate "department" in that studies are only for the basic professional title ("carrera"); in contrast, the "faculty," offers a masters and/or doctorate as well as the basic professional title. Research is an essential part of "faculties" but not of "schools." (Research institutes are academically and administratively apart from the faculties and schools.)

Economics, often combined with business administration or commerce, is usually a separate school or faculty from the other social sciences. Non-economic social sciences are frequently still combined into a school or faculty of "law and the social sciences," although the humanities are sometimes listed separately.

As a whole, social sciences have not attracted as much student interest as they have in other Latin American countries. The majority of Mexican students follow a "carrera" either in business administration (which includes economics) or engineering/architecture (30 and 27 percent respectively). This is at variance with the usual Latin American pattern since for the region as a whole the most favored fields are philosophy/humanities (23%) and law/social science (20%).

(These figures are for 1967; in that year only 12% of Mexican students selected law/social science, and presumably most of these were in law.)

In addition to El Colegio de Mexico (discussed in detail below) graduate degrees in the social sciences are offered at UNAM and several state or regional campuses. Unfortunately, UNAM has been so disrupted by politics and student unrest in recent years that it is difficult to make any assessment of what, in fact, is actually going on in the social sciences there. UNAM offers doctoral programs in most social sciences. It has several social science research institutes among them the Institute of Social Research, directed by Raúl Benítez Zenteno, and a Center for Research in the Behavioral Sciences, directed by social-psychologists R. Díaz-Guerrero and Luisa Morales. (At least the latter is considering withdrawing from UNAM.) The Ph.D. program in sociology, started only two years ago, has been marked by political controversy.

In general the social sciences at UNAM tend to be highly political, strongly Marxist, and theoretically oriented. Not only does the faculty and student body tend to be hostile to external technical or financial assistance, but the mobilization of resources is normally impeded by strikes, disruptions, etc. The Ford Foundation, which has had a permanent office and a long standing social science program in Mexico (indeed, virtually all of its programs have been in the social sciences), has been unable to give more than token support to UNAM and does not foresee much change in the future. Moreover, as one Ford official put it, "This is not the kind of institution where a grant of, say, \$200,000 per year would have a major impact." (The annual UNAM budget is reported to be over 50 million dollars.)

At the state or regional level, five universities have a "faculty" in economics (sometimes in combination with "administration sciences"). These are the universities of Vera Cruz, Guadalajara, Nuevo Leon, Puebla, and Sinaloa.

In addition, an advanced degree in economics is offered at the National School of Agriculture of Chapingo (a postgraduate college and agricultural research center in Texcoco, State of Mexico). The University of Nuevo Leon also has an Economic Research Center which has been somewhat active in demographic research. At least five other universities have "schools" of economics.

For social sciences other than economics, the most important work and training are carried out at El Colegio de Mexico, UNAM with its Institute of Social Research and doctorate programs in many social sciences, and at the Mexican Institute of Social Sciences (IMES) a private research institute under the direction of Luis Leñero which has linkages to Ibero-American University and its school of social sciences. In addition, seven state institutions have faculties of law and social science, but the actual social science component of these has large variations. Overall, there are only two graduate degrees available in sociology, two in anthropology, three in political science, two in psychology, and three in urban and regional planning. Other sources of social science education are only at the "school" level.

Demographic studies and population concern in general are relatively new in Mexico. Although the country has a history of regular censuses and relatively good vital data throughout most of this century, an active interest in demography did not begin until 1940. Before then population was analyzed only in a general fashion. Since 1940, though, the quality and frequency of demographic research has been increasing steadily.

By hosting the first Inter-American Congress in 1943 and the first Latin American Statistical and Census Training Congress in 1948, Mexico acquired regional leadership in the field. Graduate training in demography, however, had to be acquired from universities outside the country until 1964 (primarily in U.S. or European institutions. Beginning in 1958, when the Centro Latinoamericano de

Demografía (CELADE) at the University of Chile was established, Mexican demographers were able to receive training within the Latin American region.

In 1964 El Colegio de Mexico opened its program in Economic and Demographic Studies, offering a high quality two-year Masters program. It has since become the leading institution in Mexico in demographic research as well as training, and with its journal, Economía y Demografía (published quarterly) it has acquired an international reputation. It is the only graduate demography program in the country, and its graduates (including one who heads the census) have moved on to important governmental and provincial university positions.

#### El Colegio de Mexico

Most high-quality graduate instruction and research in the social sciences is carried out at El Colegio de Mexico. This is a small independent institution founded in 1940 specifically for research and graduate-level training in the social sciences and humanities. Within El Colegio are centers for the study of history, Spanish language and literature, international studies, oriental studies, sociology (a new division), and "economics and demography." All of these offer at least a masters degree and have an accompanying research institute. One unique aspect of El Colegio is that economics is combined with demography rather than with a business curriculum.

The president of El Colegio, Victor Urquidi, is an influential figure both within the nation (he is a salaried special advisor to President Echeverria) and within the Latin American university complex. Along with Carmen Miró he is a leading spokesperson in the population area in Latin America. He is also Mexico's UNESCO representative. Under Urquidi's leadership El Colegio has developed into one of the most prestigious learning institutions in Latin America.

Perhaps because it is small (about 125 employees, including 80 full or

part-time faculty), El Colegio remains apart from the political strife that often inflicts Latin American campuses. It is able to offer a consistently high quality of education to its 180-190 students. Many of the faculty have trained abroad, and the large population of full-time faculty is almost unique for a Latin American university.

Established by the federal government, the Bank of Mexico, UNAM, and the Fondo de Cultura Económica, it is relatively assured of stable and in fact increasing support from government sources. (The Ministry of Education's contribution has increased from \$520,000 in 1968 to \$960,000 in 1973.) There is additional assistance from the National Bank of Commerce and the Rockefeller and Ford Foundations, as well as miscellaneous other sources. Between 1963 and 1972 the Ford Foundation has put almost one and one-half million dollars into El Colegio, half toward establishing the Center for Economic and Demographic Studies (described in detail later) and half for teaching and research support in social sciences and humanities. Recently the Ford Foundation provided a two million dollar endowment to El Colegio, which should supply about \$200,000 for the social sciences.

#### Center for Economic and Demographic Studies

Within El Colegio, the Center for Economics and Demography (CEED) receives more than twice the support of any of the other centers (\$386,000 in 1973). In 1973 Sociology, formerly a part of CEED, became a separate faculty with a budget of \$152,000. A three year doctorate program in sociology is just beginning under a faculty of six Ph.D's or near Ph.D's and five M.A. level people. It has a sizeable contingent of foreign students and could become the most important training center of its kind in Latin America. Victor Urquidí, president of El Colegio, would like to see Ph.D. programs develop in other social science areas as

well, especially Demography, Political Science, and eventually Economics.

El Colegio serves as a catalyst and resource base for other institutions and is often consulted by provincial universities when they initiate and/or expand social science programs. For example, the faculty from CEED recently collaborated with the School of Economics at Vera Cruz in getting a Masters in Regional Development started.

Directed by Gustavo Cabrera, CEED has 25 full-time professors and researchers, as well as additional part-time and visiting professors, and an annual budget of \$350-400,000. Of its 4.3 million pesos in 1971, 39 percent went to demography; in 1973 demography's relative share of the budget had increased to 47 percent (of 4.9 million pesos). The 1973 demography budget of 2.15 million pesos was divided among salaries (1,700,000 pesos), fellowships (200,000 pesos), and research (250,000 pesos).

The demographic component of CEED includes eight full-time people with M.A.'s, (including the director of the center), three half-time persons with M.A.'s and three research assistants. In 1974 two full-time faculty will be added with Ph.D's or near Ph.D's from the University of Pennsylvania (José Morales) and the University of Paris (María Eugenia Zavala). In addition, Mercedes Pedrero Nieto, a 1973 Ph.D. in Demography from the University of Pennsylvania, began a half-time association with El Colegio in early 1974. There are plans to add at least three more demographers in the next two years (people currently studying for advanced degrees abroad).

The M.A. degree currently offered in demography involves four academic semesters preceded by four months of preparatory or remedial study of english, mathematics, and basic demography. (A reading knowledge of english is required for the program.) A cohort of about 14 students begin every two years, so by 1973 four "generations" of graduates had finished their course training (although

not necessarily their degrees). In that year, four of those 25 students were currently studying for advanced degrees abroad, four were working at El Colegio, six teaching at other Mexican universities, and two had positions at the census bureau; most of the rest were in miscellaneous government service or planning positions, although two were teaching abroad (at CELADE and Paris). Only one or two entering students each year are non-Mexicans.

In addition to its M.A. program, El Colegio has run several two-month intensive training courses in demography for university professors and for high school teachers. It also has held two high level Latin American seminars, one on mathematical demography and one on migration, with the Ford Foundation's financial assistance.

Research-wise, El Colegio has several on-going migration projects in the Sociology Department. Within CEED, the most important current project is analysis of the KAP survey of the rural population (in collaboration with Benítez of UNAM); this project has Population Council financing (\$23,000 in 1971 for analysis; about \$50,000 in the late 60's for pilot studies and actual data collection). There are a number of other interrelated ongoing research projects that cover virtually all aspects of population analysis.

Because of its political stabilization, its high academic caliber, its prestige and influence with the government, and the "demographic activism" of its president, El Colegio is crucial to any plans for DARSS in Mexico, and indeed, in Latin America. It has the prior strength in demography that is a good basis for building an even stronger program. Through its graduates, El Colegio is building a cadre of demographers who can serve as the basis for development of DARSS elsewhere - especially if the linkages between El Colegio and other universities, preferably provincial ones, continue to grow.

Other DARSS Institutions

Aside from El Colegio, there are only a few institutions in which DARSS is of sufficient scope and quality to merit discussion: UNAM, the University of Guadalajara, Veracruzana University, and the private Mexican Institute for Social Studies. The demographic research that is being done, at UNAM is located primarily in the Institute for Social Research, the Center for Research in Behavioral Sciences and the Institute of Public Health and Tropical Diseases (mortality and morbidity studies). The former, directed by Raul Benítez Zenteno, was organized in 1933 and in 1961 brought out a major book, Demographic Analysis in Mexico, in which the characteristics of the Mexican population were systematically analyzed with demographic techniques. In 1964 they initiated a survey of urban fertility (undertaken jointly with CELADE as part of their survey of seven Latin American cities). In 1971 it began working with El Colegio on the rural fertility survey (described earlier). The Institute also publishes the Revista Mexicana de Sociología.

Because of its power and its politics, UNAM is probably invulnerable to "institution building" from external sources. Ford has been unable to provide assistance. (The potential, but the overwhelming problems, there was detailed in the preceding section. UNAM does not really "need" money for staff, equipment, or research in any area of interest to it - even the strongly political nature of its social sciences could be ignored.)

The University of Guadalajara is Mexico's largest provincial university (40-50,000 students). It includes some DARSS courses separately in both medical school and public health training and in the economics and planning department. The latter is planning a three year masters level curriculum in "urban planning" (for which Ford Foundation is considering support). The non-medical faculty includes six people with demographic training, most of them graduates of El Colegio.

For the most part they work part-time at the University and do non-demographic work elsewhere. (Only 10 percent of university's 2,500 member faculty are full-time.) Four of the demographers are currently involved in a migration study of 1,500 families in Guadalajara (in collaboration with the State Statistical Bureau).

Veracruzana University (with the main campus in Jalapa but with five other locations) is a provincial university of about 15,000 students. There, DARSS courses are offered primarily through economics (one of 13 faculties) and researchers is through the Center of Economic and Social Sciences. The latter, directed by Luis Ramos Bello and co-directed by Luis Unikel of El Colegio, has an annual budget of 1.5 million pesos and full salary support for six professionals.

Within economics, the two year M.A. program in regional development (started in 1966) takes about 20 students every two years. It is advised by Gustavo Cabrero of CEED at El Colegio. Three "generations" of students have finished their formal course work. The 25 person department (about 15 of which are full-time) includes 2 people with formal demographic training from El Colegio. In addition, population is a teaching or research concern for several of the other faculty members who are involved with economic development for regional planning. Formal demography (techniques) is offered in only two courses, taught by Antonio Pulido (an M.A. from UNAM who has a demography diploma from El Colegio). His research is in migration and urban growth (based on a one percent sample of Veracruz state and assisted by a research grant from CONASIT, Mexico's National Science Council).

There have been a number of outside agencies supporting the Economics faculty: the Fulbright program has provided teachers; the University of Wisconsin has signed an agreement for exchange of professors and researchers; the Latin American Institute of Economic and Social Planning (ONU) is lending a technician in planning; the National Association of Universities gives ten fellowships worth

3,500 pesos monthly for the Masters degree in Planning; CONASIT grants salary supplements to allow "exclusive time" on the part of faculty, in addition to library, equipment and a number of fellowships.

There is also a new humanities graduate program at Veracruz begun only three years ago. Its emphasis is mainly in anthropology (with support from the National Indigenous Institute), although a course is offered in demographic techniques.

In addition to the DARSS on university campuses, the independent Mexican Social Studies Institute (IMES) does considerable demographic research. Directed by Luis Leñero, IMES started in 1960 and now has 12 full-time investigators, most of whom have been working with the institute for the past five years. In 1966, they were assisted by a Ford Foundation grant and earlier by contributions largely from German sources. Most of the staff are sociologists, two of them with or almost with doctorates. The staff's training has been fairly wide: one from Minnesota, one from Brussels, one from Louvain, several from the National University, and one or two from Ibero-Americano. Leñero teaches a course at the Ibero-Americano, and while most of his staff members have similar kinds of connections with universities, there is no formal association between his institute and teaching programs.

Leñero lists their basic research interests as population, family cycle, rural problems, and socio-cultural-religious problems. Some examples of on-going projects are an intensive study of recently married couples with an effort to assess the impact of an educational program on marital relations; an urbanization and population project centered in Acapulco for which they expect World Bank financial assistance. This seems to be an efficient well organized and effective group, particularly in getting research out and diffusing it to the general population.

IMES now has a \$250,000 Ford Foundation grant to carry them for the next three years. This support is partly institutional and partly for specific projects. The most important of these is a "sub-elite" study based on a national sample of elites. A sampling however will be created of 7,000 cases throughout the nation and sub-samples of 1,000 drawn up for each of the various studies. Several of these will concentrate on population policies and attitudes of the elites towards such policies and programs carried out by the Mexican government. Interpenetrating samples of the 1,000 will be introduced each year. This is a two and a half year project funded at a level of 1.5 million pesos, (\$120,000) which is about 40% of what they need. They may propose the balance to the Population Council as a research project.

Another project is an investigation into "Family Planning and Integration in Mexico" in which several sociological and demographic variables are related to those two variables. This research is taking place in seven cities and six adjacent rural areas.

#### V. CONCLUSIONS AND RECOMMENDATIONS

Over the next decade, universities in general and the social sciences in particular will continue to expand rapidly in Mexico, because of the continuing economic growth and the development of provincial resources. Needs for DARSS will also increase because of large government programs to slow demographic growth and foster regional development. The recent government policy shift from pro to anti-natalism has opened the door to the large scale development of family planning programs and to social science research and evaluation.

As a leader country in Latin America, Mexico could influence other nations both by its prestige and by the level of its development in the population area.

The only graduate degree in demography in Latin America is the M.A. at El Colegio de Mexico. El Colegio is just introducing a doctoral program in Sociology and is considering a doctoral program in Demography.

Several provincial universities are introducing graduate level social science programs for the first time, partly as a consequence of government policies to de-centralize higher education and build up provincial institutions. Because of this they receive strong financial support from the government. Ford and UNESCO are considering proposals for general social science support to respectively, the Universities of Veracruz and Guadalajara. These institutions already have an interest in demography and have demographers trained at El Colegio on their staff.

Technical assistance is needed to stimulate teaching and research, and resources are needed for libraries and fellowships as well as research.

The Ford Foundation, aware of these developments and with a large investment both in the social sciences and in demographic training at El Colegio de Mexico, plans to continue upgrading training and research at graduate level. At the same time, because of Mexico's international prestige and the dimensions of its family planning programs, we can anticipate large blocks of technical and financial assistance from the UNFPA and the PAHO. This unusually favorable background and future for institutional development might create new opportunities that might be the case in many other countries.

This situation leads to the recommendation that international donor agencies put substantial resources into Mexico for the development of social science programs in population. In general this would involve supporting a loose consortium of provincial universities whose programs could be coordinated by El Colegio de Mexico.

Specifically, for DARSS four areas for development can be mentioned:

1) Increasing the competence of Mexican institutions currently involved in population research or teaching; 2) Building competence of provincial institutions through the technical assistance of institutions included in 1 above; 3) Infusing population study in related programs; and 4) Strengthening non-university associations with DARSS potential. The following outlines each of these points in more detail.

1. There is a limited range to choose from in the way of graduate DARSS programs. The National University is more or less inaccessible and El Colegio de Mexico has been carefully nurtured by the Ford Foundation. El Colegio, however, would certainly profit from closer ties with U.S. or European institutions, since their staff in sociology, economics, and demography is only of moderate quality, by American standards. However, it has reached the point where a genuine exchange of scholars program would be feasible - that is, one in which American scholars and graduate students would get as much from the Colegio staff as they give, and in which Mexican visitors to U.S. institutions could contribute as well as learn. The Population Council might broker such exchanges, as well as participate in them.

2. An important way of both upgrading El Colegio and diffusing its influence would be to encourage it to develop DARSS in the provincial universities with which its ties are already strong - Guadalajara, Monterrey, and Veracruz. El Colegio could extend scholarships and technical assistance to assist in the development of teaching and research programs at the undergraduate and M.A. level. These campuses already have some faculty with demographic interests, but those in medical schools rarely meet those in economic and planning fields; development of demography programs would provide an opportunity to bring them together and build from there.

3. Infusing population materials in existing curricula is a difficult

but promising area. It should be recalled that students typically spend four or five years in one academic discipline at the undergraduate level, and write a thesis before receiving their degree. The majority of students become "egresados" rather than graduates since they never complete the thesis, a situation which thesis support could help. Students at a selected list of institutions, through financial and technical assistance, could be encouraged to write theses on population topics related to their specialty area - law, sociology, economics, etc. (This presupposes some acquaintance with demography through their formal curriculum.) The development of such programmatic infusions could best be done through 2 above, with occasional technical assistance from foreign institutions where appropriate.

4. If Mexico is to assume leadership in DARSS in the Latin American academic community, it would be helpful to strengthen its inputs to relevant national and international organizations - e.g., the Latin American Committee on Social Science (CLACSO), the IUSSP, and the newly formed Population Association of Mexico. These associations might be important vehicles for the development of technical assistance, research, and teaching exchanges.

In the medical field, the situation is fluid and interest in family planning research and academic teaching is likely to increase. In fact some institutions have been singled out as having greater potential for development than others. They are listed below in order of priority:

1. Jalisco - Facultad de Medicina, Universidad de Guadalajara
2. Mexico - Escuela de Medicina, Instituto de Ciencias de la Salud  
de la Universidad Autónoma del Estado de Mexico (Toluca)
3. Distrito Federal - Escuela Superior de Medicina, Instituto  
Politécnico Nacional
4. Veracruz - Facultad de Medicina, Universidad Veracruzana

5. Durango - Escuela de Medicina, Universidad Juárez de Durango
6. Guanajuato - Escuela de Medicina, Universidad de Guanajuato (Leon)

Sources of Information

Site visits between March and December 1973 to the medical schools by: Dr. Miguel R. Barrios, Dr. Luis Enrique Villalobos, Dr. Arnoldo López Rico, Dr. Roberto Rivera Darm, and Dra. Yolanda M. de Vega. The information was collected by means of a questionnaire prepared and summarized by Dr. Barrios.

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PANAMA

Luis A. Sobrevilla

I. COUNTRY SETTING

With 1.6 million inhabitants in mid-1973 the republic of Panamá has the smallest population in the Central American region, of which it is not an integral part, although it is a close associate. Panamá also is one of the smallest countries on the American continent with a land area of 77,000 square kilometers. Its population density is not high with 18.9 inhabitants per square kilometer.

With an annual population growth rate of 2.8 percent, resulting largely from natural increase, Panamá has a crude birth rate of 9 percent. The population is young with about 44 percent of the total under fifteen years of age in 1973.

The largest cities are Panamá City, the capital, with an estimated population of 500,000 and Colon with 80,000. In 1971 about 48 percent of the population lived in urban centers. Panamá has been through the centuries a racial melting pot, and thus the population is largely of mixed blood. The aboriginal population is now very small, and was estimated at 5 percent in 1970.

The literacy rate is estimated at 80 percent. In 1972 more than 400,000 students were enrolled in the educational system, which includes more than 2,500 institutions. However, the educational level is not high, yet an estimated 291,000 students were enrolled in primary education.

The economic situation has been improving rapidly with a per capita gross national product estimated at US\$730 in 1972.

## II. HEALTH POLICY AND PROGRAMS

In 1972 Panamá had 27 hospitals, 62 health centers, including a pediatric and maternal annex, and 95 subcenters. There were 5,700 hospital beds with an index of 3.8 per 1,000.

Health professionals included 950 physicians, 700 nurses, and 1,660 auxiliary nurses. Over two-thirds of the total health manpower is in government service.

## III. POPULATION POLICY AND PROGRAMS

Concern about rapid population growth began in the mid-1960's when the birth rate was 40. In 1966 the Panamanian Association for Family Planning (APLAFA) was founded and began providing family planning services at various clinics. In 1968 the Ministry of Health decided to include the family planning clinics operated by APLAFA among its facilities, thus nationalizing these services.

Although in 1968 a National Committee for Demographic Policy was appointed, Panama does not have an official policy. Since 1968 population programs have been conducted by the Ministry of Health. At present the office responsible for family planning at the Ministry of Health is the Oficina Materno-Infantil, and program directors are Dr. Augusto Bal, in charge of the maternal program, and Dr. Manuel Vásquez, in charge of the pediatric program. Family planning services are provided in forty-eight of Panamá's sixty-four health centers. The ministry has targeted a coverage of 12.5 percent of fertile women by the end of 1973 and 15 percent by the end of 1974. The Ministry of Health has developed a program of information and family planning promotion using mass media -- television, radio, newspapers, and billboard advertising. As far as research and evaluation, UNFPA has approved financial support to the

Ministry of Health for evaluation of its services.

In the private sector, APLAFA, which is an affiliate of the International Planned Parenthood Federation, operates two clinics and now concentrates on information, education, and research. The clinic in downtown Panama, in the Marañón district, develops programs on sex and family planning education in coordination and through an agreement with the Ministry of Education. The clinic located in the outskirts of Panamá City at San Miguelito is developing research programs in connection with the Ministry of Health and the National University.

The executive director of APLAFA is Mrs. Graciela de Playa, and the director of medical programs is Dr. Julio A. Lavergne. Dr. Lavergne, formerly professor of obstetrics and gynecology at the University of Panamá, was one of the founders of APLAFA and is a leader in the development of population programs in Panamá.

#### IV. UNIVERSITY DATA

There are two universities in Panamá, the National University and the private Catholic university of Santa María la Antigua. The National University receives its funding from the state but enjoys a large degree of autonomy. Santa María la Antigua is financed by student fees and donations from local private sources. By law, the private university has to be "supervised" by the official entity, but this has not been a source of problems to date. Grand Chancellor of the Catholic university is Panamá's Archbishop, and the influence of the Catholic Church is prominent. The universities of Panamá do not belong to the Consejo Superior Universitario Centroamericano (CSUCA), their retirement having been forced after the political events of 1968.

Universidad de Panamá

This is a public institution, with one central campus in Panamá City and two regional centers. The UP had 17,900 students in 1972, in the following academic programs: public administration, agriculture, architecture, natural sciences and pharmacy, law and political sciences, philosophy and humanities, engineering, dentistry, and medicine. Rector of the university is Dr. Rómulo Escobar Betancourt, a lawyer, and dean of the School of Medicine is Dr. Rodolfo Young, a specialist in respiratory disease.

The School of Medicine, one of the smaller schools of the university, had an enrollment of 197 students and graduated 52 physicians in 1972. The medical curriculum covers eight years divided in two years of premedical, four years of faculty, and two years of internship, which is obligatory as a prerequisite to practice.

The university does not have a teaching hospital. Teaching in the clinical areas, including obstetrics and gynecology, is done at the National Hospital of Santo Tomás, and through an agreement at the Hospital Gorgas in the Canal Zone.

The Department of Obstetrics and Gynecology was formerly the site of much interest and activity in family planning research and teaching, under the leadership of Dr. Julio A. Lavergne. It was also Dr. Lavergne who introduced the teaching of demography in the Medical School. After his departure, these activities and interests have decreased, but the teaching of demography and family planning has become institutionalized.

This should be considered a low priority institution, although it has some interest in developing programs in population. The students of medicine are taught demography (details were not available) in courses in "social medicine"

given by the Department of Preventive Medicine. Family planning is taught by the Department of Obstetrics and Gynecology. Since the departure of Professor Lavergne in 1968, no research in human reproduction or family planning has been done.

The present head of the Department of Obstetrics and Gynecology is Professor Roderick Esquivel. Dr. Esquivel is interested in developing research and has indicated that his areas of interest would be demographic research, clinical studies, and experimental studies in an animal facility he would like to create. Professor Esquivel, trained at the University of Chicago, has been associated with the department for several years and has recently become its head. He has been Minister of Health of Panamá and is an influential man of undoubted leadership ability and a good organizer. He believes that the executive council of the School of Medicine will approve research and teaching activities in family planning if funds are available.

Dr. Karl Austin has recently joined the Department of Obstetrics and Gynecology after receiving training at Johns Hopkins University as a fellow of WHO. Dr. Austin, young and well-trained, has worked in the endocrinology of human reproduction with Professors Georgeanna Seagar Jones and Howard Jones. He has also received training in family planning and laparoscopy with Professor Hugh Davies. Just back from Hopkins, Dr. Austin is interested in developing research activities in contraception and has good relationships with Professor Esquivel, who has offered to back his efforts.

Head of the Department of Preventive Medicine is Professor Alberto Calvo. The department is developing a community medicine program, "Programa de Medicina Integral de Sabanitas," in Colon Province. The operational objectives of this program include student activities in sex and family planning education and the provision of FP. Financial support for the program comes

from the Panamerican Federation of Associations of Schools of Medicine (PAFAMS), with funds provided by the Kellogg Foundation. Professor Calvo, formerly at the Ministry of Health, has a deep interest in community medicine and recognizes the importance of teaching in demography and family planning. He has been able to provide skillful leadership and organization.

The influence of the leadership within the university rests mainly on the personal status of Professors Esquivel and Calvo.

The National University remains an important and leading institution in Panamá. Although financed by the state, it is largely autonomous. The influence of the students in the governing bodies of the university has increased and has politicized the activities of the institution. The School of Medicine, by virtue of its small size and its conservatism, has lost status in the university, a fact that is reflected in budgetary limitations and lack of influence vis a vis the university government.

The major strengths are the leading ability and personal influence of Professors Calvo and Esquivel and the presence of a young, well-trained and motivated individual, Dr. Karl Austin. The major weaknesses are the lack of influence of the Medical School in the university and the opposition of the students to population activities, following the influence of the powerful university leftist leaders.

On a country basis the Universidad de Panama rates average, degree of staff interest in population is modest, likelihood of reaching program objectives is average, with an overall average rating.

#### Universidad Santa María la Antigua

This is a private Catholic university located in the heart of downtown Panamá in what was previously the archbishopal palace, a three-story

building. The authorization for its creation was granted by President Robles in April 1965. Rector of USMLA is Dr. Carlos María Ariz, a Jesuit. The USMLA has 700 students and gives degrees in administration, accounting, psychology, sociology, civil engineering, mathematics, languages, philosophy, history, and religion. A total of thirty-two degrees were given in 1972.

This should be considered a low priority institution, although there is some interest in developing a social science based population program.

The university has developed plans to create a course on population and development that will be integrated into the courses given by the Department of Social Science, directed by Dr. José Vicente, a psychologist. It is hoped that this course could begin next year as a contribution to the World Population Year. The university's human resources for the course would be with a degree in sociology. Other staff will be invited, among them Dr. Julio A. Lavergne, who is willing to help the university develop this course. The major objectives of the course would be "to give high level academic knowledge regarding population growth and its impact on development."

A further step in developing demographic studies would be the creation of a center for population studies. The objective would be to carry out research on demographic and development issues, to develop and coordinate courses and degree programs and to disseminate population information. It is felt by the rector, Dr. Ariz, and Drs. Vicente and Lavergne that this center would be a forward step toward understanding the population issues confronting Panamá.

The university has not had any previous teaching activities in the population area.

The financial support for the university comes from fees paid by students and from private contributions of Panamanian donors. The university

is now rather crowded in its present location. No laboratories or computer facilities are available. With financing coming from USAID, it is planned to build a new campus, presently on the drawing board, for a maximum of 3,000 students.

Although young and still struggling, the university has been successful in establishing a good reputation in Panamá, and some of its graduates are already becoming influential in the Panamanian community. It has the support of the Catholic Church, its grand chancellor being the Archbishop of Panamá, Marcos MacGrath, an influential leader in the community.

Major strengths: The rector and head of the Departments of Sociology appear highly motivated to develop activities in population. The university has the support of the church and is influential with the leaders of the community.

Major weaknesses: The university is small, and its direct liaison with the Catholic Church might influence and limit the scope and orientation of its programs.

On a country basis, the Universidad Santa María la Antigua rates high, degree of staff interest in population is excellent, likelihood of achieving program objectives are good, and its overall rating is average.

## V. CONCLUSIONS

Panamá has a de facto population policy, with family planning education and services provided by the Ministry of Health. The Panamanian Family Planning Association has moved into developing programs in education and research and is working in coordination with the Ministries of Education and Health.

The National University, for many years a leader in the community, and formerly a leader in the development of family planning activities, has become politicized and does not seem to have a strong interest in developing programs

in population. At the Medical School, however, the Department of Preventive Medicine has successfully incorporated the teaching of demography and has included teaching in sex education and family planning and the provision of family planning services in its rural community program. In the Department of Obstetrics and Gynecology, the department head, Dr. Roderick Esquivel, and Dr. Karl Austin, a recent Johns Hopkins postgraduate trainee, are interested in developing research in contraception and family planning.

The private Catholic university, Santa María la Antigua, is interested in developing a population studies center in the future, and plans for a course on population and development are well advanced. Such a center could be instrumental in carrying out more in-depth studies related to population problems in Panama.

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PERU

Anthony Measham and Charles A. Lininger

I. COUNTRY SETTING

According to 1973 figures, the total population was 14.9 million and the growth rate 3.1 percent. Reliable fertility and mortality data are not available for recent years; these were estimated by the Population Reference Bureau as 42 (crude birth rate) and 11 (crude death rate) for 1973. Rural fertility is estimated to be 20 percent higher than the urban rate, and the average number of live births for all the principal cities was stated to be 4 to 5 per woman in 1972. About 45 percent of the population is under fifteen and 20.6 percent are females aged fifteen to forty-four. The urban population was estimated at 59.6 percent of the total. Average life expectancy was stated to be fifty-seven years (males) and sixty years (females).

The three major racial groups are Indian, Caucasian and mixed, with the majority of the population falling in the latter category. According to the 1961 census, 97 percent of the population was Roman Catholic, but the degree of observance varies widely. Literacy was estimated in 1970 at 74 percent of the population fifteen and over. Average per capita income is estimated at US\$450 for 1973, with a highly unequal distribution pattern. Assuming a continuing mortality decline and a moderate decline in fertility, the growth rate will increase until 1975-80 and then decline to 2.8 percent in 1995-2000, giving a total population of 33.5 million in the year 2000. If fertility drops rapidly (for example, a reduction in the gross reproduction rate of 0.2 every five years

from 1980 to 2000), the growth rate at the end of the century would be 1.9 percent and the population 31.7 million.

## II. HEALTH POLICY AND PROGRAMS

In 1971, Peru was divided into 12 health zones and 57 hospital areas. The Ministry of Health administers a total of 87 hospitals, 277 health centers, and 889 sanitary posts. In 1971, the Ministry had 10,445 hospital beds of a total of 31,155 in all official, semiprivate, and private institutions.

Peru's health resources are not evenly distributed, with metropolitan Lima having much more than its share of both personnel and physical plant. In 1971, 56 percent of outpatients and 68 percent of hospital discharges were MCH patients. Lima, with 24 percent of the total population, received 59 percent of the MCH consultations. In 1970, the government created a Maternal and Child Health Institute (IMPROMI) and continues to give priority to women in the reproductive ages and their children, although it does not include the provision of family planning services.

## III. POPULATION POLICY AND PROGRAMS

Concern with the rapid population growth rate dates back to 1964, when the results of the 1961 census were known and the 1966-70 Social and Economic Development Plan was being prepared. The government in December 1964 formed the Population and Development Studies Center (CEPD), but no explicit population policy was formulated. However, in mid 1968 an agreement was signed with the Pan American Health Organization (PAHO) to implement a national maternal and child health (MCH) program to include family planning. Before the program was begun, the present military government assumed power, and all preparations were halted. In 1970, a population and employment commission recommended a

policy to include fertility reduction, but in the 1971-75 development plan only the recommendation to reduce the distribution disequilibrium was adopted. In 1973, the government requested PAHO assistance in the formulation of a national MCH plan that would include family planning and be presented to the UNFPA. This plan was developed during the year and had a budget of \$3.6 million, but in November 1973 the government decided at the last minute not to submit it to UNFPA.

In December 1973 the government reversed its permissive attitude toward private family planning programs and ordered that the IPPF affiliate cease the delivery of family planning services by January 20, 1974. The Minister of Health, in making the announcement, said that foreign powers were attempting to force Peru to adopt a fertility control program and this would not be tolerated. The IPPF affiliate complied, but continued its educational activities. Other programs that included family planning were investigated but continued to operate in their usual ways. It was claimed that the IPPF affiliate was financed by and subservient to foreign interests.

Subsequently, in mid-1974, a request was submitted to the UNFPA for assistance for census and statistical activities. The political left constitutes the major opposition to fertility reduction programs, basing its opposition on anti-Malthusianism and anti-United States sentiment arising from the promotion of family planning by the United States government and what is deemed to be commercial exploitation in Latin America. The Catholic Church supports responsible parenthood programs employing the rhythm method and the use of oral contraceptives for two years postpartum. It seems unlikely that the church would forcefully oppose a national family planning program, although it would be unlikely to endorse methods such as the IUD and would strongly oppose sterilization and abortion.

Sale of contraceptives without prescription is against the law, but most

methods and especially oral contraceptives are widely available. Physicians are permitted by law to prescribe contraceptives that do not affect health or produce permanent sterility. Therapeutic abortion is permitted only to save the life of the mother or to avoid grave and permanent damage to her health.

The Peruvian Association for Family Protection (APPF), an IPPF affiliate, operated eleven clinics (seven in Lima) and recruited 4,429 new acceptors in 1971. Approximately half chose the IUD and more than a third orals. APPF operates multipurpose clinics offering a broad range of services, training, and education programs, and does not aim to provide massive coverage. Its goals are to operate model clinics, provide a broad range of information, education, and services (sex education, literacy courses, handicrafts, abortion prevention, infertility services) so as to legitimize family planning. All methods were offered, and the average clinic has a physician, nurse, social worker, and administrative personnel on a part-time basis. The 1972 budget was \$210,000.

The Christian Family Movement (MCF), supported by the Catholic Church, provides the rhythm method and orals for two years postpartum in eleven clinics in low-income areas of greater Lima. The Lay Apostolate Family Program, founded like MCF by Señor Pedro Pazos, operates on the same basis as MCF in the provinces, with fifteen clinics supported by the local church hierarchy. Each of these programs probably has about 2,000 active couples.

Finally, there are a few scattered, usually small-scale public and private MCH programs - such as the ones operated by Arequipa, Trujillo and Cayetano Heredia Medical Schools. These programs have provided services for a few hundred to 2,000 acceptors. None of the programs in Peru has adequate research and evaluation programs.

No data were available on commercial sector activities, but it can be safely assumed that most couples practicing family planning in Peru do so by

means of supplies purchased in drugstores.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

There are thirty-one universities in Peru, twenty-two public and nine private. At present the universities enjoy a considerable degree of autonomy. However, a new education law, not yet promulgated at the end of 1974, because of concern regarding probably opposition from a number of sources (students, faculty, political groups), would considerably increase the authority of the government.

Tables I and II list the universities and schools of nursing in Peru. There are in addition a number of DARSS institutions that deserve mention, but not all are teaching institutions. These will be discussed before the important medical institutions are systematically described.

##### Catholic University (Lima)

Peru is the only Latin American country with a vigorous graduate program in sociology and anthropology that includes population studies. Pontificia Universidad Católica initiated a two-year master's program at the beginning of 1972, and eighteen students successfully completed the program at the end of 1973. A second two-year cycle was begun in 1974 with almost fifty students and the number of students in population studies more than quadrupled. This program provides training in demography and related population studies for social scientists who are concerned with the interrelationship of demographic factors with development.

The program was begun for students who had completed a strong five-year bachelor's program at the same university or equivalent backgrounds. (In some instances, equivalency was obtained by special remedial courses.) The quality of the bachelor's program reached its high level as a result of long term technical assistance from the Dutch government, dating from the mid-1960's,

and careful staff selection.

Demography also is taught now as a prerequisite course in the sister Faculty of Economics, but the two-year graduate cycle in this field is not expected to begin before 1975, by which time it is anticipated that the undergraduate program and faculty will have reached a sufficient level of maturity to go on to the next stage. Interest in population in both faculties is overwhelmingly concerned with the interrelationships of demographic and socioeconomic variables, and is problem oriented.

This should be considered a high priority institution for continued assistance. Population studies, now taught in the Social Science Faculty (sociology and anthropology) are to be included in the graduate program of the Economics Faculty to begin in 1975. Both faculties include many full-time staff with completed Ph.D. degrees. The teaching of demographic methods was judged to have weakened in early 1974 following the withdrawal of the Population Council advisor, but the addition of new staff under contract for 1975 and the reincorporation of junior faculty that are undertaking graduate study abroad under current fellowships will rectify this.

Two plans for the more distant future also deserve mention. The university has authorized the granting of the Ph.D. degree, although the planning for implementation of this is several years off at least. The university also has manifested interest in an interdisciplinary research center in population, but feels that it would be premature to organize it until the new program of the Economics Faculty is operative and the expansion of staff in population is completed over the next two years.

Centro de Estudios de Población y Desarrollo (CEPD) (Lima)

This semi public institution completed ten years in 1974 and has never

realized its anticipated potential. It has been encouraged to undertake a variety of different activities at different times, including pilot family planning activities, educational activities, research activities and popularization of population problems. Currently it is divided between information activities and research. It receives a portion of its support from the Ministry of Health and has a governing board in which the Health and Labor Ministries and the National Statistical Office are represented. With its present staff and facilities it can maintain modest activities in its chosen fields.

This institution should be considered a medium to low priority institution, until the government provides stronger encouragement and support for its services, or until it develops a more coherent and ambitious work plan as a private institution trying to fill some of the existing gaps in the population field in Peru.

Technical Office of Man Power Studies (OTEMO) (Lima)

This official institution, located in the Ministry of Labor, was formally organized as the Sample Survey Center (CISM) in 1965 with technical assistance from the University of Michigan. It has a great concentration of the available talent for sample survey investigation, and maintains probability sampling frames for major metropolitan areas, regions, and the nation. In this respect it maintains an ad hoc division of labor with the National Statistical Office. OTEMO also carries out a current survey of business establishments, and it is the agency charged with producing manpower, employment, and wage and hours data for the country. OTEMO is part of the sectoral office for manpower of the National Planning Institute, and has a functional link thereby with this central planning body.

OTEMO has conducted or assisted many special studies related to fertility when they were able to assign the necessary manpower to them. In recent years,

because of its greatly expanded budget and work load for the government, it has not sought special projects.

Despite its great and unusual sample survey capabilities, it lacks high level analytical capacity on its staff, and it seeks to compensate for this and to upgrade staff through the input of expatriate resident advisors. It had advisors from the University of Michigan through 1972 and it is currently seeking a new arrangement with the Population Council.

This institution has shown a desire and ability to collaborate with other national institutions, and coupled with its huge data archive and data collection capacity and its need for assistance in analysis, it should have the external assistance that it requests. It also should be encouraged to establish links with interested local universities.

OTEMO should be considered a high priority institution for research and an important potential resource for any major data gathering operation in Peru. Fellowship support for a limited number of technicians through the master's level would be desirable, provided assurance could be obtained for their reintegration into the agency.

National Statistical and Census Office (ONEC) (LIMA)

This central statistical agency is responsible for census operations and the aggregation and publication of national statistics. It maintains an office of demographic studies, many of whose staff received training at CELADE. Its technicians have held part-time positions in universities or have alternated between university appointments and appointments at the agency. The agency and its demographic unit are able to maintain acceptable professional standards.

ONEC is ranked as an institution of moderate priority, which rating might be raised or lowered according to a revised work plan outlined for it.

It has been heavily concerned with the production of standard statistics and little involved in the interpretation of these data for social and economic development and policy studies.

#### Other Universities

The important national universities in Lima, San Marcos University and University Federico Villarreal, and their Economics and Social Science Faculties and their career programs in statistics are areas to which demography is clearly related. Some efforts to initiate and maintain courses in demography have been made from time to time, but without notable success.

A number of provincial universities function as important regional training centers. In these, too, demography would be compatible with existing offerings, but there is almost none of this training and a generally negative interest in it due to an erroneous association of demography with birth control. A major shift is unlikely to occur until government opposition to widespread family planning activities is eliminated.

Until a later date when enthusiasm for demography appears in these institutions, they must be ranked as low priority institutions with regard to the social sciences. Formal institutional development activities now would be premature, but individual faculty members with interest in population matters should be assisted where possible with library materials, assistance in curriculum development, and occasional training to help them keep active and up-to-date in the discipline.

#### Universidad Nacional de San Agustín (Arequipa)

This public institution is located on one campus in Peru's second largest city. In addition to medicine, there are major academic programs in

engineering, geology, biology, chemistry, architecture, education, the humanities, economics, and accounting. Total enrollment in 1971 was 8,081, with most students coming from Southern Peru; entrance is decided on the basis of general examinations.

By government decree, beginning in 1973, all students who enter a university may elect to study medicine. Arequipa this year received 300 first-year medical students, bringing the total enrollment to 950, the second largest in Peru; 50 physicians were graduated in 1972. In 1969 the Medical School faculty numbered 93, and has since grown to perhaps 120. The physical plant is adequate, but the university does not have a computer. Because this is judged to be the second-best medical school in Peru and has a reputation for exporting talent, the medical graduates exert an indirect impact on government policy in the health field.

This should be considered a high priority, developing institution. Demography is taught in two parts: forty hours (40 percent exercises) to ninety students in social and preventive medicine during the fourth year and twenty hours to groups of six to eight students in the seventh year as they rotate through internal medicine, pediatrics, and gynecology. Contraception is taught in obstetrics and gynecology, but only for a small, unspecified number of hours. There is considerable interest in expanding this teaching, adopting a family planning rather than strictly clinical approach, and providing practical experience in health posts operated by the medical school. Faculty are also eager to carry out population research, and a number of proposals are in various stages of development.

Department of Pediatrics and Social Medicine: Dr. Benigno Lozada, head of the department; Dr. Mary Vásquez; Dr. Guillermo Chávez; and Dr. Federico Ugarte.

Department of Obstetrics and Gynecology: Dr. Daniel Caceres; Dr. Daniel Eguren; Dr. Americo Mayorga; Dr. Benigno Lozada Stanbury; and Dr. César Belaunde.

The leadership in population enjoys good relationships both within their own department and in the medical school as a whole. Leadership's influence (for example, with the dean) does not depend on personal status. The group listed above are enthusiastic, energetic, and imaginative in developing new population activities, but these activities do not go beyond the Medical School except to local health institutions.

Fertility and mortality have been taught since 1962. Research has been carried out since 1962 by faculty and students and some papers have been published, for example, by Dr. Benigno Lozada (KAP survey) and Dr. Mayorga (IUD study).

Family planning services have been offered for the past two years in the university hospital, and more than 1,000 new patients have been recruited. The functioning of the program leaves something to be desired, mainly because of lack of funds to pay staff.

One faculty member (Dr. Vásquez) receives partial salary support from FEPAFEM to teach demography.

Morale and commitment are high; no conflict is apparent. The university's strengths are: capable, young, enthusiastic, well-trained personnel; a strong intellectual tradition; good resources for extramural activities (health posts, and so on); and lack of strong student opposition.

Its major weakness is a lack of institutional stability, endemic in Peruvian universities but pronounced in Arequipa.

University rankings, on an in-country basis, are:

Overall quality: good

Quality of population program: good

Apparent degree of staff interest in population program: excellent

Likelihood of success in achieving program objectives: good

Overall rating: good

Universidad Peruana Cayetano Heredia

This private institution was founded in 1962 by a large group of professors who left the San Marcos Medical School faculty. It is located on one campus, and has programs in medicine, the biological and physical sciences, dentistry, and nursing. The internationally recognized Institute for High Altitude Studies and an Institute of Tropical Medicine are completely integrated with the university. The medical school has a close relationship with the Ministries of Education and Health, and the latter supports a community medicine project.

Total enrollment in 1971 was 686 and is based on very rigorous entrance examinations. In 1973 the Medical School had 630 students, including 180 in the first year; enrollment is still below 800. The middle and upper classes are well represented but not to the exclusion of students from the lower socioeconomic strata. Ninety-four physicians were graduated in 1972. Faculty numbers approximately 250. Sixty five percent of the budget is provided from public and 35 percent from private sources. The physical plant is adequate but the university lacks computer facilities. This university has a very strong reputation, with the best medical school in Peru and considerable access to and influence on elites.

This is a high-priority, established institution. Medical students receive a sixty-hour course entitled "Introduction to Demography," in the first year, six hours of demography in "Human Ecology and Social Anthropology" in the

second year, and eleven hours of demography in "Public Health" in the fifth year. All are taught by the Department of Statistics, Biometrics, and Demography, which in addition provides a thirty-hour course for hospital administrators, one of similar length for physicians, biologists, pharmacists, and midwives, and a twenty-four-hour course to physicians and other personnel of Hospital Central del Seguro de Empleado. All three of the courses just mentioned are postgraduate. In obstetrics and gynecology, third-year students receive a ten-hour course in "Preventive Obstetrics," in the fourth year they have seven hours of teaching of population dynamics and policy and contraception and two hours of clinical practice, and in the fifth year they spend thirty hours in a family planning clinic. The teaching of demography is largely carried out by Dr. Eduardo Mostajo and Dr. Gálvez Brandon, while in Ob-Gyn Dr. González del Riego, Dr. Gonzalez Enders, Dr. Carlos Muñoz, and Dr. Luz Jefferson are responsible.

The Institute for High Altitude Studies holds two-week seminars on reproductive physiology twice yearly, with the family planning content approximately 25 percent. These courses, begun in 1971, are attracting physicians from neighboring countries and are run by Dr. Llerena and Dr. Guerra García. The institute is heavily involved in research in reproductive physiology but has also undertaken socio-medical research, and this year published the final results of a study involving pre- and post-KAP studies combined with a family planning program at high altitude. The chief investigator was Dr. Luis Sobrevilla, now with the Council.

The Department of Ob-Gyn has also completed a KAP study of the area surrounding the university hospital, which was published in 1973.

Most of the leadership has been mentioned above, but the names of Dr. Carl Bachman, Dr. Victor Díaz, and Dr. Diego González should be added. A major problem is that there is poor communication among the leaders in various depart-

ments, especially between the Clinical, Preventive Medicine, and Social Science Departments. Some faculty are not interested in population, and there is some disagreement between faculty and students over course content.

The leadership is influential both on the basis of personal and departmental status and has been successful in stimulating new activities and in coping with politically motivated student opposition. There is a high degree of commitment in the field of population, and morale is good.

Postgraduate courses in demography and biostatistics have been offered since 1962, and the teaching programs in the Institute for High Altitude Studies and Department of Ob-Gyn began in 1971. A KAP study was carried out jointly with CELADE and was highly regarded. The quality of research at the institute has been consistently high, both in reproductive physiology and the socio-medical area, and as a result the institute enjoys an international reputation.

Family planning services are offered on a limited basis in the university hospital and two peripheral health posts (approximately 200 acceptors per year) and at Hospital Loayza (1,000 acceptors predicted for 1973).

The Council is providing the only external support in population, currently through Grant T72.171A for \$69,045. Since 1966 it has provided twelve grants totalling \$443,853, mainly to the Institute for High Altitude Studies.

Major strengths of the university include an excellent and experienced faculty, a good faculty organization, considerable research experience, and a good physical plant.

Major weaknesses are lack of coordination among the various departments and student opposition to the teaching of demography and family planning as "Yankee imperialism."

University rankings, on an in-country basis, are:

Overall quality: excellent

Quality of population program: good

Apparent degree of staff interest in population program: good

Likelihood of success in achieving program objectives: good

Overall rating: good

Universidad Nacional Federico Villarreal

This public, one-campus institution has academic programs in the physical and biological sciences, mathematics, economics, the social sciences, the humanities, education, administrative science, law, architecture, oceanography and fisheries, and medicine. Total enrollment in 1971 was 12,279. Entrance is based on the results of a general examination.

The Medical School has 850 students, including 350 in the first year. It has been functioning for only five years and has not graduated its first class. Data on faculty size could not be obtained. The university and its medical school do not have a strong reputation or access to elites. There has been a considerable amount of student unrest, and the institution is highly politicized.

The Medical School can be classified as a high-priority developing institution. With the help of ASPEFAM, demography was taught for the first time in 1973 to second year students in preventive and social medicine. The course, scheduled for forty hours, was given only in part because of deficiencies in the coordination of the teaching staff and poor attendance. ASPEFAM has also provided some classes in family planning and sex education for faculty and students. Apart from this, there is no organized teaching of family planning. The course in demography will be repeated in 1974 with the assistance of ASPEFAM, and family planning will be incorporated into the teaching of Ob-Gyn. In two

years it is expected that the need for ASPEFAM assistance will be minimal.

At the present time Dr. Reategui (preventive medicine) is the only leader. It is too early to say how influential he will be.

There were no previous teaching or research activities and few if any family planning services are offered.

Major strengths are a generally competent faculty and no overt student opposition. A major weakness is passive opposition from some faculty and many students.

University rankings, on an in-country basis, are:

Overall quality: weak

Quality of population program: weak

Apparent degree of staff interest in population program: modest

Likelihood of success in achieving program objectives: modest

Overall rating: average

Universidad Nacional San Luis Gonzaga - ICA

This public institution, located on one campus, has academic programs in the sciences, pharmacology and biochemistry, veterinary medicine, agronomy, fishing, engineering, law, education, literature, economics and accounting, dentistry, and medicine. Enrollment in 1971 was 4,718, determined by entrance examinations. The medical school has 400 students, including 150 in the first year; there were 36 graduates in 1972. Data on faculty size were not available. This institution is not considered to be influential.

The medical school should be considered a high-priority developing institution. There were no population activities until 1973, when ASPEFAM gave a forty-hour course in demography. It is planned to repeat the course in 1974, add a family planning component to the curriculum, and become independent of ASPEFAM within two years.

Dr. Rafael Caparo and Dr. Luciano Zelaya, both of the Department of Ob-Gyn, are the only two leaders identified to date.

There is a very small family planning services program in operation, but no data on the number of acceptors were available.

A major strength consists of young and enthusiastic faculty members. Major weaknesses include lack of well-qualified personnel, a badly organized teaching program, and a deficient physical plant.

University rankings, on an in-country basis, are:

Overall quality: very weak

Quality of population program: weak

Apparent degree of staff interest in population program. modest

Likelihood of success in achieving program objectives. modest

Overall rating: weak

#### Universidad Nacional Mayor de San Marcos

This public institution is the largest university in Peru and the oldest in Latin America. It is located on two campuses and has attached to it institutes of Tropical Medicine and Andean Physiology. It is not directly related to any government agency. All academic programs are offered at San Marcos. The total enrollment in 1971 was 20,328 and is now estimated at 22,000. The Medical School has 4,000 students, including an incredible 2,400 admitted to the first year in four staggered increments. All students are admitted on the basis of entrance examinations and may then elect whatever course they choose. A large number of dropouts or failures are expected in view of the size of the first year medical class. In 1972, 330 physicians were graduated, more than half of the total output in Peru.

In 1969, the Medical School faculty numbered 585. The university is

in dire economic straits and the physical plant is in need of repair; there are no computer facilities. San Marcos has considerable institutional impact on the basis of its size, the strength of some academic programs, and its political potential.

San Marcos should be classified as a high-priority developing institution. A sixty-hour course in statistics and demography is taught to second-year students (464 in 1973), with only eight hours devoted to statistics. In that course, Dr. Luz Jefferson of ASPEFAM gave an excellent two and a half hour talk on fertility patterns in Peru, Latin America, and the world. Six professors are involved in this teaching program, headed by Dr. Manuel Torres, chief of the Department of Preventive Medicine. The course was well received by the students. Contraception is taught in Ob-Gyn for a small but unspecified number of hours.

A group working under Dr. Jorge Larranaga is doing research on oral contraceptives. The Council has received an application via ASPEFAM to support a family planning demonstration and research program directed by Dr. Abraham Ludmir.

In addition to those mentioned above, Dr. Rene Cervantes, Dr. Genaro Ferreyros, Dr. Samuel Solhet, and Dr. Mariano Bedoya of the Department of Ob-Gyn, and Drs. Eduardo Mostajo and Gálvez Brandon of the Department of Preventive Medicine are leaders. Unfortunately, owing to the size of the university and the dispersion of the leadership, it is not well coordinated and its overall influence is diluted. Until recently, the political volatility of the university made most faculty members very cautious in the field of population, but they are now able to stimulate activities with less difficulty. Influence is based largely on personal status, and there is no consensus within any department.

Drs. Mostajo and Gálvez Brandon taught analytic demography from 1960-62, and Dr. Temoche introduced vital statistics (1962-65). Dr. Ludmir has carried

out research on the KAP type and on abortion. Dr. Matzude Gustin has investigated abortion and done studies of family size and neonatology. Drs. Mariano Bedoya and Dr. Jorge Larrea were both active in family planning services and related research work.

Family planning services are provided on strict medical grounds in Hospital San Bartolomé, but are expected to be considerably expanded with Council support in 1974.

Major strengths are good personnel in the Department of Ob-Gyn and little student opposition at present. Major Weaknesses: taken as a whole the university is beset by myriad problems and is highly politicized. The faculty in the Department of Preventive Medicine is not strong, and the organization of teaching programs leaves much to be desired.

University rankings, on an in-country basis, are:

Overall quality: average

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of success in achieving program objectives: modest

Overall rating: average

#### Universidad Nacional de Trujillo

This public one-campus university offers programs in the sciences, engineering, law, political science, education, economics, literature, humanities, accounting, nursing, and medicine. In 1971 total enrollment, based on entrance examinations, was 4,869. The medical school now has 700 students, including 300 in the first year, and in 1972 graduated 53 physicians. In 1969 the faculty numbered 127. Trujillo is the principal city in northern Peru and the university has considerable influence in that area.

The Medical School should be classified as a high priority developing

institution. Demography is taught to fifty-year students in a sixteen-hour course on community medicine. Family planning is also covered in the fifth year, when the class is divided into five groups by the Department of Ob-Gyn and receives three hours on this subject. Interest in population is strong and has a long history at Trujillo. There is an ongoing abortion research project, financed by the Council through ASPEFAM.

In the Department of Preventive Medicine, Dr. Alberto Gil, Dr. Victor Villanueva, Dr. Orlando Ramos, and the department head, Dr. Carlos Rivera, are all providing leadership. In the Department of Ob-Gyn Dr. Felix Guillén is the sole leader. The Preventive Medicine group is strong and capable, but there is a lack of coordination between this department and those of Pediatrics and Ob-Gyn. The leadership has been able to incorporate family planning into a community cooperative health program, but within the university there is a well-founded fear of student reaction to actions in the population field.

Dr. Walter Torres led the group teaching demography until he joined FEPAFEM in 1972. Together with Drs. Gil and Villanueva, he conducted KAP and abortion studies. Students have carried out attitudinal studies of physicians in the area of family planning. Dr. Guillén has carried out clinical studies of contraceptives.

Family planning services have been offered in the university hospital once a week for two years, with annual new acceptors numbering approximately 150. An application for support has been made to the Pathfinder Fund.

Population activities have declined somewhat in the past year due to student unrest, but there is still considerable interest in the field.

Major strengths are an able, young, well-trained faculty, a good faculty organization, and considerable teaching and research experience. Major weaknesses are lack of interdepartmental coordination and concern regarding student opposition.

University rankings, on an in-country basis, are:

Overall quality: average

Quality of population program: average

Apparent degree of staff interest in population program: modest

Likelihood of success in achieving program objectives: modest

Overall rating: average

#### Medical Schools Summary

It is fair to say that the six medical schools in Peru share the objectives outlined by Cayetano Heredia for the teaching of demography:

1. To prepare students and professionals in the management and interpretation of demographic data.
2. To know the demographic reality of the country.
3. To promote a greater and more effective use of demographic knowledge in the field of health.
4. To motivate physicians and other professionals to produce vital statistics of high quality.

Family planning is currently being taught only as a clinical subject (contraception) in obstetrics and gynecology, and little time (perhaps three hours on average) is devoted to it.

There is considerable interest in all medical schools in the following:

1. The expansion of the teaching of demography and improved teaching-learning techniques.
2. Greater attention to family planning, not only from the clinical standpoint but also from the social.
3. Introduction or expansion of the teaching of sex education.
4. Provision of family planning services in medical school hospitals and clinics.

Until very recently, discussion of family planning was taboo in Peruvian medical schools. This has now changed, but the subject can still provoke strong reactions from students and the political left, which are often synonymous. The Catholic Church poses a lesser threat. Council support to ASPEFAM is enabling the association to cater to the felt needs of the medical schools and in this, their first year of operation, they have met with considerable success.

#### Escuela de Salud Pública del Perú

The National School of Public Health was founded in 1961 and is a unit of the Ministry of Public Health, housed in a large, rented, private house in Lima. Courses of varying lengths up to one year are given for physicians, nurses, other professionals, middle-level health personnel, and auxiliary personnel. The number of graduates has risen from 131 in 1961 to 1,057 in 1972, and the projected figure for 1973 is 1,179. This is a key institution, because all physicians, nurses, and other health personnel employed in the public sector have to receive training here. Also, the school is responsible for organizing, setting norms, advising, and supervising the training of all the nurse auxiliaries in Peru.

The school has 24 full-time and 182 part-time faculty. More than 95 percent of the budget is provided by the Ministry of Health. The 1971-72 two year budget was \$553,250. The physical plant is inadequate in size given the present level of operation, and efforts are being made to obtain funds to build (there are only ten classrooms). The school does not enjoy a reputation as one of the best in the region, but improvement has occurred recently, and PAHO has been collaborating in some courses.

This is a high priority developing institution. All students receive some teaching in demography, from four to eight hours depending on the course.

No instruction in family planning is given at present.

As a Ministry of Health unit, the school closely follows government policy. If the UNFPA project is approved and it becomes clear that policy has shifted regarding family planning, it can be expected that demography and family planning will receive much higher priority. Furthermore, the school is allotted a key role in training personnel for the four-year MCH and family planning project submitted to UNFPA.

At present there cannot be said to be any leadership in the population field.

From 1966-68, when it appeared that the ministry would undertake a national MCH and family planning program, the school held one-month courses in demography, family planning, and sex education for physicians and paramedical personnel.

Major strengths are the following. It has a broad mandate to train health personnel in the public sector; it can be expected to implement any change in government policy in the field of family planning, and it is the only institution of its type, and the general quality of teaching is improving.

Major weaknesses are: it is highly bureaucratized and lacks autonomy, the faculty is not of the highest calibre; and it is not associated with a first-rate university.

The school's rankings, on an in-country basis, are:

Overall quality: weak

Quality of population programs: weak

Apparent degree of staff interest in population program. modest

Likelihood of achieving success in program objectives. modest

Overall quality: average

Programa Académico de Obstetricia de la  
Universidad Nacional Mayor de San Marcos

This program, established in 1828, is the only midwifery training course in Peru and is located in La Maternidad, the country's largest maternity hospital. It forms part of San Marcos University. Its students receive four years of instruction and carry out a one year internship before receiving their professional degree, which entitles them to open a private practice. Students come mainly from the lower socio-economic classes in the provinces and have to pass the general San Marcos entrance examination. The number of graduates has increased over the past five to ten years and will be 140 in 1973. Two classes of 90 each are admitted yearly, and the dropout rate is low; 100 to 200 applicants are turned down annually.

Unfortunately the director of the program was unable to provide much information about size of faculty and curriculum. The school should be considered a high priority developing institution. All teaching is carried out by the faculty of San Marcos, from the Departments of Ob-Gyn, Basic Sciences, and so on. Some family planning and sex education is taught, but no details were available and the promised curriculum has not arrived at the time of writing. It is clear that the students are interested in family planning, but faculty attitudes are judged to be less favorable in some cases. Until very recently physicians were extremely jealous of the midwives, who were therefore kept on the margin of the health system. However, their acceptance is now increasing, with eighty employed at La Maternidad and forty to fifty at the Hospital del Seguro del Empleado. Most medium-large hospitals employ ten to fifteen.

Institution leadership (or lack of it) could not be ascertained. There has been very little teaching and no research activity in the past.

There is no consensus regarding the number of midwives practicing in Peru, perhaps because of in-migration from Chile and Argentina. The school director, an obstetrician, gave the figure of 4,000, while the Ministry of Health estimates 3,000 and other knowledgeable individuals say 2,000. Whatever the true figure, midwives are a very important resource for a national MCH and family planning program and figure prominently in the proposal submitted to UNFPA.

Insufficient information was gathered to permit a valid ranking. My impression was that the school is of relatively high quality (judged on a regional basis, it perhaps should be ranked as good). No ranking is possible in the population field but the institution is clearly of key importance.

Escuela Nacional de Enfermería, Hospital del Niño, Lima

This public institution, housed in Hospital del Niño, is a unit of the Ministry of Health. The course is of three years duration and total enrollment is 186. The average number of graduates has been twenty five yearly but will be thirty-eight or thirty-nine in 1973, and the school has a theoretical capacity of 300. Most students come from the middle to middle-lower socioeconomic classes in the provinces. Approximately 600 to 700 applications are received annually, and this year the entering class numbers 118 (instead of 40). Students must be at least sixteen, have completed high school, and pass an entrance examination.

Full-time faculty numbers ten, seven nuns (nurses) and three lay nurses, most of whom have received training at the National School of Public Health. Other faculty are contracted as needed. The budget comes from the Ministry of Health and is administered by the hospital. The physical plant is adequate.

This is a high priority developing institution. The curriculum devotes 800 hours to MCH and public health, of which 250 are theory and 550 practice. Of

the 250 hours of theory, 22 are devoted to family planning. All students carry out normal deliveries (twelve to eighteen each), and all work in the community during their public health training. Research was begun in 1971, with instruction in methodology given, and each student carries out research in the community. Eight students have completed studies documenting the need for family planning in various communities.

The leaders are: Sub-director, Sra. Emerita Bastera, chief of the MCH program (a nurse-midwife), and director Sister Catalina Martín. The leadership is clearly influential, and the nuns appear to be as interested in family planning as the lay nurses. A consensus is evident, and the leadership has shown considerable initiative in the field of family planning.

Current population activities give more attention and priority to the area of family planning than was expected, especially given the predominance of nuns.

Major strengths are an enthusiastic and well-trained faculty and a faculty consensus regarding need to teach family planning. Major weaknesses include limited ability to influence hospital or Ministry of Health policy.

The school's rankings, on an in-country basis, are:

Overall quality. excellent

Quality of population program. good

Apparent degree of staff interest in population program. excellent

Likelihood of success in achieving program objectives: excellent

Overall quality. excellent

Programa Académico de Enfermería,

Universidad Nacional Mayor de San Marcos, Lima

This public institution, located on the main campus of San Marcos University, began to function in 1964. Students must sit the general university

entrance examinations and seventy enter each year, with the number of graduates averaging thirty-five (it will be sixty in 1974). This program, in common with the other nine degree programs, is of five years duration, although the director considers the final year unnecessary. Students come from the middle to lower socio-economic groups. Faculty number twenty-two nurses (seven exclusive dedication, eight full-time, seven part-time). five of whom have masters' degrees and all but one of whom have bachelors' degrees. There are also physicians teaching part-time. This program, considered by WHO to be the best nursing course in Peru, graduates about 25 percent of the total output of the ten academic programs. The budget comes from the various departments of San Marcos. The physical plant is adequate but slightly cramped.

This is a high priority, developing institution. There is a minimum standard curriculum for all the academic nursing programs. MCH occupies about one-third of the curriculum, and family planning is emphasized in every phase, from preconception through postpartum and growth and development. Each student spends one week in an APPF clinic (the IPPF affiliate). All students carry out at least five normal deliveries, work in the community for a semester and write up a research project.

The leaders are the director, Sra. Espino de Alayo and the chief of MCH, Sra. Bertila, who exert considerable influence on the whole faculty. The leadership has been innovative and progressive in their emphasis on family planning. Some resistance is encountered from the students, who shout about "Yankee imperialism" in the classroom; this is quickly forgotten when they begin work in the community.

Major strengths are a large, well-trained faculty, family planning integrated throughout the MCH curriculum, and the program's influence given its quality and situation within San Marcos University. A major weakness is that,

being part of San Marcos, it is subject to the university's general economic and political problems.

The school's rankings, on an in-country basis, are:

Overall quality. excellent

Quality of population program: good

Apparent degree of staff interest in population program: excellent

Likelihood of success in achieving program objectives: excellent

Overall quality: excellent.

#### Nurse and Auxiliary Nurse Training

There are nineteen schools of nursing in Peru (see Table II), ten five-year academic programs and nine non-university affiliated diploma courses (Ministry of Health, seven, private, two). The academic programs, which began in 1960, vary greatly in quality, some of the provincial schools having only one or two faculty. Most in the provinces have between 40 and 80 students entering each year, but the very heavy demands cause a dropout rate of over 50 percent. Total output per year is 250 to 300 from the three-year diploma courses and 150 to 200 from the five-year degree programs. It was reported at San Marcos (an academic program) that many diploma programs have better resources, and hospitals frequently prefer to hire diploma nurses. However, the absorption capacity for all nurses is limited because of lack of funds in the health sector. In 1971, it was reported that there were 3,932 nurses in Peru, of whom 96 percent worked in hospitals.

In the area of auxiliary nursing, the School of Public Health organizes courses according to the demand from Ministry of Health dependencies. The courses are held in regional hospitals, and four of the local nurses are trained for three weeks in the school in Lima and act as faculty. Nurses from the School

of Public Health are responsible for the organization and supervision of the courses, each of which lasts six months and usually includes sixty students. From 1962 to 1972, the School of Public Health has been involved in the training of 2,772 auxiliary nurses in 81 courses, an average of 300 per year (the figure will be 500 for 1973). Only official entities are interested in hiring the auxiliaries, since private academies provide competition with personnel who demand higher wages.

The private academies, run by physicians, are a serious problem since the quality of training is usually mediocre. There are twenty or twenty-five in Lima alone, and one (Instituto San Luiz) graduates about 250 health personnel per year, who work in private clinics and doctors' offices. A Minister of Health commission is now investigating the situation in order to establish norms and controls.

In 1971, it was estimated that there were 9,670 auxiliary nurses in Peru, of whom 83 percent worked in hospitals. Many of the older personnel are thought to have received little or no formal training, and according to the director of the School of Public Health only 6,000 are recognized as qualified by the Ministry of Health. The curriculum is now standard for auxiliary nurses, and they are required to have three years of secondary education.

#### V. CONCLUSIONS

Peru appeared to be moving toward a de facto policy change until the abrupt reversal in December 1973. There is now no indication that the government is ready to adopt a policy favoring fertility reduction as part of its overall socio-economic development plans, although it has a population policy in favor of spatial redistribution.

Given the importance of DARSS activity and the difficulties for it in the region, the graduate social science program with population studies at

TABLE I  
PERUVIAN UNIVERSITIES \*

<u>University and Location</u>	<u>Rector</u>
A. State Universities	
1. Universidad Nacional Mayor de San Marcos, Lima	Dr. Juan de Dios Guevara
2. Universidad Nacional de San Antonio Abad, Cuzco	Dr. Isaac Velasco Quintanilla
3. Universidad Nacional de Trujillo, Trujillo	Dr. Antbal Espino Rodríguez
4. Universidad Nacional de San Agustín Arequipa	Dr. Eduardo Gómez Becerra
5. Universidad Nacional de Ingeniería, Lima	Ing. César Sotillo Palomino
6. Universidad Nacional San Luis Gonzaga, Ica	Dr. Manases Ocampo Ríos
7. Universidad Nacional San Cristóbal d de Huamanga, Ayacucho	Ing. Roberto Ishikawa Triveno
8. Universidad Nacional del Centro del Perú, Huanayo	Dr. Adriel Osorio Zamalloa
9. Universidad Nacional Agraria, Lima	Dr. Federico Anavitarte Condemarín
10. Universidad Nacional de la Amazonia Peruana, Iquitos	Ing. Gerardo de la Torre Ugarte
11. Universidad Nacional Técnica del Altiplano, Puno	Dr. Eduardo Beltrán Rivera
12. Universidad Nacional Técnica de Piura, Piura	Ing. Máximo Urbina Gutiérrez
13. Universidad Nacional Técnica de Cajamarca, Cajamarca	Ing. Mariano Carranza Zavaleta
14. Universidad Nacional Federico Villarreal, Lima	Dr. Humberto Espinoza Uriarte

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\* Lists of these institutions, giving full addresses, are available.

- |   |                                    |
|---|------------------------------------|
| 15. Universidad Nacional Hermilio Valdizan, Huanuco             | Econ. Encarnación Flores Pérez     |
| 16. Universidad Nacional Agraria de la Selva, Tingo Maria       | Ing. Guillermo Nishiky Atilano     |
| 17. Universidad Nacional Daniel Alcides Carrión, Cerro de Pasco | Ing. Anibal Campos Sueldo          |
| 18. Universidad Nacional de Educacion, La Cantuta - Chosica     | Ing. Roberto Velásquez López       |
| 19. Universidad Nacional Técnica del Callao, La Punta - Callao  | Ing. Jacobo Alcabes Avdala         |
| 20. Universidad Nacional Jose Faustino Sánchez Carrión, Huacho  | Dr. Julio Alvarez Ramírez          |
| 21. Universidad Nacional Pedro Ruiz Gallo, Lambayeque           | Ing. Enrique Vásquez Guzmán        |
| 22. Universidad Nacional de Tacna, Tacna                        | Ing. Francisco Sotillo Palomino    |
| <br>B. Private Universities:                                    |                                    |
| 1. Pontificia Universidad Católica del Peru, Lima               | R.P. Felipe MacGregor              |
| 2. Universidad Peruana Cavetano Heredia, Lima                   | Dr. Enrique Fernández Entíquez     |
| 3. Universidad Particular Católica Santa María, Arequipa        | Dr. Raul Zamalloa                  |
| 4. Universidad Particular del Pacífico, Jesús María             | Dr. Pedro benvenuto Mutrieta       |
| 5. Universidad Particular de Lima, Lima                         | Dr. Antonio Pinilla Sánchez Concha |
| 6. Universidad Particular San Martín de Porres, Lima            | Dr. Luis A. Gmelgar Vásquez        |
| 7. Universidad Femenina del Sagrado Corazón, Lima               | Rev. Madre Graciela Marrou Correa  |
| 8. Universidad Particular Inca Garcilaso de la Vega, Lima       | Dra. Amparo Salinas Rodríguez      |

- |   |                                 |
|---|---------------------------------|
| 9. Universidad Particular Victor Andrés<br>Belaunde, Ayacucho | Dr. Marino Montenegro<br>Castro |
| 10. Universidad Particular de Piura,<br>Piura                 | Ing. Ricardo Rey Polis          |
| 11. Universidad Particular Ricardo<br>Palma, Miraflores       | Dr. Edmundo Guillén Guillén     |

TABLE II

SCHOOLS OF NURSING IN PERU\*

<u>School</u>	<u>Director</u>
1. Escuela de Enfermería, Callao	Madre Emilia Peláez
2. Escuela de Enfermería de la Caja Nacional del Seguro Social, Lima	Madre M. Donrose, M.S.C.
3. Escuela de Enfermería, San Isidro, Lima	Sra. Nelly Aybar de Morales
4. Escuela Nacional de Enfermeras, Lima	Sor Pilar Caycho
5. Escuela de Enfermería, (Sanidad de las Fuerzas Policiales), Lima	Crnel. SPF Salvador Pineiro Nesanovich
6. Escuela Nacional de Enfermería (Hospital del Niño), Lima	Madre Catalina Martín
7. Escuela de Enfermería Regional del Centro del Ministerio de Salud, Tarma, Junín	Srta. Haidee Prado Quirez
8. Escuela de Enfermería de Tacna del Ministerio de Salud, Tacna	Srta. Carlina Badoino Ponce
9. Programa Académico de Enfermería (Universidad Nacional Pedro Ruiz Gallo), Chiclayo	Dr. Abraham Burga Hernández
10. Programa Académico de Enfermería (Universidad Nacional Mayor de San Marcos), Lima	Sra. Susana Espino de Alayo
11. Programa Académico de Enfermería (Universidad Nacional de San Agustín), Arequipa	Dr. Jose Gutiérrez Correa
12. Programa Académico de Enfermería (Universidad de "Santa María"), Arequipa	Madre M. Cristoforis
13. Programa Académico de Enfermería, Trujillo	Dr. Jorge de Vinatea

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\* Lists of these institutions, giving full addresses, are available

14. Programa Académico de Enfermería y Obstetricia  
(Universidad Nacional "Hermilio Valdizan"),  
Huanuco Sra. Celia Salazar de  
Puente
15. Programa Académico de Enfermería  
(Universidad Técnica del Altiplano),  
Puno Sra. María Montes de  
González
16. Programa Académico de Enfermería  
(Universidad Nacional San Cristobal de  
Huamanga), Ayacucho Dr. Miguel Mariscal Llerena
17. Programa Académico de Enfermería  
(Universidad Nacional del Centro),  
Huanucayo Dr. Jesús Veli Vizarraga
18. Escuela de Enfermería de la Clínica  
San Felipe, Lima Madre María de Cristo Rev
19. Programa Académico de Enfermería  
(Universidad Nacional Técnica de  
Cajamarca), Cajamarca Dr. Juan Matias Atuncar

Catholic University is a unique and important venture. Although assisted as a national undertaking, it has attracted an international student body for its second cycle as a result of its spreading reputation through the Andean countries. There has been a healthy competition for admission to the program, and an effective demand for its graduates. A parallel graduate program in economics soon is to be undertaken.

Continued support for Catholic University is strongly recommended. The full development of its master's level programs will not be complete for several more years, and continued support is needed for the consolidation of the progress already achieved. Published research outputs should turn sharply upward as the investments already underway come to fruition, and its significance for policy considerations should be followed carefully.

Employment and unemployment matters rank as high priority areas in Peru, and the OTEMO contribution to this area cannot be overlooked. Its analytical capabilities, especially in the interpretation of findings, should be expanded. It should be helped to strengthen links with the graduate programs at Catholic University, and to expand the use of its data by graduate students and in faculty research.

A good start has been made by ASPEFAM in promoting the teaching of demography and family planning in the six medical schools in Peru. Outside support will be necessary for two to three additional years until the teaching becomes institutionalized. The Council is supporting family planning research and demonstration programs at Cayetano Heredia and San Marcos Universities. Overall, there has not been much research in family planning in the medical schools outside of the biomedical area. Opportunities for strengthening research capacity should be sought by the various funding entities. I would recommend that

Cayetano Heredia, San Marcos, and Arequipa Medical Schools be accorded highest priority, followed by Trujillo and then Federico Villarreal and Ica.

The teaching of family planning is given some priority in at least the major nursing degree and diploma courses. It is thought to receive less attention in the provincial nursing schools. Judging from the interviews and the course outline for the training of auxiliary nurses, they receive no preparation in the area of family planning. In an intermediate position are the midwives, who receive at least those nurses in the higher-quality programs.

The School of Public Health and the School of Midwives are clearly two key institutions and family planning teaching programs will be of the utmost importance as soon as the policy climate changes. However, because these are public institutions, it is not felt that much can be done until the government stance changes.

Schools of nursing in general are felt to have lower priority since they are farther along in the family planning field, because almost all graduates work in urban hospitals (and family planning services are most urgently needed in health centers and posts, especially in the rural areas), because of the long training period (three to five years), and because it would be more difficult to reach these programs since ten are attached to individual universities and only seven are under the direct control of the Ministry of Health.

#### SOURCES OF INFORMATION

Numerous site visits for DARSS review were made to the Catholic University, OTEMO, and CEPD in recent years.

Other site visits were made to Cayetano Heredia Medical School (six times in the past three years); San Marcos Medical School (October and November 1973); Arequipa Medical School (October 1973); School of Public Health (June and November 1973); and all paramedical institutions covered in this report (November 1973); all six medical schools in the past few months.

Several other institutions were visited by the professional staff of ASPEFAM, since foreign visitors for this purpose might have been unwelcome.

July 1974

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VI. POPULATION

A. POPULATION AND LAND DEVELOPMENT

Introduction

The population of Venezuela has increased steadily since 1950, and is expected to continue to do so for the next 20 years. The present population is about 10 million, and is projected to reach 15 million by the year 2000. This increase is due to a high birth rate and a low death rate. The population is concentrated in the coastal and Andean valleys, with the remainder scattered in the interior. The population density is highest in the coastal region, and lowest in the interior. The population is growing rapidly, and this has led to a shortage of land for agriculture. The government has been unable to provide enough land for the growing population, and this has led to a situation of landlessness for many people. The government has been unable to provide enough land for the growing population, and this has led to a situation of landlessness for many people.

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The population of Venezuela has increased steadily since 1950, and is expected to continue to do so for the next 20 years. The present population is about 10 million, and is projected to reach 15 million by the year 2000. This increase is due to a high birth rate and a low death rate. The population is concentrated in the coastal and Andean valleys, with the remainder scattered in the interior. The population density is highest in the coastal region, and lowest in the interior. The population is growing rapidly, and this has led to a shortage of land for agriculture. The government has been unable to provide enough land for the growing population, and this has led to a situation of landlessness for many people.

20 percent of the nation's territory. While in 1941 23 percent of the population was located in this region, by 1961 78 percent of the population was living there. There is also a tendency for internal migration to increase, which has resulted in a larger concentration in the principal urban centers. An estimated 3 million persons live in greater Caracas, the capital city, and 75 percent of the Venezuelans are now living in urban areas of more than 2,500 inhabitants, as opposed to 48 percent in 1951. The majority of the population is Roman Catholic, although religious observance is not high. The racial majority is mestizo (mixed blood), and the literacy rate is 77 percent.

According to official figures, Venezuela had an estimated per capita income of US \$1,236 in 1972, the highest for any country in Latin America. However, since the share of oil in the gross national product was 13.1 percent in 1972, and the price of oil has greatly increased in the international market, it is expected that both GNP and per capita income will increase substantially. Venezuela has been gift with rich natural resources, which include, besides oil, large ore deposits of iron. The next decade could be one of rapid development if the bottlenecks in agriculture and land distribution and the problems created by the high population growth rate are effectively dealt with, so that the increased economic resources coming from mining and oil can be utilized.

## II. HEALTH POLICIES AND PROGRAMS

Since Venezuela has recently changed government, the nature and direction of its health policies cannot be evaluated at present. A plan to create a national health service had been prepared by the outgoing administration, and it might be implemented by the new government.

The health system is represented by more than eighty-four institutions, belonging to an array of organizations that in 1971 were providing services to an

estimated 73 percent of the population. Of the thirty-two major institutions, the largest are the Ministry of Health, the Venezuelan Institute of Social Security, and the institutes belonging to the Ministries of Education, Foreign Relations, Communications, and Public Works.

In 1973 the health sector had 34,340 hospital beds, 304 hospitals, 37 health units, 37 health centers, and 492 rural health posts. There were 10,200 active physicians, 7,500 nurses, and 18,000 auxiliary nurses. However, there is a high concentration of resources in the urban centers, with the Federal District, which includes Greater Caracas, having 75 percent of the physicians, 70 percent of the nurses, and 70 percent of the auxiliary nurses. The Ministry of Health and the Venezuelan Institute of Social Security account for 75 percent of the health coverage.

### III. POPULATION POLICY AND PROGRAMS

Concern with the social problems created by rapid population and urban expansion began in the early 1950's and led to the development of the first family planning services at the Jose Maria Vargas Social Security Hospital at La Guaira in 1962. This was soon followed by the development of a family planning clinic at the Maternidad Concepcin Palacios in Caracas in August 1963. In 1964 an International Conference on Population problems took place in Caracas, and in 1965 a population division was established at the Ministry of Health with the objectives of studying the health consequences of the rapid demographic expansion and drafting a plan of action.

In 1966 several important developments took place. Through the efforts of the director of the division of population at the Ministry of Health, the national public health congress issued a declaration urging the provision of family planning services in governmental health facilities. Shortly after that, a group of professionals, motivated by the problems of illegal abortion and the health aspects of

rapid population expansion, founded the Asociación Venezolana de Planificación Familiar (AVPF). The objective of AVPF is the creation and financing of family planning centers located in public health institutions, to offer family planning as well as educational services and cancer detection to the patient. The services of family planning will be provided free of charge.

Opposition to family planning comes largely from four groups:

1. Religious groups.
2. Extreme leftists who insist that social change can come only through revolution and that family planning is a device to interfere with this inevitable outcome.
3. Strong nationalists who look on family planning as foreign intervention.
4. Geopolitical groups who maintain that Venezuela has a low population density and unpopulated frontiers with Colombia and Brazil. The influx of illegal migrants from Colombia is seen as both a political and a demographic problem.

The population division of the Ministry of Health, because of these constraints, did not develop family planning services, but limited itself to the development of norms and regulations. However, these were favorable to the development of family planning services in the facilities of the ministry and other institutions. In 1969 the incoming administration further restricted the possibilities of action by the population division, and the division was finally eliminated and its components allocated to the directions of public health and social welfare.

In the meantime, the AVPF was able to attract funds from local private sources and international agencies. In 1968 it received increased support from the IPPF and began to receive support from the Population Council and the USAID. This led to a rapid expansion of its family planning work.

In 1967, the Maternidad Concepción Palacios, one of the largest maternity hospitals in the world, became a member of the postpartum demonstration program of the Population Council and began to enlarge its FP service program.

Two important developments took place in 1969. First, a pastoral letter from the Venezuelan bishops stressed the obligation of the state to give information and education about fertility regulation and made clear that in a pluralistic society it was not appropriate for the state to give information regarding methods not endorsed by the church. The second development was the drafting and publication of the Caracas Declaration by the members of the AVPF as a response to accusations from the opposition. This Declaration indicated the objectives and methods of the AVPF and helped greatly in preventing further attacks.

In 1971 a new organization, the Foundation for Responsible Parenthood, was created by a group of prominent industrialists to raise funds to support the family planning programs of AVPF and other organizations. The foundation was influential in obtaining a large appropriation from the National Congress that, through the Venezuelan Council for Child Welfare, was used to fund family planning activities and served as a counterpart donation for support from the Billings Fund. These inputs increased the number of family planning clinics from 61 to 124 by the end of that year. In 1973 there was renewed interest in population at the Ministry of Health. Responding to a request from AVPF, the ministry initiated a series of meetings of the Venezuelan agencies concerned with family planning and family and child welfare and invited a United Nations team to develop a population program for Venezuela. A request for preparatory funding for 1974 was prepared and has since been sent by the government to the UN.

These developments reflect the rapid change in attitude in Venezuela during the decade. It was thus not surprising that during the electoral campaign of 1973, Carlos Andrés Pérez, one of the presidential candidates, now in office, publicly

endorsed family planning. It is expected that the new government will issue a population policy with directives to develop a national population program and will allocate funds from its new sources of revenue for these activities.

There are two family planning programs in the organized sector in Venezuela: the AVPF and the Maternidad Concepción Palacios. The program of the AVPF is located in facilities of the public health services at the municipal, federal, and state levels. The 137 clinics of AVPF had 80,200 new acceptors in 1973 and a total of 315,000 revisits. The 1973 budget was \$1.8 million with \$520,000 provided by local sources. The AVPF is directed by an eight-member board. The executive director is Dr. Pablo Liendo Coll. The AVPF is organized in four divisions: services, research and evaluation, communication and education, and administration. The central office, located in Caracas, has thirty-eight full-time staff members, of whom eighteen are professionals and twenty are technical and secretarial workers.

The proportion of AVPF support to individual FP clinics varies. The Association provides funds for personnel for most of the clinics, for some, it provides funds for contraceptive equipment. The hospitals and other health institutions in which the clinics are located provide auxiliary personnel, space, and services.

The AVPF utilizes oral contraceptives, intrauterine devices, and other methods, such as the condom and spermicides. According to the Caracas Declaration, the AVPF does not provide abortion or sterilization services.

The division of research and evaluation is in charge of the preparation of family planning service statistics, and of the research activities of the AVPF. At present, the division is developing a computerized statistics system and is completing a study on communication, evaluating the effects of two different types of communication. A fertility study is under development, and a survey will soon be carried

out in Caracas.

The efforts of the division of communications and education are directed at an intensive personal training for physicians, auxiliaries, and motivators who will be responsible for the program, and efforts to reach leaders and other members of the community.

The IPPF in Caracas cooperates closely with the government in the development of a primary health care program. It is also in contact with the service centers of IATF and other groups by means of reports, and through the organization of a network of health centers in the community and consultation with individuals.

The staff of the hospital is composed of the following: Patricia Hernandez, Medical Director, who works in cooperation with the Welfare Society of Caracas. The IPPF has established a health center in the hospital grounds. The medical center is considered one of the best of its kind in the world and handles a substantial number of patients on an out-patient basis.

The health center is staffed by 100 in 1963 with one physician, one medical nurse, and one auxiliary. There are 10 beds, including 100 in the eight operating rooms, radiology and laboratory, and facilities for the preparation of films and slides. The center has a laboratory, laboratory technician, four nurses, three psychologists, one social worker, one dental technician, two secretaries, a statistician, and six clerks.

The funds for the IPPF program are derived from the hospital budget. One-third of the funds come from the Population Council, which contributes annually approximately US \$75,000, and the IPPF, which provides US \$70,000. Contraceptives are obtained from US AID and supplied by AVPF.

In 1971 the Ford Foundation made a \$70,000 grant for training. The training program has two main components: service and education. The service program,

directed by Dr. Dario Merchán, enlisted in 1973 7,500 new acceptors, with 6,800 utilizing an intrauterine device, and gave a total of 37,000 follow-up visits. The educational program, directed by Dr. Ela Bergher de Bacalao, teaches physicians, nurses, auxiliary nurses, other health workers, and a large number of medical students in the course in obstetrics and gynecology of the Central University of Venezuela. Research and evaluation activities deal with studies in contraceptive methodology, evaluations of the copper-T and Lippes Loop, the immediate postabortion insertion of the Lippes Loop, and KAP studies in coordination and collaboration with the Venezuelan Center of Population and Family (CEVEPOF).

It is estimated that contraceptive use in the private sector is also increasing. According to the Westinghouse Population Center report, there were 170,000 consumers of condoms and oral contraceptives in the private sector in 1971. The data for this study was obtained by personal interviews with importers, distributors, and wholesalers of contraceptives.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

The university system is directed by the Consejo Nacional de Universidades (GNU). This entity, presided over by the Minister of Education, is integrated by the rectors of the universities, two representatives of Congress, three representatives of the faculty, and one representative of the National Research Council (CONICIT). The functions of the GNU are coordination and planning of activities, allocation of resources, and authorization of new institutions and schools within the universities. The technical secretariat for the GNU is the national office for planning of the university sector (OPSU). Venezuela presently has seven national and three private universities. In 1972, 127,000 students were matriculated in these ten universities. The university system offers sixty-five professional and seventy technical careers. The national universities receive their support from the national



Table I

STUDENT ENROLLMENT AND BUDGET FOR  
MAJOR UNIVERSITIES AND INSTITUTIONS

<u>Universities and</u> <u>Institutes</u>	<u>Student Enrollment</u>		<u>Total</u> <u>(in millions)</u>	<u>1971 Budget (in USS)</u> <u>Percent Distribution</u>		
	<u>1968</u>	<u>1972</u>		<u>Teaching</u>	<u>Research</u>	<u>Extension Work</u>
Universidad Central de Venezuela	30,028	35,500	\$50.9	79	18	3
Universidad de los Andes	6,217	12,967	17.2	85	12	3
Universidad de Zulia	8,845	20,887	22.3	80	16	4
Universidad de Carabobo	5,304	17,241	12.4	79	15	6
Universidad de Oriente	2,827	6,921	10.6	83	12	5
Universidad Centro Occidental	1,407*	3,821	4.0	80	15	5
Universidad Simon Bolivar	--	2,302	3.8	88	9	3
<u>National University Subtotal</u>	<u>54,628</u>	<u>99,679<sup>1</sup></u>				
Universidad Católica A. Bello	4,288	7,800				
Universidad Santa María	3,161	12,379				
Universidad Metropolitana	--	670				
<u>Private University Subtotal</u>	<u>7,449</u>	<u>29,849</u>				
Inst. Pedagógico de Caracas	2,598	--				
Inst. Pedagógico Experi. de B/meto	897	n.a.				
Inst. Univ. Politec. de B/meto	224	730				
Inst. Univ. de Tecn. Región Capital	--	151				
<u>Institution Subtotal</u>	<u>3,719</u>	<u>881</u>				
<u>General Total</u>	<u>65,796</u>	<u>130,409</u>				

\_\_\_ NOT ASCERTAINED \_\_\_

\* Source: Ministry of Education records and tables in this publication  
1. Provisional figures



The medical studies comprise twelve semesters, divided into three cycles of four semesters each: basic, preclinical, and clinical. Further demographic subjects are taught in the course in public health. Family planning and contraceptive methods are taught in the gynecology course, and the students have optional hours of practice at the local clinics of the AVPF. Research work in reproductive biology is being carried out in the Department of Physiopathology.

The leaders are:

Department of Preventive Medicine: Dr. Carlos Luis González, professor of preventive medicine, and Dr. Hector Sequers, professor and head of the department. Coordinator of demography instruction is Dr. Paulino Lobo, and Dr. Guillermo Real is also active.

Department of Gynecology: Drs. Desiderio and Judith Rincón are active in teaching and service in family planning.

Department of Physiopathology: Dr. Walter Bishop is actively working in reproductive biology at the experimental level, and Dr. Alfonso Osuna is interested in cytogenetics and the endocrinology of reproduction.

There is interest in creating a unit on human reproduction.

The main objectives of the program of medical demography are the provision of a sound background of information to enable the student to understand population issues and their impact in health and to deal with statistical issues and data. The objectives are well integrated into the curriculum and are relevant to local and national objectives. Instruction in contraception is adequate, but the coverage of family planning needs to be improved.

Previous population activities were limited. The new program of teaching in demography was instituted in 1973. Previous research activities have been developed by the Department of History at ULA, dealing with the evolution of the population in the region. Since the teaching activities in demography are new, no modifications

are to be expected soon, although the inclusion of field work is being considered.

Books are selected primarily by local and governmental sources. The teaching aids and materials developed and provided by FEPAEM are being used, and additional teaching materials and paragraphs are prepared locally, utilizing material prepared by the local education.

As a discipline, anatomy has full academic status and is required. Although the curriculum is subject to frequent and considerable change, the students approach the study of anatomy and its applications and are able to visualize health problems in the human and their individual nature.

In the past few years, a significant interest in anatomy has been developed in the Department of Anatomy at the University of Puerto Rico, P.R. In 1964, a research laboratory was established in the Department of Anatomy, directed by Dr. Juan F. Rodriguez. The laboratory is a well-equipped and modern laboratory. It is the only laboratory of its kind in the island. The laboratory is a well-equipped and modern laboratory. It is the only laboratory of its kind in the island. The laboratory is a well-equipped and modern laboratory. It is the only laboratory of its kind in the island.

The Department of Anatomy is a well-balanced department and has a high reputation. The Department of Anatomy is a well-balanced department and has a high reputation. The Department of Anatomy is a well-balanced department and has a high reputation. The Department of Anatomy is a well-balanced department and has a high reputation.

Problems can be added from political attacks on programs by leftist leaders and the negative impact and institutional stress caused by ever-enlarging student populations in the face of relatively limited resources.

### Universidad Central de Venezuela

This public institution is located in University City in Caracas, and is the country's largest university. In 1972, it had an enrollment of 35,500 students and a staff of 3,700 professors. The university is organized in eleven faculties, each with a different number of schools, for a total of thirty-eight. There are seven schools for professionals in the health sciences: two of medicine and one each of bioanalysis, nutrition and dietetics, public health, dentistry, and pharmacy.

In 1971 the UCV graduated 2,700 students and 867 of them received an M.D. degree. (This number represents the graduates for two years, since no degrees were conferred in 1970.) On the average, 300-400 physicians graduate yearly.

Most of the schools of the university are located in the University City, a group of modern buildings located in downtown Caracas. The university has a central library building and several other specialized libraries belonging to the different schools. There are well-equipped, modern laboratories with good facilities for research and a computer center.

The UCV is the leading university in the country, and its impact, reputation, and access to elites are outstanding.

In the description that follows, the School of Public Health and the Schools of Medicine are treated separately.

#### School of Public Health

The School of Public Health (SPH) was a school of the Ministry of Health until 1958, when by an act of the executive council (Acuerdo No 16, December 1958) it was transferred to the UCV. According to the agreement, the Ministry of Health will continue to provide the budget and the UCV incorporates the school as one of its member schools assigned to the Faculty of Medicine. The World Health Organization, through the Panamerican Health Organization, is providing technical assist-

When the agreement was signed, the school prepared health personnel for the Ministry. As a part of the RCV, the SPH is regulated by university law and health personnel for the ministry and all other health institutions.

The school is headed by the Director of the Institute of Hygiene at the University of Oslo. The professional staff of twenty-five full-time and part-time lecturers is supplemented by larger staffs. 600 students attended the school in 1967.

The school has a wide range of studies for undergraduates, their studies include epidemiology, microbiology and immunology and laboratory medicine. The school also offers courses for graduates of other professions who wish to become health workers or health controllers.

The school is under the direct control of the Minister of Health, who has appointed a Director of the school. The school is also a part of the University of Oslo. The school is a public institution and the education is free of charge. The school is a part of the health services in Norway.

The school has a long history. It was founded in 1825. The school has a long tradition of providing health personnel for the Ministry of Health. The school has a wide range of studies and a high standard of education. The school is a public institution and the education is free of charge.

The school is a part of the health services in Norway. The school is a public institution and the education is free of charge. The school has a wide range of studies and a high standard of education. The school is a part of the health services in Norway. The school has a long history and a wide range of studies. The school is a public institution and the education is free of charge.

The school's reputation is improving throughout Latin America, and it has gained from its association with the university.

This should be considered a high priority developing institution. The SPH has three levels of post-graduate courses:

1. An intermediate course (16 weeks), open to all members of the health team, which leads to the certificate necessary for registration in the magister's course. This is a general orientation course aimed at public health personnel working at the district level.

2. Magister's course in public health. This course, according to the regulations of the UCV, leads to a magister's degree in public health. The general objective is the preparation of personnel that can work as public health administrators at a subregional or regional level. This course is organized in three regular periods. The first (16 weeks) is, like the intermediate course, a refresher and orientation in public health. The second (7 months) allows the student to follow any one of four subspecialties: health administration, hospital administration, epidemiology, or nutrition. Demography is taught in all these courses during the hours (about 100) assigned to statistics. The Department of Statistics, under the direction of Ir. Luis Quevedo, is planning to develop a fifth subspecialty in statistics and demography, beginning in 1975.

3. Doctoral level. This course leading to a doctoral degree, is open to those who have earned the magister's degree. The studies last 12 months, and a doctoral thesis has to be approved.

There has been little research dealing with population subjects at the SPH. Recently, Dr. Rafael Borges, a professor in the department of epidemiology who has taken postgraduate training at North Carolina University for two years, has applied for funds for a research program dealing with the effect of multiparity on blood pressure.

The leadership is Dr. Eleuterio Acosta Sierra, director of the SPI, Dr. Luis Quintero, chief of the Department of Biostatistics, and Dr. Rafael Borges, chief of the epidemiological department. The School of Public Health has been recently re-organized and is headed under the leadership of Dr. Sierra, who is influential in the government, in the states and provinces, in medical and PH education.

There are close relations with the Ministry of Health and other institutions in the country. The school is well equipped and is interested in bringing the curriculum up to date and in providing a good education.

The curriculum is designed to train public health workers in general and epidemiologists in particular. The duration is five years. The curriculum is divided into five years. The government is interested in the school and has provided the facilities and equipment. The school is well equipped and is interested in bringing the curriculum up to date and in providing a good education. The school is well equipped and is interested in bringing the curriculum up to date and in providing a good education.

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high standing in the country and its prestige is growing.

The major strength of the population program is its development as a new activity in the school and the likelihood of its having an impact on the direction of the health areas of the country.

The major weaknesses are the lack of previous experience in population activities and past hostility of the university students to population programs.

#### The Schools of Medicine at UCV

The Faculty of Medicine of the UCV has two schools of medicine: José María Vargas, directed by Dr. Carlos Moros, and Luis Razetti, directed by Dr. María A. de Blanco.

The total number of physicians graduated in 1971 was 867, but noted that the school did not graduate physicians in 1970 and had graduated only 15 in 1969 because of the interruption of activities by partial closure of the university. In previous years the university had graduated from 300 to 400 physicians.

The funds for both medical schools come from the budget of the university. Additional research funds are provided by the Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICIT). The basic sciences are taught at various institutes of the university and the clinical sciences in the two main teaching hospitals, the University Hospital, located in University City, and the Hospital Vargas, in addition to other institutions in Caracas. The students of both medical schools are taught obstetrics and gynecology at the Concepción Palacios Maternity Hospital (MCP).

This should be considered a low priority institution, with no interest in developing a population program.

Demography is being taught only in lectures within the course on statistics. The efforts of Dr. Luis Angulo, professor of preventive medicine, to expand teaching in this area were not successful because of student opposition.



graduates, this type of school is going to find it difficult to maintain enrollment and subsist as a separate and vigorous entity. The requirement for admission to the school is the bachelor's degree. The studies last four years divided into semesters, three of which cover basic subjects with the remainder dedicated to clinical courses. Family planning is taught in the context of obstetrics and gynecology. At the ULA, teaching of family planning comprises one unit of five hours, in which the objectives and techniques of FP are described, and later two weeks of practice at the family planning clinics, for a total of thirty-two hours.

These schools, because of the problems they are facing and their limited output, even though they provide adequate teaching in family planning, will not be able to make a significant contribution to health personnel needs.

#### Diploma Nursing Schools (Bachillerato)

In 1973 there were nine of these schools, which graduated 400 nurses. These schools depend on the Ministry of Health and the Ministry of Education. A Committee with members from both entities is in charge of developing the curricula. The Ministry of Health has technical assistance from the Panamerican Health Organization. The requirement for admission is three years of secondary education. The studies take three years, leading to a diploma in nursing equivalent to the secondary education diploma, the "bachillerato." These professionals receive instruction in family planning during their training, but detailed information was not available for inclusion in this report.

#### Auxiliary Nurses

These health workers are trained at the same schools that train diploma nurses, and the yearly output is approximately 600. Requirements for admission and the type of training vary, with two main types of AN now being trained:

1. Auxiliaries to work in the hospitals. They receive training from nine months to a year. In 1973 500 of this type of health worker were prepared.

... of "simplified medicine" and at the ... They receive training for three months and ... in first aid techniques, the use of certain ... and tuberculin testing.

... instruction in family ...

... low level ... fully planning.

Discussion

... public health ...

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center. There exists a nucleus of professors who have had several meetings to discuss the details of the creation of this center. They are planning to request technical advisors and financial assistance from several institutions, among them CELADE, FEPAFEM, and the Population Council.

At present, the center of demographic and related social science training and research interest is in the Center for Economic Research (discussed later).

LUZ is closely connected with the governmental agencies of the region. Relations with organizations for planning and economic development (Corpozulia and Conzuplan) and with health organizations (the Cooperative Health Service) are particularly important. Formal agreements with the Cooperative Health Service allow for the use by LUZ of all official health institutions from the city as well as from all the areas of the state of Zulia for undergraduate and graduate teaching.

There are about 30,000 students presently enrolled at LUZ. The growth of the student population has greatly accelerated (a growth from 7,000 to 8,000 annually) during the last two years, as has been true of the other universities.

#### The School of Medicine

Out of these 30,000 students, about 8,000 are enrolled in "general studies" a year of preparation for any university career. From among these students nearly 1,500 are in the "medical field" and are waiting to be placed in the four departments of the School of Medicine: 1,200 in medicine, 175 in bioanalysis, 75 in nutrition, and 45 in nursing.

Data is given below on student enrollment in the School of Medicine, the ten semesters after the year of general studies:

III and IV semesters (basic)	1,555
V and VI semesters (pre-clinical)	559
VII and VIII semesters (fifth year clinical)	132

IX and X sections (sixth year clinical) 439

During the last 100 years, from 1869 to 1971, the School of Medicine has graduated 1,148, 1,120, 720, and 120 physicians respectively.

THE FACULTY of the School of Medicine  
as of 1971

Faculty	64
Administrative personnel	60
Students	31
Postgraduate students	29

The School of Medicine is a member of the Association of American Medical Colleges and the Association of Schools and Colleges of Health Professions. It is also a member of the American Association of Colleges of Podiatric Medicine.

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This should be regarded as a high-priority developing institution.

LUZ has great potential for development of a program of teaching and research in population. In fact, a group of professionals is presently working on the creation of a multidisciplinary center of research in population. The Schools of Medicine and Economy are working on this project: at the School of Economy, Dr. Dionisio Carruyo and collaborators from the Center of Economic Investigations, and at the Faculty of Medicine, Drs. Antonio Romero-Paez, Ivan Mavarez, Rafael Hernández, and others from the Department of Social and Preventive Medicine.

The Department of Social and Preventive Medicine has a well-prepared and interested staff, with training in population. Dr. Romero-Paez took the international course of FEPAFEM, Dr. Mavarez the course on health and population dynamics at the University of Chile, and others have taken the local courses given by CELADE.

The leaders are: Dr. Francisco Gómez Padrón, Dr. Antonio Romero-Paez, Dr. Ivan Mavarez and Dr. Rafael Hernández (Department of Social and Preventive Medicine) and Dr. Robinson Suárez-Herrera and Dr. Francisco González-Govea (Department of Obstetrics).

Dr. Rafael Montiel, Department of Biochemistry, is interested in the endocrinology of reproduction and has just finished a three-year training period in this specialty at the Karolinska Institute in Stockholm, Sweden. Dr. Montiel is working closely with the obstetrics group.

Dr. Lois Wilhelm is regional director of the Venezuelan Association of Family Planning.

These leaders have influence because of their personal status. Nevertheless, it seems that there is already a sense of team work not only within the school but also with the other university areas, as demonstrated by the desire to create the multidisciplinary population center.

Aspects of population are taught as a part of the graduate teaching program, whose purpose is to train basic nonspecialized physicians who have essential in-



Center for Economic Research at LUZ

A leading group in fostering interest and training in population at LUZ has been the Center for Economic Research, whose director, Dionisio Carruyo, is a CELADE trainee. The center is conducting studies on population of a regional interest (surveys on migration, research of marginal urban areas) and is planning others (projections of population, evaluation of the last census). Two intensive courses in demography sponsored by CELADE have been offered. Among the instructors are two demographers, a statistician, and two economists with demographic training. (Some have taken the extensive courses from CELADE.) In addition to fostering university interest in population, the center has good linkages with other universities and with government institutions at the state and national level. At the second CELADE course offered by the center, participants represented academic and government institutions from all over Venezuela.

The center is the research arm of the Department (Facultad) of Social and Economic Sciences at LUZ. It also functions as a training center for specialized courses related to its main objective -- the study of development-related problems within Latin America, in both a national and a regional context. In addition, the center seeks to foster research interest among a faculty often involved only in teaching. Among development aspects that are singled out for study are: commercial relations (export-import) with adjoining countries, the industrial process, technological dependency, national and regional integration, economic and human resource planning, and forecasting. Population studies as such are not mentioned in the center's official statement of objectives, but this is counterbalanced by the director's expressed interest and activities in this area.

While the creation of an interdisciplinary population research center at LUZ remains an excellent possibility this, like other Venezuelan universities, suffers from a lack of well-trained demographic staff strongly committed to developing this

area of research and training.

The staff at the center includes Beatriz de Kahn, a statistician specialized in sampling; Nestor Castro and Leopoldo Provenzani, both economists; and Dionisio Carrara, the director. The consensus of this group was that the center had done the ground work for social studies at Zulia and that with both aid and expertise from international agencies, further plans could be developed.

The center offers a professional certificate. Master's degree programs do not exist at the university and Venezuela in general does not adhere to the undergraduate requirements of higher education but offers specialized professional degrees in various fields.

The center will attempt to develop a program of population studies and programs to improve professional training.

The center maintains a nucleus of professionals with basic training in the field of statistics and the Department of Economics and

Statistics. The center is a member of the International Association of Agricultural Economists and the International Association of Agricultural Economists.

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International Association of Agricultural Economists and the International Association of Agricultural Economists.

The center will continue to receive financial resources will be credited to the center for the purpose of training and there will probably be few resources available for the purpose of population studies.

Institute for Advanced Studies in Social Science

IESA -- Caracas

The Institute for Advanced Administration Studies (IESA) is a graduate education and research center specializing in business and public administration. Since its beginning in 1968, IESA has enhanced its reputation, ranking today among

the leading comparable institutions in Latin America. Master's degree programs are offered in public administration and business administration, and plans exist to increase these specialties with development integration administration and population program administration.

IESA's six-quarter, full-time master's of administration was initiated in 1968 with substantial support from the Ford Foundation and advisory assistance from a committee in which leading US schools of public and business administration have been represented. These include Cornell, Chicago, Harvard, and Syracuse, with Northwestern's Graduate School of Management serving as coordinator. IESA's full-time faculty now totals fifteen, of whom nine have completed the Ph.D., three more are expected to complete the degree during the current year, and three others are still engaged in coursework. Awardees supported for the Ph.D. have attended a total of ten universities, including American, Berkeley, Cornell, Harvard, M.I.T., North Carolina, Northwestern, Pennsylvania, Pittsburgh and Syracuse.

IESA operates independently of Venezuela's university system, a necessary precondition to permit the wide-ranging innovations that IESA has introduced in Venezuelan education. These include the Ph.D. requirement for its faculty, full-time faculty service, full-time study at the graduate level, demanding student workloads, a variety of instructional methods considered new in Venezuela, and the nation's first degree program. However, the rectors (presidents) of all Venezuelan universities are ex officio members of IESA's board of trustees, as are the Minister of Education and other public officials. Other board members include community leaders and businessmen drawn from some 200 Venezuelan firms that have provided IESA with financial support.

Population program administration is a natural area of interest at IESA. The first international workshop of the International Committee of Management of Population Programs (ICOMP) in Latin America took place at IESA in 1974. IESA

Faculty discussed their research on issues bearing on future population policy and productivity of urban management effectiveness in Latin America. The leadership position of IESA in the management field in Latin America makes it an extremely important institution for the development of training and research programs in a number of socially-related studies.

Current projects include the development of an aggregate economic model of the region, the analysis of growth potentials that could be expected from a number of alternative population policies, a study of higher education in the region, a study of the region's capital markets, and a study of training requirements for urban projects.

The enrollment of post-graduate programs has increased from a class of about twenty students in 1967 to an average class of fifty-two in 1973. Executive programs, such as the M.A. in 1967 and the M.B.A. in 1971, have attracted more than 500 participants from the public and private business sectors, public agencies, and labor unions in the region. In 1974 IESA introduced a post-study program with the help of a grant from the Ford Foundation (FORDA), which will help provide financial support for interested students from Latin America to participate in the master's program. A report on the current situation addressed to issues concerned with the region's economic future.

#### Universidad de Oriente at Cumaná

The Universidad de Oriente has branches at Sucre, Monagas, Bolívar, Anzoátegui, and Cumaná, with a total enrollment of about 6,000 students. At Cumaná, the former director of the School of Social Sciences, Elizabeth Caldera, had initiated basic population and demography courses; however, these activities slowed down after her departure (she is now at CORDIPLAN). The rector of this university feels that demography could be continued at Cumaná, perhaps through an exchange program with an American university as counterpart. This would help solve the

critical problem: lack of trained talent in demography Caldera could be engaged in coordinating this effort now that she has obtained a Ph.D. in demography, although she returned to a government rather than an academic position.

#### University de Carabobo at Valencia

Located about two hours west of Caracas, this 12,000-student campus offers only one degree in the social sciences: economics. Interest in demographic studies is consequently low.

#### V. CONCLUSIONS

The development of the family planning programs of the AVPF in governmental and municipal health centers, and the interest of the government in developing a population program, herald a period of rapid expansion of population activities in Venezuela. It is likely that in the future the government will take over many of the responsibilities for the service program, and that there will be further need for strengthening the activities of applied research and evaluation.

The School of Public Health of the Central University is interested in developing a teaching program including demography and other population subjects. The Universities of Zulia and Andes are both interested in the development of multidisciplinary teaching research and service programs in population, and they appear as high-priority institutions in Venezuela. Zulia offers the best locale for the development of training programs in demography and related social sciences. In Caracas, IESA's leadership position in the population program management field indicates a serious commitment and possible expansion of training and research in population.

Other programs that should receive attention are the strengthening of family planning instruction in paramedical institutions and the inclusion of family planning matters in instruction for "Medicina Simplificada" being carried out in

some of the universities.

Sources of information

Site visits by Axel Mundigo and Charles A. Broinger during 1975.

Regular reports by Dr. Adrian P. Soutterhead to

October 1975