ANNUAL REPORT

OF

THE JHPIEGO CORPORATION

FISCAL YEAR 1981

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REPORT FORMAT

This Annual Report is divided into five sections, and includes an appendix. Sections I through III provide a review of all activities during FY'81, as well as a summary of the work plan for FY'82. Section I provides a review of the operating divisions during FY'81. Section II describes the educational and training activities of JHPIEGO. Section III is the report on in-country programs. It presents a summary of JHPIEGO's activities in each region and a synospis of each of the JHPIEGO overseas programs implemented during the past fiscal year. Section IV provides a review of major organizational changes instituted during FY'81. Section V is the fiscal report. It provides separate recaps of fiscal activity for the grant AID/pha-G-1064 and the cooperative agreement AID/DSPE-CA-0083

The appendix consists of the proceedings of JHPIEGO's 1981 International Council Meeting, as well as the recommendations of the study committees convened during that meeting.

It should be noted that JHPIEGO's accomplishments during FY'81 have been funded through both the previous grant, AID/pha-G-1064, and the current cooperative agreement AID/DSPE-CA-0083.

I. REVIEW OF OPERATIONS

A. HISTORY OF JHPIEGO

The JHPIEGO Corporation was created as a result of a 1973 study carried out by the Johns Hopkins University through the support of a planning grant from the Agency for International Development (AID).

The findings of the study were presented in December 1973 to a committee of international experts and an advisory committee from the Johns Hopkins University. The groups recommended jointly that steps be taken to design the structure and develop the by-laws of a University-affiliated corporation which would organize and implement a program for international education in gynecology and obstetrics. Its purpose would be to upgrade the knowledge, skills, and technology of obstetricians, gynecologists, and other qualified professionals in the developing world, to make a critical evaluation and advance the diffusion of new methods of promoting reproductive health as they are developed, and to encourage the integration of those methods into the daily practices of medical professionals.

The JHPIEGO Corporation was awarded an AID grant in June 1974 to enable that institutional model to serve as an agent to coordinate and lead collaborating institutions in the U.S. and interested developing countries in their participation in the program for international education in gynecology and obstetrics. JHPIEGO would not only provide educational leadership, but would also serve in a facilitative capacity to mobilize resources and channel funds and equipment to the educational institutions participating in its program.

In September 1980, AID and JHPIEGO signed a cooperative agreement for the continued support of JHPIEGO until at least September 30, 1982. The signing of that agreement ensured that JHPIEGO would have the means to continue to organize educational programs for the purpose of upgrading the knowledge, skills and technology of obstetricians, gynecologists, and other qualified health care personnel in less developed countries in order to promote the mutual goals of AID and JHPIEGO.

Since its inception, JHPIEGO has undergone a process of evolution. Initially, major educational and training programs were conducted by the Department of Gynecology and Obstetrics of the Johns Hopkins University, the Washington University in St. Louis, the American University in Beirut, and the University of Pittsburgh in collaboration with Western Pennsylvania Hospital. The directors of these centers and JHPIEGO staff formed a council of associates to select physicians from developing countries to receive training, and to consider equipment, curriculum, and policy. Cadres of physicians from leading institutions in less developed countries were brought to the JHPIEGO-supported centers named above, for intensive short-term post-graduate courses emphasizing high-risk pregnancy, the management of fertility and infertility, surgical contraception, and other broadly-based postgraduate courses promoting the improvement of reproductive health.

At the time of the program's inception, it was thought to be possible to provide, in addition to didactic instruction and clinical observation (Phase I of the program), some personal participation in clinical practice at the institutions affiliated with JHPIEGO. This soon became unfeasible, so instead, physicians were and continue to be sent to clinical practice centers overseas for technical training and clinical experience (Phase II), usually following the didactic phase of their course at the Johns Hopkins Training Center. Once a physician's competence has been certified by the directors of the educational and clinical practice centers, JHPIEGO ships the appropriate surgical equipment to the physician's home institution. The shipment of equipment is followed by a field visit by a JHPIEGO consultant (Phase III) to install the equipment, observe the physician's ability to use the equipment in his/her home institution, and to acquaint operating room staff with the importance of the care and maintenance of the equipment.

At present, JHPIEGO maintains only one educational center in the U.S., the Johns Hopkins Educational Center. This reflects the shift of JHPIEGO's focus from

U.S.-based training to the development of in-country educational centers. These centers continue to be established in developing countries to meet the demand for training which has been generated by the large cadre of JHPIEGO-trained physicians who have expressed an interest in developing such programs.

The courses offered at the Johns Hopkins Educational Center, too, have undergone a process of evolution. The initial course for clinicians, conducted only in English and Spanish, has given rise to 4 more course offerings, many of which are conducted also in French and Portuguese.

It should be noted that in October and November 1981, a 3-week evaluation of JHPIEGO's activities was carried out by consultants from the American Public Health Association. The evaluation team submitted to AID a very positive report on JHPIEGO's training programs in both the U.S. and developing countries. Although it made certain suggestions for the refinement of the in-country programs, the report indicated that all of JHPIEGO's programs were meeting their objectives.

Detailed descriptions of program activities abroad and in the U.S. appear in other sections of this report.

I.B INTRODUCTION

Fiscal Year 1981 was a significant period for JHPIEGO, distinguished not only by the maturation of and demand for collaborative educational programs in reproductive health throughout the third world, but also for the evolvement of sophisticated in-house systems for monitoring and evaluating these programs. The responsiveness of overseas institutions to entering into cooperative arrangements with JHPIEGO was matched only by the enthusiasm of the members of the JHPIEGO staff in realizing their developmental objectives.

By the end of FY'81, a cumulative total of 4,801 health professionals representing 1,767 institutions in 108 countries had attended JHPIEGO-supported educational programs in the U.S. and in developing countries.

Over 1,600 of these individuals were trained during the reporting year. JHPIEGO's success in establishing national and regional training centers had reversed earlier trends in training. Twice as many health professionals attended national and regional training programs as had been trained at U.S. centers since the inception of JHPIEGO, and, during the reporting year, for each person trained in the U.S., 5.6 individuals were trained in overseas programs. JHPIEGO's selection of candidates for U.S. training continued to give priority to in-country and regional needs, with nearly 30% of the trainees coming from African countries. Clearly, this year was a watershed.

With changes occurring in the state of the art and levels of sophistication advancing in the developing world, JHPIEGO continued to expand its programs and to introduce new and updated information in its courses, in order to meet the evolving needs of developing countries. Under consideration at year's end for the Johns Hopkins Educational Center were courses to improve the use of pharmaceuticals in the delivery of reproductive health care and to improve the diagnosis and treatment of sexually transmitted diseases. In the four regions of the developing world, JHPIEGO-supported educational centers were firmly established and were providing reproductive health courses for physicians, nurses, and other health professionals. Fourteen of these centers were entering their second (and one institution, its third) operational year. Five new centers were added to the network, for a total of 19 functioning programs. In Africa, centers were located in Kenya, Nigeria, Somalia, Sudan, and Zaire. Two programs in Brazil and one each in Colombia and Mexico offered courses in Latin America. Near Eastern centers were located in Morocco, Tunisia, and Turkey, with two additional centers in Egypt. Centers in Indonesia, Malaysia, Pakistan, the Philippines, and Thailand represented Asia.

The essential clinical component of many of these educational programs was provided by 43 JHPIEGO-supported clinical practice centers. These centers offered

clinical experience in endoscopy, minilaparotomy, microsurgery, and anesthesiology for physicians, and the appropriate clinical support training for nurses and paramedics.

The establishment of 62 JHPIEGO-supported didactic and clinical training centers in Asia, Africa, the Near East, and Latin America effectively illustrates JHPIEGO's ability to mobilize support in diverse cultural, religious, and socioeconomic environments. The flexibility to adapt and create new educational models to meet national needs is a factor in this success. JHPIEGO's policy of working through existing infrastructures to increase the number of trained professionals and of training and service institutions has borne positive results. The approach to the implementation of this policy has varied according to local conditions. It has included, for example, working with ministries of health to train physicians and nurses from rural or district health centers. JHPIEGO has collaborated also with medical schools and other medical educational centers in educating physicians in reproductive health. REHEP programs have been instituted to upgrade the education of medical and nursing students. Another approach has been to utilize a single teaching hospital or university to improve the knowledge and skills of health professionals who, in turn, establish training and service centers in urban and rural communities. In African countries where infertility is a concern, JHPIEGO has sought to address that problem through course content. Courses in microsurgery found strong support in Egypt, where tubal reanastomosis is viewed as a means of alleviating religious concerns about the permanent suspension of fertility which results from tubal ligation. These are examples of the broad-based approach to reproductive health education which JHPIEGO is able to provide. It opens doors in countries where traditional practices have precluded the introduction of fertility management modalities.

In the field of medical technology, JHPIEGO's earlier decision to distribute to institutions overseas the Laprocator™ in place of the laparoscope was reaffirmed at a meeting of the JHPIEGO equipment committee, held in Baltimore in May 1981. The

meeting confirmed the usefulness of the Laprocator™ for at least 98% of laparoscopic procedures. The effectiveness of this instrument from a cost-benefit perspective appears to be further supported by the fact that the total dollar value of spare parts shipped by JHPIEGO during FY'81 was substantially lower than in previous years.

More efficient utilization of maintenance centers may also have contributed to this savings. During FY'81, nine centers for the preventive maintenance and use of laparoscopic equipment were functioning with JHPIEGO's support in Colombia, Costa Rica, Malaysia, Nigeria, Pakistan, the Philippines, Sudan, Turkey, and Thailand.

In addition to providing equipment, JHPIEGO continued to provide educational packages and teaching materials to individuals trained and to teaching institutions overseas. At a meeting of the educational materials committee, held in September 1981, educational packages were streamlined to reduce costs. These packages are now customized for the recipients by the inclusion of country or region-specific material.

Distribution began in 1981 of the English-language version of JHPIEGO's two equipment manuals, Laprocator™: Preventive Care and Maintenance, and Advanced Laparoscopic Systems: Preventive Care and Maintenance. By late FY'81, the French manual, Laprocateur™: Soins Preventifs et Entretien, was ready for distribution. The proceedings of the JHPIEGO conference held in Key Biscayne, entitled Surgical Equipment and Training in Reproductive Health, were also published and made available during the reporting year to clinicians overseas.

With JHPIEGO-supported activities proliferating around the world and program agreements extending beyond their first year of operation, JHPIEGO staff directed its attention not only to program development, but also to program and grant management. Suitable systems and tools were developed and implemented to evaluate, monitor, and ensure financial accountability of JHPIEGO-supported activities.

An information and evaluation services unit was created from the former history and evalution unit and the central records section to allow for prompt retrieval of data for program monitoring, planning, and evaluation. Through a sophisticated computerized data base, the unit now maintains program information on trainees, institutions, equipment, and demographic information for country profiles. Computer programs are available to facilitate the listing and tabulation of information.

An agreement status report was devised which sets forth the performance objectives specified in each agreement and records the progress made in meeting those objectives. This status report, which is prepared monthly by the grants unit for each agreement, tracks proposed and actual training activities, shipment of equipment and educational materials in support of training, and receipt of the documentation and reports that are conditions of each agreement.

The agreement status document is a companion report to the budget and fiscal status form developed in FY'81 and maintained monthly for each agreement by JHPIEGO's financial office. The budget and fiscal status report provides a summary of cumulative expenditures against monies obligated for the duration of the agreement and an account of funds advanced.

Together, these reports furnish the regional development officers and the director with a complete and current picture of activity under each country agreement, for programmatic and funding decisions. In addition, the reports reflect the receipt of documentation from which program performance can be ascertained. They provide a basis for making payment to institutions overseas for work performed and for analyzing funds unused in ongoing agreements.

These management information systems yield data essential for the close-out of terminating agreements, for the extension of ongoing agreements, and for program planning to establish JHPIEGO's overall program and funding requirements. As such, they are necessary tools, used not only by the regional development officers and the

director of JHPIEGO, but also by the assistant to the president and the resource manager.

During the reporting year, numerous site visits to ongoing programs were made by regional development officers, the assistant to the president, and the director of JHPIEGO, to evaluate programs and to make certain that the necessary systems relating to agreements were in place locally for the documentation of program activities and financial transactions. During these visits, efforts were made to ascertain compliance with voluntary participation and other requirements of the agreements.

The work load of the grants unit and the office of resource management was considerable during this reporting year. Forty-five agreements with educational institutions were funded through 30 June 1981 under prime grant AID/pha-G-1064, on which action had to be taken. All of these agreements had to be closed out. Forty-four of the agreements required renegotiating and rewriting for continuation beyond 30 June under the terms of the new Cooperative Agreement AID/DSPE-CA-0083. Letters of intent were sent for 16 agreements with overseas institutions during the close-out process. Before new agreements could be finalized, the amount of funds remaining in each terminating agreement had to be determined and deobligated, and the equipment inventoried. Steps were also taken to develop a JHPIEGO audit program with an independent accounting firm for the audit of these terminating agreements. In addition, 27 new agreements with institutions overseas were negotiated under AID/DSPE-CA-0083 during the reporting period.

In the spring of 1981, JHPIEGO staff participated in a series of in-house programming meetings to establish national and regional strategies for the operating period 1 October 1982 through 30 September 1987, and to determine the amount of funds needed to meet these objectives. To assist with this exercise and to be maintained as an ongoing programming document, the country profile sheet was

developed. Pertinent demographic and health data, JHPIEGO programs funded, institutions and health personnel reached and to be reached, and the strategy and objectives to be achieved were recorded within this format for each developing country. This information formed the basis for the five-year proposal which JHPIEGO submitted to AID in June 1981 for the continuation of financial support from FY'82 through FY'86.

FY'81 was an extremely productive year, and it was therefore a disappointment to the staff when JHPIEGO did not receive from AID the full increment of FY'81 funds previously negotiated into the budget of the AID/JHPIEGO cooperative agreement and earmarked for programmatic purposes. With the loss of these funds and the uncertainty regarding the levels of support to be received in coming years, JHPIEGO had no alternative but to slow down the program momentum it had already generated. This was done by delaying both the funding of new activities overseas and the renewal of ongoing programs.

Unfortunately, due to JHPIEGO's obligatory program reduction, the outputs which could have been obtained by the geometric progression of training, i.e., JHPIEGO trainees providing training to others who may train others and so on, cannot again be realized.

I.C ADMINISTRATION OF THE CORPORATION

The affairs of the JHPIEGO Corporation are managed by a Board of Trustees. The officers of the corporation are the chairman and vice-chairman of the board, the president, the treasurer, and the secretary of the corporation.

STRUCTURE AND ORGANIZATION

The Board of Trustees is responsible for the management of the corporation. Its members are appointed by the president of the Johns Hopkins University. The trustees serve voluntarily, without salary, reimbursement, or consultant fees from the corporation. There are at present 8 trustees serving on the Board (Figure I).

The Board of Trustees met 5 times during the reporting period to review the financial status, organization, program, and administrative affairs of the corporation.

Through periodic mailings, the Board of Trustees also reviews proposals for in-country activities and other business, so that the affairs of the corporation can continue in operation even when the Board does not meet formally.

OFFICERS OF THE CORPORATION

The president of the corporation, Dr. Theodore M. King, is chief executive officer. He is responsible for administering the business and the affairs of the corporation. The president is selected by the Board of Trustees.

The treasurer, W. Thomas Barnes, has charge and custody of and is responsible for all funds and securities of the corporation.

The director of the corporation, Dr. Ronald T. Burkman, is chief operating officer. He is responsible directly to the president for program development and implementation.

Figure I

JHPIEGO BOARD OF TRUSTEES

Dr. J. Richard Gaintner Trustee	Associate Dean, The Johns Hopkins University School of Medicine
Dr. Janet B. Hardy Trustee	Director of Continuing Education, The Johns Hopkins Medical Institutions
Dr. John F. Kantner Trustee	Professor of Population Dynamics, The Johns Hopkins University School of Hygiene and Public Health
Dr. Theodore M. King Trustee and President of the Corporation	Professor and Director of the Department of Gynecology and Obstetrics, The Johns Hopkins University School of Medicine
Dr. Richard P. Longaker Chairman of the Board	Provost and Vice-President of Academic Affairs, The Johns Hopkins University
Dr. Robert E. Reynolds Trustee	Associate Dean for Administration, The Johns Hopkins University School of Medicine
Dr. Harry Woolf Trustee	Director of the Institute for Advanced Study, in Princeton
Dr. Richard A. Zdanis Trustee	Vice Provost, The Johns Hopkins University

At an annual election held in January 1981, Dr. Richard P. Longaker was re-elected to serve as the chairman of the board and Dr. Janet B. Hardy was elected vice-chairman. Ms. Charlotte G. Ellis was designated secretary.

INTERNATIONAL COUNCIL OF JHPIEGO

An International Council of outstanding professionals from other countries is selected by the Board and appointed by the President to provide advice and guidance on matters of program and policy. During FY'81, the International Council was comprised of the 14 experts listed in the appendix.

In March 1981, the International Council met in Rio de Janeiro. This meeting provided the opportunity to exchange information on the previous year's activities and trends in the area of reproductive health in the countries of the council members, and to review examples of JHPIEGO's efforts to provide training in the utilization of the expanded team approach to reproductive health education. The council members formed study groups to consider various approaches for reproductive health education. Their discussions and recommendations centered on curricular needs and the role of research and clinical training, undergraduate medical student education in reproductive health, indigenous health workers and dai education, and nurse and paramedic education in reproductive health. The reports and recommendations of these committees are located in the appendix.

A session of the International Council was held jointly with a concurrent meeting of the Centro de Pesquisas de Assistencia Integrada a Mulher e a Crianca (CPAIMC), which is under agreement with JHPIEGO. The topic of this session, human reproduction in Brazil, was addressed by representatives of the Brazilian government (a senator and a judge), and a number of prominent physicians. There was also a site visit to a CPAIMC clinic.

I.D OPERATING DIVISIONS OF THE CORPORATION

DIRECTOR AND STAFF

The director of JHPIEGO is responsible for the development and implementation of JHPIEGO programs. He directs a line operation with supporting functional units. These units provide program and operational support. Certain units underwent changes in organization and operation this year, in order to facilitate the efficiency of JHPIEGO's operations and the support of training programs. This included the centralization of all administrative offices at 550 North Broadway. The former history and evaluation unit and central records unit were merged into the information and evaluation services unit. The educational materials unit assumed writing, editing, and translating responsibilities.

During the fiscal year, JHPIEGO continued to seek donor support for its program. Fund-raising activity directed at outside sources was increased. The Board of Trustees discussed plans for solicitation of organizations and foundations. The Johns Hopkins University Development Office provided assistance regarding the types of organizations to be solicited. Twelve foundations were contacted or visited by JHPIEGO staff during FY'81.

In support of JHPIEGO programs which may not be supported by AID, the General Services Foundation, in Minnesota, provided to JHPIEGO a grant to foster the development of reproductive health and endoscopic educational programs for physicians from the People's Republic of China. It is anticipated that this program will commence during FY'82. Furthermore, the Jessie Smith Noyes Foundation, in New York, provided funding to JHPIEGO for support of tuition of physicians from countries in which AID funds may not be used to attend JHPIEGO programs. This grant was a renewal of funding previously received from that foundation. The Population Crisis Committee provided support to JHPIEGO for spare parts for

laparoscopic equipment in India and for an unrestricted grant of over $3,000. A grant awarded to JHPIEGO by the United Nations Fund for Population Activities (UNFPA) for endoscopy training in Pakistan expired in June 1981. JHPIEGO's goal of institutionalization of reproductive health techniques was achieved when the government of Pakistan took over responsibility for that training. The World Bank was approached for support of training in surgical techniques of contraception for teams of health professionals in Bangladesh.

During FY'82, foundations and other sources of funding will continue to be solicited by JHPIEGO. Negotiations will be completed with the American College of Obstetricians and Gynecologists for the donation of a large quantity of educational materials. UNFPA will be approached for the support of a new edition of the Manual of Human Reproduction, described in the section on educational materials.

A description of the major activities of each of the major staffing segments of the corporation is described below. Figure II provides an organizational chart for reference.

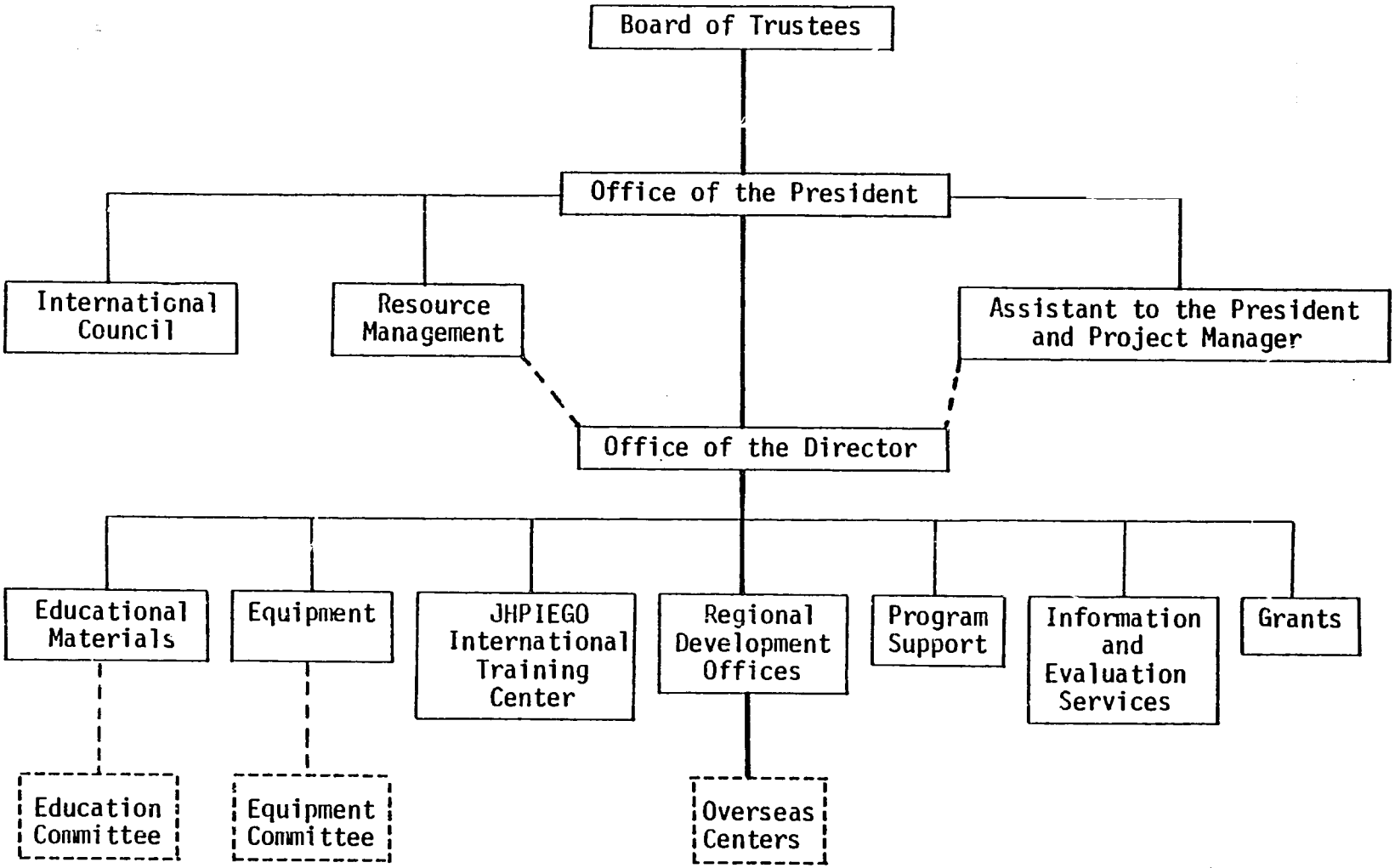
ASSISTANT TO THE PRESIDENT

The assistant to the president relates directly to the president and the director of JHPIEGO, and is concerned with policy direction and program management, especially as they relate to requirements of AID and the JHPIEGO Board of Trustees.

Efforts focused largely on instituting within JHPIEGO informational systems for program and grant management. The maturing of programs demanded careful monitoring of overseas agreements. The assistant to the president worked closely with the office of resource management, the grants unit, and information and evaluation services to develop the numerous linkages in the system for evaluating, monitoring and planning programs.

Figure II

JHPIEGO Organizational Chart



The assistant to the president provided guidance to the grants unit and the office of resource management for the administration of agreements under two AID funding instruments. Also, the International Council meeting, held in Brazil in March 1981, was organized by this office. The meeting was followed by the development of JHPIEGO's five-year program proposal which was submitted to AID.

OFFICE OF RESOURCE MANAGEMENT

This office is responsible for the fiscal and administrative management of the corporation. In order to ensure fiscal independence and integrity of all corporate fiscal activities, this office reports directly to the president of the corporation.

JHPIEGO has experienced tremendous growth in program activities over the past several years. Resource management's task was somewhat complicated this year by the simultaneous management of two large AID grants. Grant pha-G-1064 closed out during the year, as cooperative agreement DSPE-CA-0083 started its first year of operation.

Among other accomplishments of resource management, the Brethren Service Center contract was successfully renewed without an increase in rates. Resource management continued to stay actively involved in the review and approval of all goods and services contracts, as needed.

This office took an active part in the redesign of educational materials packages, and in many other areas of JHPIEGO business, such as forms design and control. For example, increased activity in clinical practice centers has necessitated the development of a quarterly financial statement. A form was devised jointly by this office and the grants unit for the purpose of reconciling funds advanced by JHPIEGO for clinical practice with the actual training conducted at each clinical practice center during that period. This quarterly financial statement is a management tool for regional development officers, the grants unit, and this office. Also, the property

control and inventory system was refined. This was a particularly important accomplishment this year, in view of the changeover of AID grants.

The office represented and coordinated JHPIEGO's participation in the Johns Hopkins University Salary Administration Program, which required submission and review of each job description. The program was conducted university-wide and resulted in the conversion to a totally new job classification system.

When requested to do so, resource management frequently provided cost analysis and verification of previous expense to JHPIEGO staff, for purposes of developing contracts and agreements, and negotiating favorable rates for various goods and services.

Control Systems

Resource management developed this year a system of reporting and controlling funds awarded against all subordinate agreements. The system has been further refined and merged with a report of agreement activities prepared by the grants unit. This combined monthly status report permits JHPIEGO staff to monitor and manage both training and funding activities.

The ADP Company assisted JHPIEGO last year in the redesign and expansion of the JHPIEGO Corporation's ledger systems. This was needed to control adequately the increased sources of funds received and the disbursements made by the JHPIEGO Corporation. The system has required very little modification since its implementation and has proven to be adequate for the corporation's needs. The treasurer of JHPIEGO reviewed the systems and reported to the Board of Trustees his satisfaction with JHPIEGO's financial management reports and procedures.

The office continued to support the review and implementation of both proposals and agreements for overseas programs. This is accomplished by providing cost analyses and by determining that appropriate cost factors are included with proposals. Budgets and justifications are then developed to be included in subordinate

agreements. Training rates specified in these agreements are developed by resource management from cost information provided in proposals. Standards have been developed to ensure consistent application of rate calculation.

Close-out and Audits

Resource management was active in the close-out process of overseas programs funded under AID grant pha-G-1064. This required the consolidation and review of program and financial reports submitted to JHPIEGO.

The accounting firm of Peat, Marwick, Mitchell, and Co., will audit closed-out programs requiring an audit, under authority of a major service agreement between that firm and the JHPIEGO Corporation.

An Internal Revenue Service audit was conducted at JHPIEGO during 1981. The purpose of this audit was to test the nonprofit status of JHPIEGO. The Internal Revenue Service has determined that JHPIEGO is reporting properly for tax purposes and has met the nonprofit requirements set forth by the IRS.

REGIONAL DEVELOPMENT OFFICERS

Regional development officers for Africa, Asia, Latin America, and the Near East are responsible for all JHPIEGO activities in their regions. These activities include the stimulation and development of in-country programs, program implementation and analysis, and the monitoring of programs and former trainees. Section III describes more fully the activities initiated by regional development officers during the past year.

PROGRAM SUPPORT

The program support unit is responsible for the admissions and travel activities of JHPIEGO. It has responsibility for the coordination of information on program and trainee activities in the United States and overseas, thereby supporting JHPIEGO's

director and regional development officers. The scope of this unit's responsibility encompasses a wide variety of activities and interactions, including assistance in the development and monitoring of in-country educational programs, and the organization of national and international conferences and meetings.

The admissions component of the program support unit assists regional development officers in recruiting candidates, processing applications, and scheduling and assigning participants to courses in the U.S. and overseas. During FY'81, recruitment was directed toward medical schools and teaching hospitals, with an emphasis on African countries. Seven new countries were reached: Algeria, the Central African Republic, French Guiana, Greece, Guadeloupe, South Africa, and Zimbabwe. Recruitment was accomplished by coordinating with regional development officers and with other donor organizations. In order to select participants for 18 courses, 10 meetings of JHPIEGO's selection committee were convened during FY'81. More than 750 applications were processed through the admissions office during the past year. Of these, 381 applications from candidates in 67 countries were presented at the meetings of the selection committee.

The travel component of the program support unit is responsible for planning and processing travel arrangements for all U.S. and overseas trainees, as well as all JHPIEGO staff and consultants. The travel office maintains curricula vitae for both U.S. and overseas consultants, and provides assistance in identifying consultants suitable for specific assignments, as well as new consultants appropriate to training activities. During FY'81, more than 450 trips were processed for trainees, consultants, and staff.

GRANTS

The grants unit is responsible for writing and processing agreements with overseas institutions, for developing procedures relating to these agreements, and for

providing to regional development officers support in the monitoring of these agreements. It maintains and distributes to JHPIEGO staff a control sheet on the status (signatures, expiration date, etc.) of each agreement and compiles information pertaining to the grantee's compliance with agreement requirements. Other responsibilities of this unit include keeping abreast of the changes required by the office of the president and AID in the provisions and language of overseas agreements. The unit is responsible for coordinating with the office of resource management to ascertain that the budget and support sections of agreements are compatible with JHPIEGO's accounting systems, and that the expenditure and reimbursement reports to be forwarded to the grantee comply with the provisions of the agreement. The grants unit periodically reviews each agreement for submission of required documentation, and apprises regional development officers of documentation received. It reviews all JHPIEGO requests for financial transactions for compliance with each agreement's program, budget, and support sections.

During FY'81, 72 agreements, 54 amendments or letters of intent for existing agreements, and the continuation and monitoring of 106 agreements with institutions overseas were either written or effected in part of this office. In conjunction with the office of resource management, the grants unit developed a monthly format to assist JHPIEGO staff in monitoring the progress of in-country programs.

INFORMATION AND EVALUATION SERVICES

The information and evaluation services unit (IES) was established in January 1981 in order to meet JHPIEGO's rapidly growing need for collection, maintenance, and analysis of data. The growth of the in-country programs necessitated a reassessment of information-related needs and the establishment of new methods, such as an improved filing system and a computerized data base, to meet these needs. Information and evaluation functions had previously been conducted

by two separate units of JHPIEGO: program support, which had maintained JHPIEGO's central records and had manually produced information summaries on training activity, and history and evaluation which, among other responsibilities, coordinated the mailing and analysis of surveys. The central records and information processing components of the program support unit were combined with the entire history and evaluation unit to create IES. During FY'81, IES consolidated existing record keeping resources with data analysis resources, thus providing increased efficiency and responsiveness to information reporting needs, and improving the quality of data analysis and reporting.

Central to the functioning and goals of IES is a computerized information system. An important consideration, therefore, in the establishment of IES was the development of a comprehensive, computerized data base. To build this data base, the IES staff drew upon the existing computerized information maintained by the history and evaluation unit, supplementing it with information from in-country programs, a complete listing of institutions represented by JHPIEGO trainees, and a geographic listing. During the latter part of FY'81, IES compiled a large mailing list which includes the addresses of all JHPIEGO trainees and contacts. JHPIEGO utilizes the address list for distribution of its Newsletter and as a central, up-to-date address reference. The four lists are largely complete, and are continually updated. By the end of FY'81, IES had drafted software packages to produce directories of trainees and institutional activity for each country.

The emphasis of work within IES has now shifted from building the core of the data base to maintaining it and upgrading its quality. Coding of additional components of this system is under way. Biodata on all JHPIEGO trainees is being abstracted from application forms and computerized. A computerized inventory of JHPIEGO medical equipment is currently being built, in order to provide programmatic information and the location of each piece of equipment. These coding projects are scheduled for completion by the middle of FY'82.

Activities in the evaluation component of IES center around a long-term follow-up of the JHPIEGO program, based primarily on an international mail survey of trainees. The status of the different trainee surveys conducted by IES during FY'81 is as follows: the second survey of trainees, which had been mailed to physicians participating in the general course through February 1980, was completed; a new questionnaire was mailed to participants of the administrators' courses at Johns Hopkins; and inserts for inclusion in the second survey of trainees for participants of the infertility and academic skills courses were developed and mailed. IES completed the initial planning and development of an in-country survey designed to evaluate more thoroughly and uniformly JHPIEGO's in-country programs.

In August 1981, representatives of IES attended an evaluation meeting at AID, along with representatives of other programs sponsored by the training division of the AID/POP Office. Issues pertaining to evaluation were reviewed extensively at this meeting, and were found to be compatible with JHPIEGO's initiative in shifting the focus of evaluation from U.S.-based programs to in-country programs.

Second Survey of Fellows

Mailing of this survey was completed during FY'81. The data has been computerized, cleaned, and some of the analyses have been made. An average of two mailings were sent to each of the 928 participants trained at U.S. training centers and on-site in Turkey, Bolivia, and Barbados. The total number of surveys returned was 521, giving a response rate of 56%. A review of the results of this survey appears in the accompanying evaluation report.

Administrators' Survey

The administrators' survey was first sent out in November 1980. This questionnaire was and continues to be sent to most of 383 participants who attended the course for Administrators in Family Planning and Reproductive Health. By the end of FY'81, a questionnaire had been sent to all participants of courses held before June

1981. JHPIEGO has received a total of 166 completed questionnaires. Responses have been computerized, and comments transcribed. A section of the appended evaluation report includes pertinent opinions transcribed from the "Comments" section of that questionnaire.

Survey Inserts for Participants of Infertility and Academic Skills Courses

IES designed questionnaire inserts to address the specific topics covered in the infertility and academic skills courses. The first of these inserts were included in the second survey, mailed during August 1981 to course participants. By the end of the reporting period, the first responses to these mailings had begun to arrive.

In-Country Survey

The JHPIEGO in-country programs have been proliferating since their inception. It has become necessary to shift the emphasis of evaluation from U.S.-based training to in-country programs. In order to meet this ever-increasing need, a brief in-country survey was planned. Its development began during FY'81. Each in-country course participant will be asked questions about the following: activities connected with duties at his/her present position, involvement in second generation training, and involvement with procedures performed at the institution. Also, the questionnaire requests from participants information on the condition of laparoscopic equipment and the type of anesthesia used for laparoscopy at their institution, the usefulness of topics discussed in the course, and suggestions for improving either the course itself or the work in family planning in their region. This questionnaire, which replaces the quarterly report, will be mailed annually by project directors to all course participants. Project directors will be responsible for compiling and analyzing data from the questionnaire, and returning frequency distributions and data analyses to JHPIEGO.

During FY'82, IES plans to continue maintaining and updating the computerized data base in order to meet JHPIEGO's changing informational needs. Existing

software packages will be refined, and new packages will be designed to expand the reporting capabilities of IES. The focus of evaluation will continue to shift toward the in-country programs. A final version of the in-country questionnaire will be developed and distributed, as will be an instruction manual for the consistent collection and reporting of data. A panel of evaluation experts will be assembled in order to review possibilities for the in-depth evaluation of certain in-country programs.

EQUIPMENT

The equipment unit continued during the reporting period to carry out its functions in the areas of procurement, shipment, maintenance, and repair of medical equipment used in JHPIEGO programs. It also provided certain of these services for the International Project, Association for Voluntary Sterilization (IPAVS) and other AID-supported organizations. The Brethren Service Center continued to serve as the warehousing and shipping facility. The equipment unit monitored this subcontract and made the necessary shipping arrangements. Transfer of title for equipment provided by JHPIEGO to the recipient institution was documented by this unit. The equipment unit also provided the necessary repair service, spare parts, or modernized components at either cost or no cost, whichever would best achieve the purposes of the program. Another aspect of service was the coordination of arrangements for training local technicians in the maintenance and repair of equipment, when JHPIEGO was requested to do so by a national organization, Ministry of Health, or USAID Mission. Distribution logs on all equipment and spare parts were maintained by the equipment unit.

During the early part of FY'81, 2 existing term contracts were successfully negotiated with General Services Administration (GSA) by USAID at the request of JHPIEGO. One contract was for laparoscopic systems and spare parts, and the second contract was for Laprocators™ and spare parts.

In the fall of 1980, the equipment unit developed specifications for a miniature light source, to be used in conjunction with the Laprocator™ for use in teaching hospitals. After a review of 5 different models from various companies, a favorable price per unit was obtained and 100 light sources were purchased during the year.

The equipment unit participated in the U.S.-based training of 2 technicians from Morocco, with the intent of establishing an in-country maintenance and repair center supported by IPAVS. It participated also in the assessment of JHPIEGO-supported maintenance and repair centers in Manila (Mary Johnston Hospital), Kuala Lumpur (National Family Planning Board), and Khartoum (Ministry of Health). The unit assessed the need for a maintenance and repair center at the Police Hospital, Accra, Ghana. It assessed also the in-country maintenance and repair program in Lagos, Nigeria, which is supported by JHPIEGO and administered by the Femope Marketing Company, Lagos. The equipment unit assisted the IPAVS Equipment Center, USAID/Washington and the AID Mission in Jamaica in the assessment of the IPAVS-supported in-country maintenance and repair center administered by the National Family Planning Board, Kingston, Jamaica.

In the spring of 1981, the equipment unit assumed responsibility for procurement, warehousing, and shipment of educational materials for JHPIEGO's use in educational and training programs.

The unit continued to coordinate for JHPIEGO and the AID-funded donor agencies procurement requirements for the coming year for all major laparoscopic systems and spare parts. Laparoscopic systems, spare/replacement equipment for continued maintenance and repair of nonfunctioning parts, and medical kits were procured through the GSA (Table I). Parts that needed to be refurbished were handled directly by the manufacturer of the equipment.

During the reporting year, a major portion of this unit's efforts was directed toward meeting the maintenance needs of the equipment previously provided and in

use in developing countries, in addition to shipping the new equipment shown in Table II. Table III shows equipment shipped since the inception of the JHPIEGO for its programs, as well as other AID-sponsored programs.

The equipment unit continued to supply repair kits containing simple tools, as well as spare parts to repair nonfunctional equipment on-site, to each JHPIEGO consultant making a field training visit. It should be noted that the total dollar value of spare parts shipped during FY'81 for JHPIEGO and other donor agencies amounted to:

JHPIEGO	IPAVS	OTHERS
$201,549.24	$76,135.85	0

This represents a substantial reduction in spare parts costs which seems to be due to reduced maintenance costs of laparoscopic systems, more efficient utilization of maintenance centers, and phase-out of electrocautery equipment.

Equipment Committee

In May, a meeting of the equipment committee was held in Baltimore, to review new and improved technology in the field of laparoscopy, educational materials, and audiovisual aids appropriate for use in overseas programs.

The meeting was attended by JHPIEGO consultants, including 4 who represented programs in Colombia, Egypt, and the Philippines, representatives from AID, AVS, IFRP, the Pathfinder Fund, and JHPIEGO staff. Presentations were made by various manufacturers of medical equipment and educational materials.

The meeting reaffirmed the use of the Laprocator^{TM} and its usefulness for at least 98% of laparoscopic procedures. Although many participants in the meeting, who are expert laparoscopists, preferred the more sophisticated and costly instrumentation, it was recognized that from a cost-benefit basis, the Laprocator^{TM} is highly effective. Furthermore, the Laprocator^{TM} produces only minimal operating

problems. JHPIEGO will continue to review and evaluate the Laprocator™ system for further refinement and improvement.

Among other recommendations made by the committee, it was suggested that JHPIEGO investigate the possibility of writing specifications for equipment items of major cost, if appropriate, from the basis of safety, quality, and cost-effectiveness.

Films, slides, audiovisual materials, models, and similar software were found to have widespread acceptability and usefulness in training programs for nurses and medical students. Films and technical slides remain a favorite type of instructional aid, and are preferred to more sophisticated audiovisual systems. With regard to teaching models, the Gynny™ model was found to present a more favorable cost-benefit ratio.

During FY'82, plans will be made to reconvene the equipment committe in Baltimore in October 1982, immediately following the FIGO meeting in California.

Table I

PURCHASE ORDERS PLACED FOR EQUIPMENT FOR
JHPIEGO, AVS, AND OTHER AID-SUPPORTED ORGANIZATIONS

October 1, 1980 - September 30, 1981

1.	Maintenance Support:	
	Spare Parts	$143,637.02
2.	Teaching Attachments (31)	40,533.00
3.	Damaged Equipment/Spare Parts Repaired	12,615.41
4.	Microsurgery Kit (22 kits plus spares)	38,919.97
5.	Compact Light Source (100)	46,578.00
6.	Medical Kit #8 - Minilaparotomy (500)	82,555.00
	TOTAL	$364,838.40

Table II

LAPAROSCOPIC SYSTEMS
SHIPPED BY JHPIEGO

October 1, 1980 - September 30, 1981

	AGENCY REQUESTING SHIPMENT		
	JHPIEGO	IPAVS	OTHERS
AFRICA	24	1	-
ASIA	10	21	-
LATIN AMERICA	71	6	2
NEAR EAST	51	8	-
TOTAL	156	36	2

Table III

LAPAROSCOPIC SYSTEMS
SHIPPED FOR JHPIEGO AND
OTHER AID-SUPPORTED ORGANIZATIONS

Inception through September 30, 1981

	JHPIEGO	ISTP	USAID	OTHERS
AFRICA	130	-	2	6
ASIA	327	22	246	207
LATIN AMERICA	508	11	48	242
NEAR EAST	200	8	6	39
TOTAL	1,165	41	302	494

EDUCATIONAL MATERIALS

An important component of JHPIEGO's U.S. and in-country training programs is the development and provision of educational materials. Since in many developing countries instructional aids (books, audiovisual materials, teaching models) are not available, it is imperative that all JHPIEGO training centers and trainees be provided with accurate, up-to-date educational materials.

The educational materials unit is responsible for editing in English, French, and Spanish, and supervising the publication of, various educational materials produced by JHPIEGO, including the Newsletter. It provides in-house editing and translation support, as well. This unit coordinates with regional development officers to review and update the components of the in-country educational packages for institutions, physicians, nurses, and medical and nursing students. With information provided by regional development officers, by the equipment unit and the resource management office, the educational materials unit projects the needs and the resources available for educational materials. A reference library for JHPIEGO staff and trainees, formerly maintained by this unit, is now maintained at the Johns Hopkins Educational Center.

JHPIEGO utilizes a number of approaches in providing educational materials to support its programs. These include:

- Distribution of educational packages to trainees and to in-country training centers,
- Distribution of the 3-volume Manual of Human Reproduction,
- Development and translation of educational materials (manuals, monographs, audiovisual aids),
- Maintenance by the Johns Hopkins Educational Center of a library for use by participants in its courses and by JHPIEGO staff,
- Publication of the JHPIEGO Newsletter in English, French and Spanish, and

- Provision of a JHPIEGO exhibit for display at regional, national, and international meetings.

A description follows of JHPIEGO's activity in the area of educational materials.

Educational Packages

These packages consist of specific books, booklets, audiovisual aids, and occasionally, teaching models. The packages are sometimes customized by the inclusion of other materials needed by a particular program or institution. Packages are provided in English, French, or Spanish to JHPIEGO-affiliated medical centers, teaching hospitals, and nursing and medical schools. Different educational packages are provided to the participants in the various courses offered by the Training Center. During FY'81, JHPIEGO shipped to institutions and trainees educational materials valued at $62,175.

Educational Materials Committee

A meeting of the educational materials committee was held in September 1981 to review JHPIEGO's educational packages and to provide recommendations regarding new and updated educational materials (publications, teaching models and audiovisual materials) for consideration for inclusion in the packages.

In attendance at the meeting were JHPIEGO's regional development officers, the training officer, the editor/coordinator of educational materials, and a JHPIEGO consultant.

The meeting resulted in the streamlining of certain educational packages in order to help reduce costs. These packages are now customized for the recipient institution or individual by the inclusion of specifically appropriate materials. It also provided an opportunity for all committee members to examine the educational packages for JHPIEGO's first Reproductive Health Education Program (REHEP), for medical schools in Latin America.

The committee will continue to meet during FY'82 in order to review educational materials.

The Manual of Human Reproduction

In 1978, JHPIEGO assumed responsibility for the distribution of the three-volume teaching aid, the Manual of Human Reproduction, edited by Dr. Howard C. Taylor. The results of a survey analyzing the effectiveness of this manual were published in 1981, in the International Journal of Gynaecology and Obstetrics. The survey found that,

> "In summary, all responses seem to indicate that the Manual of Human Reproduction has been a successful teaching tool in conveying current information regarding family planning and reproductive health for medical students and other health personnel in countries throughout the world, and that a new edition would be of important assistance in promoting the teaching of reproductive health and family planning in medical schools in developing countries."

During FY'81, JHPIEGO continued to seek funding for publication of an updated edition of this manual.

JHPIEGO-Produced Educational Materials

During FY'81, JHPIEGO began distribution of the English-language version of its two equipment manuals, Laprocator:TM Preventive Care and Maintenance, and Advanced Laparoscopic Systems: Preventive Care and Maintenance. These manuals are provided to operating theater personnel as a guide to the preventive care and maintenance of laparoscopic equipment, in order to assure the proper functioning and long life of the equipment. By late FY'81, the French manual, Laprocateur:MD Soins Preventifs et Entretien, was ready for distribution. The remaining manuals in French and Spanish are in various stages of publication and will be placed in distribution during FY'82.

Published during FY'81 were the proceedings of the JHPIEGO conference held in Key Biscayne, in a publication entitled Surgical Equipment and Training in Reproductive Health. This book sets forth the presentations, deliberations, and recommendations of the participants in the conference.

JHPIEGO supported the publication of 100 copies of the conference proceedings of the 1980 postgraduate seminar in obstetrics and gynecology at Kilimanjaro Christian Medical Center.

Late in FY'81, the monograph entitled Reproductive Health Education in the Developing World was in the final stages of printing. It is based on the proceedings of the 1980 meeting of JHPIEGO's International Council, held in Kenya.

During the latter part of the reporting period, there was under development a set of slides and corresponding teacher's manual on the subject of "Family Planning and Family Health," in support of JHPIEGO's teaching programs in Latin America. It is anticipated that more than 100 of these will be distributed to institutions and individuals in that region.

For FY'82, plans will be under way to investigate the possibility of JHPIEGO's producing an instructional film on microsurgery. Scheduled for publication by JHPIEGO is Reproductive Health in Africa, a monograph based in part on the proceedings of a meeting of Kenya's Obstetrics and Gynecology Society, to be held in Nairobi in February 1982. Also, distribution will begin of a manual for nurse/midwives, entitled An Introduction to Reproductive Physiology and Contraceptive Methods: A Programmed Instruction.

JHPIEGO Library

There is maintained at the Johns Hopkins Educational Center a library of materials pertaining to reproductive health. It has over 1,000 books and journals, as well as numerous audiovisual aids (slides, films, audio and video cassettes). The library is used by participants of JHPIEGO's U.S.-based courses and by JHPIEGO's staff, consultants, and visitors.

JHPIEGO Newsletter

This publication continues to be an important tool in communicating information on advances in reproductive health to JHPIEGO-trained physicians and health care professionals around the world. The Newsletter is published in English, French, and Spanish, and during FY'81 had a total circulation of 3,300 per quarterly issue.

JHPIEGO Exhibit

This portable visual exhibit provides information on the ways in which JHPIEGO can be of assistance in promoting reproductive health throughout the world.

II. EDUCATION AND TRAINING

Summary Of Training Activity

Since the inception of JHPIEGO through FY'81, a total of 4,801 trainees from 108 countries have participated in U.S.-based and in-country courses (Tables VI and VII). This figure represents course attendees rather than individuals, since on occasion individuals attend more than one course. Since the inception of JHPIEGO, approximately 3% of the trainees have taken more than one course. Even though JHPIEGO's overseas programs were established much more recently than its programs in the U.S., almost twice as many of the trainees have received training at in-country and regional training centers as at U.S.-based centers and the American University in Beirut. Of the 4,801 trainees, a total of 3,512 attended courses for physicians, i.e., general reproductive health and laparoscopy, management of infertility, microsurgery, anesthesiology, and didactic update conferences. In addition, 383 administrators and 813 nurses have been trained since JHPIEGO's inception. The remaining 93 attended academic skills and REHEP courses.

During FY'81, a total of 1,671 health professionals were trained in JHPIEGO courses (Tables IV and V). More than 5 times as many attendees received training overseas as at the Johns Hopkins Educational Center, in Baltimore. There were 474 nurses trained in clinical and update courses, representing an increase of more than 100% in nurse training over the previous year. This increase in nurse training is attributable to the proliferation of in-country programs. New countries reached by JHPIEGO through its trainees were Algeria, the Central African Republic, French Guiana, Greece, Guadeloupe, South Africa (through support of the Noyes Foundation), and Zimbabwe.

Table IV shows that 251 trainees attended courses at the Johns Hopkins Educational Center, in Baltimore. The largest group from Latin America was from Brazil, reflecting JHPIEGO's emphasis on mobilizing key institutions in that country.

Table IV

JHPIEGO PARTICIPANTS - THE JOHNS HOPKINS EDUCATIONAL CENTER

October 1, 1980 - September 30, 1981

	Clinical Courses for Physicians					
	General	Infertility	Microsurgery	Administrators	Academic Skills	Total
AFRICA	9	21	2	34	4	70
ASIA	6	3	4	6	2	21
LATIN AMERICA	48	30	4	44	3	129
NEAR EAST	5	15	3	6	2	31
TOTAL	68	69	13	90	11	251

Table V

JHPIEGO PARTICIPANTS - REGIONAL AND NATIONAL TRAINING CENTERS

October 1, 1980 - September 30, 1981

	Clinical Courses for Physicians			Clinical Nurse	Didactic Update REHEP				Total
	General	Microsurgery	Anesthesiology		Physician	Nurse	Medical	Nurse	
AFRICA	130			99	8	12			249
ASIA	87			96					183
LATIN AMERICA	133	6	31	100	393		49	13	725
NEAR EAST	96			167					263
TOTAL	446	6	31	462	401	12	49	13	1420

Table VI

TOTAL JHPIEGO PARTICIPANTS - U.S. TRAINING CENTERS AND AMERICAN UNIVERSITY IN BEIRUT

Inception through September 30, 1981

	Clinical Courses for Physicians						
	General	Infertility	Microsurgery	Administrators	Academic Skills	Nurses (INEP)	Total
AFRICA	99	56	2	125	12	34	328
ASIA	281	8	4	47	6	51	397
LATIN AMERICA	458	54	4	151	8	10	685
NEAR EAST	106	30	3	60	5	3	207
TOTAL	944	148	13	383	31	98	1617

Table VII

TOTAL JHPIEGO PARTICIPANTS - REGIONAL AND NATIONAL TRAINING CENTERS*

Inception through September 30, 1981

	Clinical Courses for Physicians			Clinical Nurse	Didactic Update REHEP				Total
	General	Microsurgery	Anesthesiology		Physician	Nurse	Medical	Nurse	
AFRICA	194			99	16	23			332
ASIA	587			190					777
LATIN AMERICA	275	12	43	221	659		49	13	1272
NEAR EAST	300			182	321				803
TOTAL	1356	12	43	692	996	23	49	13	3184

*Represents total number of course attendees, rather than individuals, since on occasion individuals attend more than one course.

There were 70 participants from Africa, representing 28 countries, or 5 countries more than the previous year. This group was the largest to date from Africa in any of JHPIEGO's U.S.-based courses. This increase reflects JHPIEGO's continued recognition of the need for training in that region in modern techniques of reproductive health. From the Near East, 31 persons were trained, and, from Asia, 21 were trained.

Activity in regional and national programs during FY'81 more than doubled over the previous year, for a total of 1,420 trainees during FY'81 (Table V). This increase takes into account 38 trainees from the Asian region who were not counted in the totals shown for FY'80 (their documentation arrived after the printing of that year's annual report). Of the 1,420 trainees, 884 attended physicians' courses. The remaining 536 attended courses for nurses and medical and nursing students overseas. Courses for physicians are general reproductive health care, microsurgery, anesthesiology, and didactic update. Other courses are clinical and didactic updates for nurses, and reproductive health education programs for medical and nursing students.

An integral part of JHPIEGO's efforts in education and training is the provision of medical equipment and educational materials to participating institutions in developing countries. JHPIEGO shipped 156 laparoscopes and Laprocators™ (Table II) to overseas institutions affiliated with its program. Institutions in Burma, French Guiana, Greece, Guadeloupe, Madagascar, Malawi, Martinique, Mauritania, Uganda, Upper Volta, and Zimbabwe were supplied laparoscopic equipment this year for the very first time. A total of 1,165 laparoscopic systems have been shipped since JHPIEGO's inception to JHPIEGO-affiliated institutions (Table III) in 91 countries, or 11 countries more than last year. Also shipped by JHPIEGO were educational materials valued at $62,173.83.

By the end of FY'81, JHPIEGO had established through its 4,801 trainees contact with 1,767 medical institutions in developing countries (Table VIII). These institutions

include all types of major health care facilities providing reproductive health care, e.g., medical schools, hospitals, and maternal and child health care centers.

Reaching medical schools through trainees is an important objective of JHPIEGO. Being educational centers, these schools provide an opportunity for JHPIEGO to reach medical faculty and staff in order to promote the diffusion and institutionalization of education in reproductive health. The staff and facilities at medical schools and the numerous health care centers affiliated directly or indirectly with the medical schools can provide enormous support in promoting JHPIEGO's objective of increasing knowledge and skills of personnel in reproductive health care.

Table VIII also provides information on the total number of medical schools in each region, as well as the total number of medical schools represented by all JHPIEGO trainees. These figures indicate that by FY'81, 51% of all medical schools, or 275 out of 544, had been reached. However, if the figures are adjusted per country for the number of medical schools, a significantly higher percentage of schools is shown to have been reached. Of the 108 countries represented by JHPIEGO trainees, 100 have 15 or fewer medical schools. JHPIEGO has reached approximately 70% of the schools in these countries. In countries having 1 or 2 medical schools, 86% of the schools were reached. In countries with a large number of medical schools, such as India (106), Brazil (75), and Mexico (55), it is naturally more difficult to reach as large a proportion of schools as in countries with fewer schools.

JHPIEGO will continue its efforts to establish contact with major medical institutions in developing countries, and with medical schools in particular.

Sections II and III will describe JHPIEGO's educational and training activities in the U.S. and overseas.

Table VIII

INSTITUTIONS REPRESENTED BY ALL JHPIEGO TRAINEES[1]

(by region)

Inception through September 30, 1981

	Number of Institutions[2] Represented by JHPIEGO trainees	Total Number of Medical Schools in Region	Number of Medical Schools in Region Represented by JHPIEGO trainees
AFRICA	288	41	29
ASIA	537	217	105
LATIN AMERICA	686	209	102
NEAR EAST	256	77	39
TOTAL	1767	544	275

1. Includes physicians, nurses and administrators.

2. Includes all types of medical institutions providing reproductive health care, e.g., medical schools, hospitals, maternal and child health centers.

II.A U.S. EDUCATIONAL PROGRAMS

Johns Hopkins University School of Medicine

Johns Hopkins Educational Programs for JHPIEGO

U.S. training remains a component of JHPIEGO's activities. It assists in the identification of key leaders in the field of reproductive health from developing countries who, after meeting with JHPIEGO's regional office staff, return to their countries and often formulate strategies for the development of JHPIEGO-supported programs as a result of their U.S. training.

Under a tuition agreement with JHPIEGO, the Department of Gynecology and Obstetrics of the Johns Hopkins University School of Medicine organizes and conducts at the Johns Hopkins Educational Center educational courses for physicians and other health personnel from developing countries. JHPIEGO maintains a training officer and a small staff known as the JHPIEGO International Training Center. The training center continues to serve as the focal point for the trainees during their participation in the courses provided by Johns Hopkins. The JHPIEGO training officer monitors the JHU educational courses and interfaces with the medical school's department of gynecology and obstetrics for the development and conducting of these courses.

This year, 251 trainees (Table IV) from 66 countries participated in U.S.-based programs. New countries represented in U.S. training programs were Algeria, the Central African Republic, French Guiana, Greece, Guadeloupe, South Africa, and Zimbabwe. The physician from South Africa was supported by a grant from the Jessie Smith Noyes Foundation, in New York. In addition, for the first time in many years, physicians from Makerere University, in Uganda, attended educational programs, which may reflect an easing of tensions in that country.

During FY'81, the following courses were conducted at the Johns Hopkins Educational Center:

- "Academic Skills for Medical School Faculty in Reproductive Health,"

- "Advances in Reproductive Health for Physicians,"
- "Management of the Infertile Couple,"
- "Advances in Reproductive Health for Administrators of Family Health and Family Planning Programs", and
- "Microsurgery for Tubal Reanastomosis."

The major objective of all JHPIEGO courses is the improvement of reproductive health. To achieve this objective, there has been developed a core curriculum which addresses:

- the concept of reproductive health and the management of fertility,
- critical issues in maternal and child health,
- population growth and its relationship to health, economic welfare, and social well-being, and
- recent advances in the prevention and management of reproductive failure.

The course contents are continuously updated to reflect suggestions from trainees and changes in the field. This year, for example, a new lecture presented was "Current Controversies in Family Planning," which reviewed current issues in the field, including the relationship between oral contraception and breastfeeding, and IUD use and subsequent pelvic inflammatory disease. Also, a session was added on "Strategies for Improving Reproductive Health Training and Service Delivery Programs." It allowed trainees to explore with JHPIEGO staff and faculty the philosophy and methodology of developing educational programs in reproductive health for nurses, medical officers, and medical students. During these sessions, in order to provide ideas on similar programs which the participants themselves might wish to organize in their own institutions, participants had the opportunity to discuss training models that had been implemented successfully by JHPIEGO.

Some of the most significant educational activities that occurred at Johns Hopkins during the reporting period are described below.

- For the first time, the microsurgery course, attended by 13 trainees, was supported entirely by JHPIEGO. Previously, this program had been offered in collaboration with the Division of Reproductive Endocrinology and Infertility of the Johns Hopkins University School of Medicine, which had received funding from AID for this program.
- Discussions were held regarding the formulation of a course addressing the proper utilization of pharmacological agents in maternal and child health. It has become increasingly apparent that the use of pharmacological agents in the developing world is in many instances inappropriate in both medical and economic terms. During the year, a questionnaire was administered in order to assess the most frequently utilized drugs in the medical practices of the trainees, as well as the drugs' mode of usage. This information is now being processed, and will assist in the formulation of the new course.
- Educational materials for each course were reviewed and updated. Films and videotapes appropriate to each course were reviewed and then integrated into the curriculum as a formal part of each course's program of study.
- Near the end of FY'81, plans were under way to schedule country profiles in all JHPIEGO clinicians' courses, as well as to reinstitute for administrative and clinical trainees site visits to various public health facilities. These two items were suggestions of the AID team which evaluated JHPIEGO in October 1980.

During FY'82, the content of each course will be reviewed and updated, and pretests will be revised. Plans will be formulated for the development of a new course, "Diagnosis and Management of Sexually Transmitted Diseases," and of a microsurgery course in French. JHPIEGO and the Johns Hopkins University are investigating the possibility of offering in Baltimore a special postgraduate course,

"Reproductive Health in the 1980s," as a follow-up to the FIGO meeting in San Francisco in October 1982.

The following is a synopsis of each course offered during the year, beginning with the newer programs.

Academic Skills for Medical School Faculty in Reproductive Health

This course was developed to provide young obstetricians and gynecologists with the skills necessary to enable them to function more effectively in their academic roles as researchers and teaching members of a medical school faculty. The course provides:

- Refresher seminars in reproductive health and medicine. Emphasis is on preventive health care.
- Training and research skills required by medical investigators for clinical studies. Epidemiological and biostatistical methods are emphasized, and there is discussion of how to conduct simple studies to help achieve improved health services.
- Lectures in teaching skills for medical school faculty. The goal is to provide competent obstetrician-gynecologists with skills enabling them to function in both investigative and teaching roles in their medical schools.

The 4-week seminar includes organized group discussions and practical exercises. Physicians attending the course are primarily junior faculty members who have completed up to 5 years on the faculty of a department of obstetrics and gynecology.

One academic skills course was conducted during the reporting period. In attendance were 11 physicians from 9 countries, including physicians from major teaching institutions in Egypt, Kenya, Morocco, Nigeria, Tanzania, and Uganda, countries where there is limited reproductive health information in medical school curricula. It is anticipated that in areas related to reproductive health, these young doctors will be instrumental in updating the medical school curricula of their countries.

To date, 31 physicians from 20 countries in the developing world have attended the academic skills course.

Microsurgery for Tubal Reanastomosis

This course was developed in recognition of the fact that voluntary sterilization is one of the most prevalent methods of fertility regulation worldwide, and although the number of women requiring reversal of sterilization is small, in countries where voluntary sterilization is widely practiced, reversal services should be available. With the evolution of microsurgical procedures for the reversal of sterilization, pregnancy rates of 60% to 70% have been reported as a consequence of this technique. As a result, the technique of microsurgery has received widespread interest with respect to its application to all types of tubal surgery.

The educational program in microsurgery is of 2 weeks' duration, and consists of didactic sessions and laboratory instruction providing practical sessions in tubal reanastomosis. During the first week, discussions center on the pathology of the fallopian tubes and infertility, selection of patients for tubal reconstruction techniques, pre- and post-operative care of patients, endometriosis, and reimplantation of the fallopian tube. Also, surgery is performed on laboratory animals. The second week provides each participant with an opportunity to perform the technical exercises necessary to complete a tubal reanastomosis using microsurgical techniques.

The participants are selected mainly from a university center in a country with an existing fertility management program responsible for a large number of voluntary sterilizations, or from a country where infertility due to tubal factors is a major problem. Each participant is an experienced, highly motivated gynecologist with a specific interest in microsurgery, and each participant's home institution is one recognized as an important tertiary care or referral center for that country.

Two microsurgery courses for obstetricians and gynecologists were offered during FY'81, once in November 1980, and then again in April 1981. They were attended by a total of 13 participants.

Advances in Reproductive Health

This course combines both didactic sessions and technical training. In selecting attendees, JHPIEGO gives preference to physicians specializing in gynecology and obstetrics who currently teach medical students or graduate physicians in medical schools or teaching hospitals.

The course is normally conducted in a 3-phase sequence. Phase I is a 2-week didactic program carried out at the Johns Hopkins University. Phase II, based in a JHPIEGO clinical practice center in an overseas institution, consists of demonstrations and supervised instruction in clinical techniques related to reproductive health, including endoscopy. At the completion of the second phase, each participant is evaluated with regard to demonstrated competence with a laparoscope. Final recommendations for the provision of equipment to the trainee's institution are based not only on the participant's surgical ability and experience, but also on institutional criteria. Equipment donations are made to the institution where the participant has been and is expected to continue working. Phase III, the delivery of instruments, is in most instances accompanied by the visit of a JHPIEGO consultant.

During FY'81, the 3 sessions of this course offered at Johns Hopkins were attended by 68 physicians.

Management of the Infertile Couple

This is a 2-week course for gynecologists with a special interest in the management of infertility. It provides a review of recent research and technology pertaining to the management of the infertile couple. During the course, the medical and surgical management of the infertile couple is studied, as are current methods of diagnosis. Topics covered include cervical and uterine factors in infertility,

endometriosis and infertility, and the utilization of endoscopy for infertility evaluation. Also presented are lectures dealing with contraception which emphasize such preventive benefits as the protection provided by oral contraceptives against salpingitis. As a supplement to the infertility course, selected participants have the opportunity to gain clinical experience in laparoscopy. En route home, such candidates may attend a one-week clinical practice session at a designated JHPIEGO clinical practice center, where they gain practical experience in endoscopic techniques stressing both the diagnosis and management of infertility.

Three infertility courses were conducted during the reporting period, for a total of 69 participants. Nearly one-third of these participants were from countries in Africa where infertility is a major problem in reproductive health.

Advances in Reproductive Health for Administrators of Family Health and Family Planning Programs

This course is designed for physicians and nonmedical health officials who administer family planning and/or maternal and child health programs. It provides administrators with information pertaining to advances in and the promotion of reproductive health services, various systems of health care delivery, and the management of programs in family planning and maternal and child health.

Four courses for administrators, attended by 90 trainees, were conducted during FY'81.

II.B CLINICAL PRACTICE CENTERS

An integral part of JHPIEGO's educational efforts is the training provided in clinical practice centers located in selected institutions overseas. Clinical practice complements the didactic instruction offered in courses in the U.S. and in the regional and national centers affiliated with JHPIEGO. A clinical practice center provides demonstrations of surgical endoscopic techniques with minilaparotomy for back-up. In

most cases, the physicians who conduct training at the clinical practice centers are JHPIEGO graduates.

In FY'81, JHPIEGO continued to formalize its relationships with many of the clinical practice centers, in order to provide tuition payment to centers providing subsistence for candidates attending clinical practice. Twenty-five clinical practice agreements were negotiated and signed during FY'81. The 8 clinical practice centers in Colombia were brought together in a single agreement. For Brazil, there were negotiated and approved 3 clinical practice centers more than had been projected during the previous fiscal year. In Tunisia, the agreement with ONPFP represents 10 clinical practice centers.

It should be pointed out that nurses and anesthetists also may receive training at clinical practice centers.

Table IX shows that 655 health care professionals were trained at established clinical practice centers during FY'81. This includes 157 persons who attended U.S. didactic courses and 498 who attended in-country programs. An additional 447 persons received clinical practice training in reproductive health techniques, in conjunction with in-country programs which do not utilize these established clinical practice centers. Therefore, a total of 1,102 persons, or 655 plus 447, received clinical practice training. Of the 1,102 persons, 602 were physicians who took general reproductive health care courses. A total 493 of these physicians learned techniques of laparoscopy. The remainder of the 1,102 trainees were nurses (463), anesthetists (31), and microsurgeons (6).

Since JHPIEGO's inception, 2,240 physicians have been trained in laparoscopy. By region, 265 of these were from Africa, 800 were from Asia, 790 were from Latin America, and 385 were from the Near East.

For FY'82, selected centers for clinical practice will be added as necessary. Plans are under way to establish an additional clinical practice center in Mexico, and one in Trinidad.

Table IX

CLINICAL PRACTICE CENTERS AND NUMBERS OF TRAINEES

October 1, 1980 - September 30, 1981

ASIA	
Korea	
Ewha Women's University Seoul	0
Korea University of Medicine Seoul	0
Seoul National Medical Center Seoul	0
Yonsei University Severance Hospital Seoul	1
Philippines	
Mary Johnston Hospital Manila	91 *
ASIA TOTAL	92 *
LATIN AMERICA	
Brazil	
CEPECS Minas Gerais	6 *
CLAM Parana	10 *
Clinide Ribeiro Preto Sao Paulo	0
CME Sao Paolo	7 *
CPAIM Para	7 *
CPAIMC Rio de Janeiro	129 *

LATIN AMERICA (continued)

Brazil	
FUEF Porto Alegre	0
MCO Bahia	10
PIO XII Rio de Janeiro	1
SAMEAC Ceara	5 *
SMIRH Rio Grande do Sul	5 *
Colombia	
PROFAMILIA Bogota and 7 other locations	115 *
Costa Rica	
Hospital Mexico San Jose	3
Dominican Republic	
Maternidad Nuestra Senora de la Altagracia Santo Domingo	3
Guatemala	
APROFAM Guatemala	6
Honduras	
ASHONPLAFA Tegucigalpa	1
Jamaica	
University of West Indies Kingston	6
Mexico	
Hospital Civil de Guadalajara Guadalajara	9

LATIN AMERICA (continued)	
Panama	
Hospital Jose Domingo de Obaldia David	7
LATIN AMERICA TOTAL	330 *
NEAR EAST	
Egypt	
International Islamic Center/ Al Azhar University Cairo	63 *
University of Alexandria Hospital/Shatby Maternity Hospital Alexandria	94 *
Tunisia	
Office of Family Planning and Population (includes 10 centers) Ministry of Health Tunis	76 *
NEAR EAST TOTAL	233 *
TOTAL ALL REGIONS	655 *

*These figures include a large number of health care professionals trained in regional and in-country programs.

II.C MAINTENANCE CENTERS AND TRAINING OF MAINTENANCE TECHNICIANS

JHPIEGO continued to emphasize the development abroad of maintenance centers for laparoscopic equipment. In FY'81, JHPIEGO supported maintenance centers in Colombia, Costa Rica, Malaysia, Nigeria, Pakistan, the Philippines, Sudan, Thailand and Turkey. In El Salvador, a maintenance center for which no agreement has been signed continues to be supported by JHPIEGO at the request of USAID.

Planned for FY'82 is the establishment of maintenance and repair centers in Ghana and Sudan.

The training of personnel is an important component in the development of maintenance centers. Technicians receive 1 to 2 weeks of training, followed by an in-country visit by a JHPIEGO staff member or consultant who assists the technician in developing an inventory and in organizing his/her shop. This year, JHPIEGO participated in the U.S.-based training of 2 technicians from Morocco, with the intent of establishing an in-country maintenance and repair center supported by the International Project, Association for Voluntary Sterilization.

II.D SITE VISITS AND MEETINGS

In order to provide support for training activities, JHPIEGO staff and consultants make site visits to developing countries for the purposes described below. During FY'81, JHPIEGO arranged for staff and consultants to make 142 trips to 48 different countries. A total of 36 trips were made to 18 countries in Africa, 17 trips to 7 countries in Asia, 61 trips to 16 countries in Latin America, and 28 trips to 7 countries in the Near East. Not reflected in these figures are the consultants' visits arranged by project directors of in-country programs.

Program Development and Monitoring

Site trips for program development provide technical assistance, consultation, and advice. JHPIEGO staff and consultants make such trips to meet with key officials of ministries of health, medical institutions, and medical and nursing schools, to coordinate efforts with the USAID mission, to meet with key fiscal personnel to determine program requirements and costs, and to discuss with educational leaders the design and curriculum of courses.

Site visits for monitoring are made to review the status of the program, to determine that its goals and objectives are being met, to resolve difficulties, and to review or revise curriculum of courses and educational materials.

Installation and Instruction in Use of Laparoscopic Equipment

Field training visits made for this purpose are provided by JHPIEGO consultants to trainees who have completed clinical practice. The majority of consultants have been trained in JHPIEGO's U.S. didactic, regional, or national programs. Increasingly, consultants from less developed countries carry out these field visits to the institutions of trainees. Consultants instruct hospital staff in the care and maintenance of laparoscopic equipment, and safe operative management. Upon completion of the consultant's field visit, the laparoscopic team is fully capable of carrying out laparoscopic procedures. The utilization of consultants from less developed countries demonstrates the institutionalization of JHPIEGO's efforts. The system has been adopted in most in-country programs because it has proven to be effective in providing the adequate training of skilled personnel and a reduction of the maintenance costs of sophisticated equipment.

Participation in International Conferences and Meetings

Such participation is undertaken to support the advocacy of reproductive health, to provide authoritative speakers for disseminating updated information in reproductive health, to provide momentum to existing programs by the presence of

distinguished experts, and to lend support to programs in the developmental stage so that ministries of health and other groups may become more favorable to the objectives of the programs.

In addition to the annual meeting of the International Council, described in Section I.C., JHPIEGO schedules other meetings to review and make recommendations regarding various aspects of its program.

The reports of the equipment committee and of the educational materials committee appear in Section I.D.

A meeting on maternal and child health in Francophone Africa projected for FY'81 was deferred due to funding restraints, as was the in-country project director's meeting originally scheduled for FY'81. During FY'82 plans will be made to reschedule the project directors' meeting immediately following the FIGO meeting in October 1982. The project directors' meeting is intended to evaluate the progress of in-country training and to review curriculum materials and content, teaching methods, and training strategies.

When asked to do so, JHPIEGO offers to ministries of health, OB/GYN societies, and other professional organizations assistance in the form of staff and consultant participation in conferences and meetings which may be regional, national, or international in scope. During FY'81, JHPIEGO staff and consultants participated in 12 major conferences and meetings, as shown below.

Africa	2nd International Congress of Society of OB/GYN of Nigeria (Nigeria)
	International Symposium on Fertility Regulation (Tanzania)
Asia	3rd International Seminar on Maternal and Perinatal Mortality (India)
Latin America	International Council Meeting (Brazil)
	IPARC Human Development Program Meeting (Nassau)
	Infertility Seminar (Trinidad and Tobago)

Near East	International Symposium on Fertility Regulation (Tunisia)
	8th Annual Conference of Egyptian Fertility Care Society (Egypt)
United States	IPPF/WHR Meeting
	USAID/POP Paramedic Training Meeting
	International Population and Reproductive Council Meeting
	FIGO Meeting

II.E IN-COUNTRY EDUCATIONAL PROGRAMS

The momentum established in prior years for the demand for in-country educational programs continued through FY'81. These programs are described fully in Section III.

II.F EDUCATIONAL MATERIALS

Since in many developing countries there is a serious lack of instructional aids (books, audiovisual materials, teaching models), JHPIEGO continued to complement its training efforts by providing relevant educational materials to its programs, and by developing pertinent educational materials. Educational materials are described more fully in Section I.D.

III. IN-COUNTRY PROGRAMS

A. AFRICA

The African continent is of high priority in terms of JHPIEGO initiatives in reproductive health. Africa has a large number of countries with varying economic conditions, varying religious backgrounds, and, frequently, unstable political systems. Many of these countries have only recently become independent, and lack a viable structure for delivery of health care. Moreover, mortality rates here for pregnant women and persons in all age groups rank among the highest in the world.

During FY'81, JHPIEGO continued to recruit health care professionals from Africa for its programs. Physicians and administrators from Algeria, the Central African Republic, French Guiana, South Africa, and Zimbabwe were accepted for the first time in JHPIEGO-sponsored courses.

Since it is a major problem in Africa, infertility, particularly the more frequent female tubal factor, is presented in the context of prevention through proper screening and management of sexually transmitted diseases. JHPIEGO presents in its courses for this region other topics, sometimes "sensitive" ones, relating to reproductive health and fertility management. Such topics are usually presented within the overall context of maternal and child health. Similarly, surgical training emphasizes the laparoscope, since it is useful in both diagnosis and therapy (tubal ligation).

Many of JHPIEGO's in-country training efforts in this region are directed toward professionals in reproductive health who are affiliated with teaching hospitals. However, since in many African countries there are relatively few professionals with particular expertise in obstetrics and gynecology, other programs of JHPIEGO are intended for "lower-level" physicians, nurses, nurse-practitioners, midwives, medical students, and paramedics. Some courses emphasize the establishment of a system of graduate or postgraduate education for such personnel in health care, while other courses, by necessity, offer training directly to individuals providing service.

Since its inception, JHPIEGO has trained a total of 332 physicians and nurses from Africa in regional and in-country programs. During FY'81, there were 249 persons trained regionally and in-country, or approximately 4 times more than in the previous year. In support of this training and other activities, JHPIEGO staff and consultants made 36 trips to 18 African countries. These figures do not reflect consultants' visits arranged by project directors of in-country programs.

During FY'82, in addition to recruiting physicians and administrative candidates for its U.S.-based programs, JHPIEGO will recruit physician and nurse candidates for JHPIEGO-sponsored regional programs in Kenya, Nigeria, Somalia, Sudan, and Zaire. These program agreements are expected to be renewed, and nursing components will be added where appropriate. In-country programs are planned for Burundi, Cameroon, Ghana, Liberia, Uganda, and Zimbabwe.

Since infertility is a major health problem in many parts of Africa, a regional training center for infertility management is planned in Cameroon. The course given there will cover the female tubal factor and the management of sexually transmitted diseases.

Conferences and seminars may be sponsored to provide an update in reproductive health to health care professionals. These will not only provide didactic materials, but also will serve as a mechanism for recruiting candidates for other JHPIEGO programs.

In Tanzania, a proposal to incorporate aspects of reproductive health training for general medical officers and nurses from district hospitals will be discussed with the ministry of health and the proposed training centers.

JHPIEGO plans to explore program opportunities in Senegal, and will provide 3 guest lecturers to the OB/GYN Congress in Dakar during FY'82.

In-Country Activities

JHPIEGO conducts a number of in-country programs in Africa. Clinical practice for Francophone African trainees is provided at JHPIEGO-supported clinical practice

centers in Tunisia. A maintenance center, which provides instruction in preventive maintenance and care of laparoscopic equipment, is located in Nigeria. Maintenance centers in Ghana and Sudan are expected to be established during FY'82.

Major training efforts in Africa are described below.

KENYA

PROJECT TITLE: University of Nairobi Human Reproduction Training Center

GRANTEE: University of Nairobi Faculty of Medicine, Department of Obstetrics and Gynecology

The goal of this program is to train physicians and allied health personnel in modern aspects of reproductive health, including high-risk pregnancy, contraception and the diagnosis of sexually transmitted diseases. During FY'81, 8 physicians and 12 nurses participated in two 2-week update courses in reproductive health care. This course provided instruction in pelvic examinations for cervical cancer, the diagnosis and management of infertility, and family planning methods. Also, a total of 9 physicians attended two separate sessions of a 2-week didactic and clinical endoscopy training course.

For FY'82, there are projected 2 endoscopy courses for physicians and 2 update courses in reproductive health for physicians and nurses. In November, one of JHPIEGO's assistant regional development officers, a nurse-practitioner, will speak at a midwives' conference in Nairobi. A regional development officer will participate in a conference of obstetricians and gynecologists scheduled in Nairobi for February 1982. JHPIEGO will support the publication of the proceedings of this conference in a monograph entitled Reproductive Health in Africa.

NIGERIA

PROJECT TITLE: University of Ibadan Endoscopy Training Project

GRANTEE: University of Ibadan Faculty of Medicine, Department of Obstetrics and Gynecology

The goal of this program is to train gynecologists, general surgeons, and graduating residents in endoscopy and reproductive health, with an emphasis on diagnostic and therapeutic endoscopy. During FY'81, there were 8 physicians trained in the 2-week course offered under this program. The program will continue to provide training during FY'82.

Other In-Country Activities

During FY'81, an agreement was developed with the Femope Marketing Company, in Lagos, in order to establish a maintenance center for all JHPIEGO laparoscopic equipment in Nigeria. In September, a JHPIEGO regional development officer for the African region participated in the Second International Congress of Obstetrics, in Lagos, at which time discussions were held with chairmen of OB/GYN departments about the introduction of a reproductive health education program (REHEP) in medical schools.

SOMALIA

PROJECT TITLE: Somalian Reproductive Health Program

GRANTEE: Benadir Hospital, on behalf of the Ministry of Health and the Ministry of Higher Education

The purpose of this new 3-year project is to provide pragmatic education in reproductive health to primary care physicians staffing district and regional health care facilities in rural Somalia. It is intended also to upgrade the teaching skills and knowledge in reproductive health of educators of nurses. During FY'81, the program's first year of operation, the 2 update courses in reproductive health offered at Benadir Hospital, in Mogadishu, were attended by 39 physicians. Also, 15 nurses attended a course in reproductive health with an emphasis on educational methodology.

It is anticipated that 2 more courses for physicians will be held during FY'82.

SUDAN

PROJECT TITLE: Continuing Education in Reproductive Health for Medical Officers

GRANTEE: Ministry of Health

The purpose of this new project is to develop for medical officers in rural Sudan a program of continuing education in maternal and child health, reproductive health care, and other relevant health topics. During FY'81, 51 physicians were trained in three such courses. Workshops for trainers and equipment maintenance technicians were conducted also. A maintenance center was established during the reporting period. Four Sudanese physicians and a nurse were trained in JHPIEGO courses in the U.S. and Egypt.

During FY'82, the program for continuing education and a maintenance center are expected to be funded. It is anticipated that a total of 140 trainees will attend 8 different courses given in Khartoum, Medani, and Port Sudan.

ZAIRE

PROJECT TITLE: Zaire Reproductive Health Training Program for Nurses

GRANTEE: Evangelical Medical Center of Nyankunde, on behalf of the Ministry of Health

The purpose of this new project is to provide pragmatic education in reproductive health to trained nurses staffing 8 hospitals and 15 clinics and dispensaries located in Upper Zaire, a region which is primarily rural. The program is designed to further knowledge in family planning techniques and the provision of services through a structured program of didactic lectures, demonstrations, management seminars, and clinical practice tutorials. During FY'81, a 2-week course for practicing nurses was attended by 61 nurses. The course covered all phases of reproductive health, with an emphasis on family planning services.

During FY'82, similar courses for nurses are expected to be held at other locations in Zaire. In addition, plans are under way for the development an in-country training program for physicians.

U.S.-Based Activities

In addition to training health professionals overseas, during FY'81 JHPIEGO trained 70 physicians and administrators from Africa at the Johns Hopkins Educational Center, in Baltimore. Countries represented were Benin, Burundi, Cameroon, Cape Verde, Gabon, Gambia, Guinea Bissau, Kenya, Lesotho, Liberia, Malagasy Republic, Mali, Nigeria, Senegal, Sierra Leone, Sudan, Tanzania, Upper Volta, Zaire, and, for the first time, Algeria, the Central African Republic, South Africa, and Zimbabwe. There were 34 Africans in the administrators' course, 21 in the infertility course, 9 in the general reproductive health course, 4 in the academic skills course, and 2 in the microsurgery course.

III.B

ASIA

Asia represents an important region in terms of JHPIEGO's training efforts, particularly because of the large population within its confines. In comparison to Africa, the region is generally more advanced with regard to the establishment of health infrastructures and of national priorities for reproductive health. Many countries, such as India, Indonesia, Korea, Malaysia, the Philippines, and Thailand, already have defined policies, programs, or interest in fertility management. JHPIEGO's programs in this region may therefore place greater emphasis on fertility management than its programs in other regions. However, the role of fertility management in relation to other aspects of reproductive health is presented as well.

Since many countries are more advanced in terms of infrastructure and training, some emphasis is given to complementing existing programs. The training of teams (physician plus nurse, paramedic, or technician) for surgical programs is emphasized. Training is directed toward paramedics and nurses who staff service centers that feed into the larger teaching centers.

Since its inception, JHPIEGO has trained a total of 777 physicians, nurses and administrators from Asia in regional and in-country program. During FY'81, there were 183 persons trained regionally and in-country, representing a small decrease over the previous year. In support of this training and other activities, JHPIEGO staff and consultants made 17 trips to 7 countries in Asia. These figures do not reflect consultants' visits arranged by project directors of in-country programs.

In April, a JHPIEGO-sponsored laparoscopic training program was offered for the first time in Burma. The 2-week didactic and clinical program was attended by 16 physicians and 25 nurses from the three principal medical institutions in Burma. As a result of this highly successful course, a second JHPIEGO laparoscopy course is scheduled for July 1982.

During FY'82, the training programs in Malaysia and the Philippines will continue, as will the direct training provided in Burma, and other activities in India. Conferences and courses will be held elsewhere, as described below. A proposal for training physicians and nurses in family planning services in Bangladesh will be submitted to the World Bank.

JHPIEGO conducts a number of in-country programs in Asia. Clinical practice centers, which provide surgical training in minilaparatomy or laparoscopy, are located in Korea and the Philippines. Table IX shows by country the number of health professionals trained at clinical practice centers during FY'81. Maintenance centers which provide instruction in preventive maintenance and laparoscopic equipment care, are located in Malaysia, Pakistan, and the Philippines.

Major training programs are conducted in Indonesia, Malaysia, Pakistan, the Philippines, and Thailand, and are described below.

INDONESIA

PROJECT TITLE: Course in Human Reproduction for Paramedics

GRANTEE: Department of Obstetrics and Gynecology
School of Medicine
University of Indonesia

This was a 1-year program which expired in June 1981. Its objective was to train 16 paramedics from the Indonesian Society of Voluntary Sterilization centers as trainees of paramedics in family planning, with an emphasis on skills for assisting physicians in reproductive health activities. The project reflects JHPIEGO's philosophy of developing an in-country training program subsequent to training a cadre of medical and nursing personnel at U.S.-based courses. A number of paramedics were trained in the previous fiscal year (FY'80). This project remained open following its expiration date because the follow-up specified in the agreement was still in progress.

Under consideration for FY'82 is a program to provide training in family planning techniques and service administration to hospital teams of non-OB/GYN physicians, administrators, and nurses.

MALAYSIA

PROJECT TITLE: Malaysian Reproductive Health and Endoscopy Training Program for Physicians and Nurses

GRANTEE: National Family Planning Board
Government of Malaysia

This was the second year of a 3-year program. Its purpose is to provide postgraduate training in reproductive health and endoscopy to physicians and nurses in Malaysia who staff rural district hospitals and outpatient family planning facilities of the National Family Planning Board and the Federation of Family Planning Associations. In FY'81, funding was approved for the continuation of this program. Due to the difference between JHPIEGO's funding cycle and the reporting period, however, the second year's objective of training 15 physicians and 15 nurses to provide services with particular emphasis on interval sterilization, is scheduled for implementation after the close of the fiscal year. During FY'81, clinical practice and field visits by JHPIEGO consultants for installation of equipment were completed for the physicians and nurses trained in the previous fiscal year.

During FY'82, it is expected that funding will be continued for the training program and maintenance center in Malaysia.

PAKISTAN

PROJECT TITLE: National Endoscopy, Surgical Contraception, and Reproductive Health Program

GRANTEE: Ministry of Health

The JHPIEGO program in Pakistan was supported by the United Nations Fund for Population Activities (UNFPA). The goal of the program was to train over a period of

approximately 3 years a total of 800 physicians and 800 nurses in 6 training centers throughout the country. The government of Pakistan has now assumed direct responsibility for continued implementation of the program.

Training is offered in 1-week and 2-week courses at selected hospitals. The curriculum includes didactic and practical training in diagnostic and therapeutic endoscopy, minilaparotomy, equipment care, patient education, maternal and child health, infertility, and other topics in reproductive health care. Personnel trained in the program will serve in hospitals and health centers across the country. During FY'81, 23 physicians attended programs, and plans were under way to provide for the completion of their clinical training. Thirty-six nurses received training in techniques of surgical asepsis, principles of minilaparotomy, and maintenance of laparoscopic equipment. The course for nurses addressed also infant and child care, contraceptive technology, and delivery of community health services. JHPIEGO has provided assistance for the development of a maintenance center to service approximately 160 laparoscopes (most of which were provided by AID) and the 54 Laprocators™ provided under the current UNFPA project.

During FY'81, JHPIEGO's director and a regional development officer attended a meeting with representatives of the Pakistani government and UNFPA. Also, a JHPIEGO nurse consultant participated in a regional nurse training program in Karachi.

Plans for FY'82 include the continued support of a maintenance center for endoscopic equipment in Pakistan. AID assistance to Pakistan may be initiated during FY'82, which will permit the U.S. training of Pakistani physicians.

THE PHILIPPINES

PROJECT TITLE: Philippines Endoscopy Training Program

GRANTEE: Mary Johnston Hospital

The purpose of this 3-year project is to train gynecologists in the diagnostic and therapeutic use of the laparoscope. During FY'81, a total of 83 health professionals were trained in 15 different JHPIEGO-supported courses in the Philippines. Of these, 48 were physicians who received didactic and clinical instruction in the use of laparoscopic equipment, and 35 were nurses who learned the techniques of laparoscopic assistance and maintenance of equipment.

During FY'82, this project will continue its operations. There will be conducted in the Philippines a regional training program in laparoscopy for physicians and nurses from Fiji and other Pacific islands. The maintenance center in Manila is directed by the ministry of health, and JHPIEGO will train 2 Thai technicians there during the next fiscal year. Under review will be a proposal for a reproductive health education project (REHEP) for students of the School of Medicine of the University of Philippines in Manila.

THAILAND

PROJECT TITLE: The Standardization of Curriculum in Family Planning for Medical Schools in Thailand

GRANTEE: The National Family Planning Program, in collaboration with the Faculty of Medicine, Chulalongkorn University Hospital and Faculty of Medicine, Siriraj Hospital, Mahidol University.

The purpose of this program was to conduct a 3-day workshop meeting of university officials to discuss and standardize curriculum in family planning in the seven medical schools in Thailand, and to hold a day-long follow-up meeting later in the year to assess the progress in implementation of the workshop's recommendations. The agreement for this program was finalized in FY'81; the workshop and follow-up will be held in FY'82.

Other In-Country Activities

As a follow-up to previous year's training activity in Thailand, a conference was held in January 1981 to evaluate the use of the Laprocator™ in that country.

During FY'82, a microsurgery course will be conducted in Thailand.

U.S. - Based Activities

In addition to training health professionals overseas, during FY'81 JHPIEGO trained 21 physicians and administrators from Asia at the Johns Hopkins Educational Center, in Baltimore. Countries represented were Burma, Fiji, Indonesia, Malaysia, Nepal, Papua New Guinea, the Philippines, Sri Lanki, and Thailand. There were 6 participants in the administrators' course, 6 in the general reproductive health course, 4 in the microsurgery course, 3 in the infertility course, and 2 in the academic skills course.

During FY'82, recruitment in Asia for U.S. courses will be directed toward administrators, in an effort to educate them in the problems of reproductive health so they may coordinate and execute their own program more effectively.

III.C LATIN AMERICA

This region is comprised of countries that are relatively advanced in their policies and orientation toward the fertility management aspects of reproductive health (Colombia, Mexico, El Salvador), countries with a limited orientation (Argentina, Brazil, Chile, Peru), and countries that are transitional. Even in countries where there is limited official authority in the area of fertility management, most institutions and health care providers are able to deliver at least limited service.

For countries actively involved in the reduction of a high rate of population growth, much of JHPIEGO's emphasis is similar to its regional efforts in Asia. In other words, many in-country programs emphasize fertility management, and attempt to systematize approaches through team training and to institutionalize the training of health professionals at all levels. In some countries, therefore, greater emphasis is given to assisting in the development of curricula and of educational materials for existing training activities.

For other countries, JHPIEGO's overall approach is similar to that taken in Africa. Programs are designed specifically to develop a health care infrastructure by training the professionals, such as physicians, nurses, nurse-practitioners, and paramedics, who eventually will staff primary, secondary, and tertiary health care facilities in those countries. Emphasis is given to reproductive health in its broadest sense. U.S.-based training is intended to complement these in-country efforts.

Since its inception, JHPIEGO has trained a total of 1,272 physicians, nurses, and medical and nursing students from Latin America in regional and in-country programs. During FY'81, there were 725 persons trained regionally and in-country. More than half of these trainees, or 393 persons, attended a nonclinical didactic update conference in Mexico. In support of training and other activities, JHPIEGO staff and consultants made 61 trips to 16 Latin American countries.

In-Country Activities

JHPIEGO conducts a number of in-country programs in Latin America and the Caribbean. Clinical practice centers, which provide surgical training in minilaparotomy or laparoscopy, are located in Brazil, Colombia, Costa Rica, the Dominican Republic, Guatemala, Honduras, Jamaica, Mexico, and Panama. French-speaking trainees from the Latin American region may receive clinical practice at JHPIEGO's clinical practice centers in Tunisia. Table IX shows by country the number of health professionals trained at clinical practice centers during FY'81. Maintenance centers, which provide instruction in preventive maintenance and laparoscopic equipment care, are located in Colombia and Costa Rica.

Major training programs are conducted in Brazil, Colombia, and Mexico, and are described below.

BRAZIL

PROJECT TITLE: Brazilian Family Planning Training and Development Center

GRANTEE: Centro de Pesquisas de Assistencia Integrada a Mulher e a Crianca (CPAIMC)

This is a national training program implemented by a private nonprofit organization. Its purpose is to provide continuing education in surgical techniques and fertility management to physicians, nurses, and anesthetists throughout Brazil. During FY'81, the program's second year of operation, 80 physicians, 40 nurses, and 21 anesthetists were trained. Furthermore, there were established 3 new clinical practice centers to support the activities of the program. A national conference held in Rio de Janeiro was attended by 100 physicians and nurses in the field of reproductive health and by the JHPIEGO International Council.

Activities proposed for FY'82 include the training of up to 140 health professionals in the current program, and the establishment of a regionalized physician training program in techniques of minilaparotomy. Continued development at the regional level is needed because of the magnitude of Brazil's area and population.

PROJECT TITLE: Santa Maria Reproductive Health Program

GRANTEE: Santa Maria Institute of Reproductive Health

The purpose of this REHEP project is to train medical students, house officers, and nursing students in the provision of maternal and child health, family planning, and preventive gynecologic services. The team approach to such health care is emphasized. This project, offered in conjunction with programs such as CPAIMC, provides a continuum of training from the level of the student to that of the postgraduate, and is supported in order to increase the impact of reproductive health services. During FY'81, 49 medical students, 13 nursing students, and 1 clinical nurse received instruction. The number of trainees fell short of expected levels, due to a prolonged strike in the medical schools during which instruction was suspended.

During FY'82, it is anticipated that approximately 145 persons will be trained.

Other In-Country Activities

In February and March 1981, JHPIEGO consultant Dr. John Rock assisted in the teaching of a microsurgery course in Sao Paulo.

During FY'82, a REHEP project similar in design to that at Santa Maria will be developed at the Centro de Pesquisa Estades Clovis Salgado (CEPECS), in Belo Horizonte. Once it is operational, this program is expected to train approximately 290 persons annually. Also planned is the establishment of two more REHEP centers, in Porto Alegre and Fortaleza.

COLOMBIA

PROJECT TITLE: Colombian National Program of Pelvic Endoscopy and Surgical Techniques

GRANTEE: PROFAMILIA

This is a national endoscopic training program administered by a private non-profit institution which is the IPPF affiliate in Colombia. Its purpose is to provide

training in endoscopy and surgical techniques to physicians and nursing technicians in Colombia. During FY'81, this program trained 50 physicians and 48 nurses, numbers which, due to unforeseen delays in program implementation, fell short of those originally proposed. The JHPIEGO agreement with PROFAMILIA has been extended to July 1, 1982, in order to complete this training. The activities of this program have been supported technically by the subcenters of the Colombian maintenance center, which is the JHPIEGO-supported ministry of health program for scheduled preventive maintenance.

Plans for FY'82 include the continuation of the surgical techniques program emphasizing fertility management and high-risk obstetrics. Up to 100 physician-nurse teams may be trained by the end of FY'82.

Other In-Country Activities

In February, Dr. John Rock and Dr. Emilio Leontic participated as lecturers at a microsurgery course sponsored by JHPIEGO and the ministry of health. There were 3 attendees from Colombia, 2 from Guatemala, and 1 from Mexico.

During FY'82, JHPIEGO will explore plans for REHEP activity in Colombia. A microsurgery course is planned.

MEXICO

To support the mobilization of key institutions, during FY'81, anesthesiologist-nurse teams from 10 ministry of health hospitals were trained in third-country programs. The 10 anesthesiologists were trained in local anesthesia, while the nurses received instruction in high-volume operating techniques. One physician attended the microsurgery course in Colombia. In addition, JHPIEGO and PROFAM sponsored a didactic update conference which was attended by 393 physicians.

A clinical practice center was operating in Guadalajara.

Other In-Country Activities

During FY'81, several site visits for program development were made by representatives of AID and JHPIEGO, in order to review major training initiatives planned for FY'82. The projects planned are described below.

1. Fertility Management Education - A Special Course for Mexican Medical Schools

   The first-year objective of this project is to train in the techniques of fertility management up to 5,000 students from 28 medical schools. It is anticipated that over the next 3 years, the grantee, the Association of Mexican Medical Schools (AMFEM), will conduct training in all 55 schools of medicine.

2. Mexican Urban Clinic Physicians' Program

   The objectives of this program are twofold. The first objective is to implement the training of 120 Mexican physicians from small clinics or hospitals, which is to be directed by the National Family Planning Coordinating Council of Mexico (the Coordinacion) and sponsored by the grantee, the Institute for Family Planning Development and Research (DIPLAF). The second objective is to assist the Coordinacion in the dissemination of family planning literature and supplies to approximately 5,000 physicians in 32 major urban districts.

U.S.-Based Activities

In addition to training health professionals abroad, during FY'81 JHPIEGO trained 129 physicians and administrators from Latin America at the Johns Hopkins Educational Center, in Baltimore. The countries represented were Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, French Guiana, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Panama,

Peru, St. Lucia, Uruguay, and, for the first time, Guadeloupe, and French Guiana. There were 48 participants in the general reproductive health course, 44 in the administrators' course, 30 in the infertility course, 4 in the microsurgery course, and 3 in the academic skills course.

III.D NEAR EAST

The Near East represents a challenge for JHPIEGO in terms of the establishment of training centers for education in reproductive health and the improvement of service delivery in the same field. Most countries here have the Islamic faith. However, there is great variation in the interpretation of the Koran with respect to the acceptability of fertility management practices and the limitation of population growth. Some countries (Tunisia, Turkey) are or have been liberalizing policies in the area of reproductive health, other countries (Algeria, Egypt, Morocco) are transitional, and still others are quite restrictive. Most countries in this region already have established health infrastructures, but in many instances their management is inefficient, so the delivery of services, particularly to rural areas, is hampered.

JHPIEGO's approach in this region is multifaceted. For countries having a significant number of specialists in obstetrics and gynecology or surgery, considerable importance is given to reproductive health education, including training in endoscopy. The use of endoscopy is particularly appropriate in this region, for a high proportion of women here are obese (a factor which limits the ability of a surgeon to perform mini-laparotomy), and this technique may be used for diagnostic purposes as well as for surgical contraception. The introduction of reproductive health education in the medical schools also is a major activity. It represents an effort to present the subject matter "prospectively," at the undergraduate level, rather than "retrospectively," at the usual postgraduate level. Also, in an effort to encourage professionals from other countries, not only from the region, but also from the African continent, certain educational facilities in Egypt, Morocco, and Tunisia are and will continue to be utilized as regional training centers. Finally, since the number of physicians available to provide services in reproductive health is frequently limited, particularly in rural areas, JHPIEGO provides nurse/paramedic training, in an effort to improve services.

Since its inception, JHPIEGO has trained a total of 803 physicians, nurses and administrators from the Near East in regional and in-country programs. During FY'81, there were 263 persons trained regionally and nationally, or approximately two and one-half times more than in the previous year. In support of this training and other activities, JHPIEGO staff and consultants made 28 trips to 7 countries in the Near East. Not reflected in these figures are the consultants' visits arranged by project directors of in-country programs.

In-Country Activities

JHPIEGO conducts a number of in-country programs in the Near East. Clinical practice centers, which provide surgical training in minilaparotomy or laparoscopy, are located in Egypt, Tunisia, and Turkey. Table IX shows by country the number of health professionals trained at clinical practice centers during FY'81. A maintenance center, which provides instruction in preventive maintenance and laparoscopic equipment care, was in the process of being established in Turkey.

Major training programs are conducted in Egypt, Morocco, Tunisia, and Turkey, and are described below.

EGYPT

PROJECT TITLE: Reproductive Health Training Center, Al Azhar University

GRANTEE: International Islamic Center for Population Studies and Research, Al Azhar University

The objective of this 3-year program is to improve maternal and child health and welfare in Egypt and in other African, Asian, and Arab countries, through the training of physicians and supporting nursing personnel in modern aspects of reproductive health and in endoscopy. During FY'81, 42 physicians from Egypt, Somalia, and Sudan attended a 10-day didactic and 5-day clinical practice course in Cairo. A 5-day course in reproductive health and maintenance of equipment was attended by 20 nurses. Field visits to 20 trainees were completed, and laparoscopic equipment was installed.

It is expected that training in this in-country program will continue in FY'82.

PROJECT TITLE: Shatby University Hospital, Human Reproduction Training Center

GRANTEE: Department of Obstetrics and Gynecology, Shatby University Hospital, Alexandria University

This project is intended to teach physicians and paramedical personnel the current concepts of human reproduction, in order for them to participate more effectively in national programs for the improvement of maternal and child health. During FY'81, 42 physicians, including 7 non-Egyptians, attended 5 courses offered for physicians, and 50 nurses, including 8 non-Egyptians, attended the 5 courses offered for nurses.

During FY'82, this program will continue and will be expanded to include a follow-up conference to assess the results of training.

MOROCCO

PROJECT TITLE: Moroccan National Educational Program: Reproductive Health, Endoscopy and Laparoscopy

GRANTEE: Ministry of Public Health

The purpose of this program is to provide didactic and clinical training in techniques of reproductive health to qualified obstetricians and gynecologists, surgeons, nurses, and nurse-midwives. Instruction includes diagnostic and therapeutic laparoscopy, reproductive health care, and management of fertility and infertility. During FY'81, 11 Moroccan nurses and nurse-midwives attended a three-week workshop in reproductive health which provided clinical practice in family planning techniques. Further delays in the opening of the National Training Center, in Rabat, prevented the offering of courses for obstetric and gynecologic surgeons, operating-theater nurses, and nurse-midwives providing family planning services. It is anticipated that this training center will be operational in 1982.

JHPIEGO expects to renew its agreement with Morocco's Ministry of Health, with programs scheduled for FY'82, as follows: 4 courses each for physicians (reproductive health, laparoscopy), operating-theater nurses, and nurse/nurse-midwives.

TUNISIA

PROJECT TITLE: Tunisian National Education Program in Reproductive Health, Endoscopy, and Laparoscopy

GRANTEE: National Office for Family Planning and Population (ONPFP), Ministry of Health

The purpose of this educational program is to provide didactic and clinical training in techniques of reproductive health to qualified obstetricians and gynecologists or surgeons and nurses. The tenth and final physicians' training course was held in April 1981. During FY'81, training was provided to 20 physicians from Tunisia and 17 Francophone physicians from Algeria, Benin, Cameroon, Haiti, Ivory Coast, Mali, Madagascar, Martinique, Mauritania, Niger, Upper Volta, and Zaire. Three courses for nurses who assist with laparoscopic procedures provided training to 21 persons from Tunisia and 16 nurses from other Francophone countries of Africa and the Caribbean.

During FY'82, it is anticipated that a new agreement will be initiated to continue the training of physicians and nurses and to implement training for anesthesiologists, with an emphasis on integrating such training into the curricula of the medical schools in Tunis, Sfax, and Sousse.

TURKEY

PROJECT TITLE: Turkish National Endoscopy Program: A Program for Obstetricians and Gynecologists and Nurses

GRANTEE: General Directorate of Population and Planning, Ministry of Health

The purpose of this project is the support of a 3-year in-country program for the training of government obstetricians, gynecologists, nurses, and technicians in techniques related to reproductive health. During FY'81, field visits were completed for the 28 physicians trained during the previous year. Sixty nurses received didactic and clinical training in the delivery of endoscopic services and the care and maintenance of endoscopic equipment. An additional 13 nurses attended an update course in reproductive health. In March 1981, a coordinating meeting for physicians and administrators was held in Ankara, to discuss the training program and various aspects of laparoscopic activity in Turkey. This meeting was attended by a JHPIEGO regional development officer.

It is anticipated that during FY'82, support for this program will be continued, and that approximately 40 physicians and 80 nurses will be trained in the regional programs.

U.S.-Based Activities

In addition to training health professionals abroad, during FY'81 JHPIEGO provided instruction to 31 physicians and administrators from the Near East at the Johns Hopkins Educational Center, in Baltimore. The countries represented were Egypt, Jordan, Morocco, Portugal, Spain, Tunisia, Turkey, Yemen Arab Republic, and, for the first time, Greece. There were 15 participants in the infertility course, 6 in the administrators' course, 5 in the general reproductive health course, 3 in the microsurgery course, and 2 in the academic skills course.

IV. CHANGES IN ORGANIZATION AND OPERATION

A number of organizational and operational changes were made by JHPIEGO during the reporting period. These changes were carried out in order to enhance efficiency of operations.

In February, JHPIEGO's operating divisions moved from Hampton House, at 624 North Broadway, to 550 North Broadway. The move to the entire 6th floor of that building allowed JHPIEGO to consolidate its administrative offices in one location, whereas previously, the offices had been located on the 4th and 8th floors of Hampton House. The JHPIEGO International Training Center and the library remain at Hampton House to be in close proximity to the Johns Hopkins Educational Center.

The educational materials unit assumed responsibility for the editing and production of all JHPIEGO publications, including JHPIEGO-produced educational materials and the annual report. The unit now provides in-house translations and editing in French and Spanish. The integration of these functions into the educational materials unit has enabled JHPIEGO to realize a cost savings and improve the quality and consistency of JPHIEGO publications, since many of the functions were formerly performed by outside consultants.

The information and evaluation services unit (IES) was created from the former history and evaluation unit and central records. Through a sophisticated computerized data base, the unit maintains a mailing list, program information on JPHIEGO trainees, on institutions reached, and on equipment, as well as evaluation data compiled from surveys. Computer programs are available to tabulate data, and software packages have been developed to facilitate listing of information. This system has allowed prompt retrieval of data, and has thereby improved program monitoring and evaluation.

Through IES, JHPIEGO has been abie to generate the following data:

- A directory of JHPIEGO trainees by institution, to be updated on a regular basis,
- A directory of medical schools throughout the world,
- A list of trainees by agreement number and training date, to facilitate the monitoring of incoming documentation on in-country programs, and
- A compilation of basic demographic data on every country with which JHPIEGO has had contact through a trainee (over 100 developing countries) to provide a tool for evaluating program strategies, and
- A manual on the organization and use of the newly reorganized central files.

A computerized equipment distribution list by institution was being compiled for the first time, and will be updated quarterly. Biodata from trainee application forms have been computerized, in order to systematically extract pertinent biographical and institutional information on JHPIEGO trainees.

During FY'81, JHPIEGO refined its system of monitoring budget expenditures and compliance with the program requirements for each agreement into which JHPIEGO enters. A monthly budget and fiscal status report format was developed to provide a summary of cumulative expenditures against monies obligated for the duration of the budget of each agreement. It provides a uniform system of monitoring the financial status of all country agreements. Also developed was a monthly agreement status report, which is a companion to the report mentioned above. It sets forth the performance objectives specified in each agreement and records the progress made in meeting these objectives. The agreement status report, which is prepared by the grants unit, tracks proposed and actual training activities, the shipment of equipment and educational materials in support of training, and receipt of the

documentation and reports that are conditions of each agreement. Together, these new monthly reports provide regional development officers and the director of JHPIEGO with a total updated picture of activity under each country agreement.

V. FISCAL REPORT

RECAP A

AID pha-G-1064 and DSPE CA-0083

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Central Costs	$6,076,425	$1,589,625	$2,080,000	$9,746,050
Planning/Development		277,331	354,066	631,397
Equipment Costs	7,636,597	1,759,214	1,190,506	10,586,317
Training Costs	8,756,422	2,615,124	5,490,659	16,862,205
TOTAL	$22,469,444	$6,241,294	$9,115,231	$37,825,969

RECAP B

AID pha-G-1064 and DSPE CA-0083

Central Costs

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Salaries	$2,868,961	$848,062	$1,066,780	$4,783,803
Fringe Benefits	463,640	158,209	213,356	835,205
Consultants	108,094	5,488		113,582
Supplies	211,122	53,524	52,000	316,646
Travel	693,937	12,729	10,000	716,666
Office Equipment	57,552	20,390	10,000	87,942
Telecommunications	353,666	138,189	150,000	641,855
Space Cost	151,923	94,209	110,000	356,132
Audit Fees	5,518		140,426	145,944
Conference Cost	61,310	2,961		64,271
Other Direct	232,725	62,076	72,000	366,801
Indirect Cost	867,977	193,788	255,438	1,317,203
TOTAL	$6,076,425	$1,589,625	$2,080,000	$9,746,050

RECAP C

AID pha-G-1064 and DSPE-CA-0083

Planning and Development

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-81/ 9-30-82	Proj. Disbursement & Unliquidated Obligations 10-1-81/9-30-82	TOTALS
Consultant		$9,500	$11,000	$20,500
Travel		176,788	234,000	410,788
Conference Cost		9,458	13,584	23,042
Other Direct		47,510	52,000	99,510
Indirect Cost		34,075	43,482	77,557
TOTAL		$277,331	$354,066	$631,397

RECAP D

AID pha-G-1064 and DSPE-CA-0083

Equipment Costs

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-81/ 9-30-82	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Procurement	$6,936,753	$1,596,640	$1,026,628	$9,560,021
Repairs	168,377	47,907	52,462	268,746
Freight	279,823	49,477	53,085	382,385
Warehousing	173,914	51,427	41,324	266,665
Indirect Cost	77,730	13,763	17,007	108,500
TOTAL	$7,636,597	$1,759,214	$1,190,506	$10,586,317

RECAP E

AID pha-G-1064 and DSPE CA-0083

Training Costs

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Participant Costs	$1,757,653	$817,377	$800,000	$3,375,030
Field Training	525,393	127,607	156,000	809,000
Educational Mtls.	247,793	220,201	411,887	879,881
Maint. Agreements	26,690	9,233	75,894	111,817
Natl./Regional Pgrms.	882,817	848,886	2,557,522	4,289,225
Clinical Practice	166,121	115,283	53,650	335,054
U.S. Trng. Cntrs.	5,021,702	266,454	1,002,580	6,290,736
Direct Support	128,253	207,184	410,794	746,231
Special Projects		2,899	22,332	25,231
TOTAL	$8,756,422	$2,615,124	$5,490,659	$16,862,205

RECAP F

AID Grant pha-G-1064

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Unliquidated Obligations as of 8-31-80	TOTAL
Central Costs	$6,076,425	$76,129		$6,152,554
Equipment Costs	7,636,597	$1,493,977	$6,324	9,136,898
Training Costs	8,741,617	1,136,377	130,124	10,008,118
TOTAL	$22,454,639	$2,706,483	$136,448	$25,297,570

RECAP G

AID Grant pha-G-1064

Central Costs

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Unliquidated Obligations as of 8-31-80	TOTAL
Salaries	$2,868,961	$276		$2,869,237
Fringe Benefits	463,640	51		463,691
Consultants	108,094	5,488		113,582
Supplies	211,122	13,607		224,729
Travel	693,937	6,504		700,441
Office Equipment	57,552	12,855		70,407
Telecommunications	353,666	15,938		369,604
Space Costs	151,923			151,923
Audit Fees	5,518			5,518
Conference Cost	61,310	2,961		64,271
Other Direct	232,725	9,715		242,440
Indirect Cost	867,977	8,734		876,711
TOTAL	$6,076,425	$76,129		$6,152,554

RECAP H

AID Grant pha-G-1064

Equipment Costs

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Unliquidated Obligations as of 8-31-80	TOTAL
Procurement	$6,936,753	$1,429,101	$3,471	$8,369,325
Repairs	168,377	32,563	2,503	203,443
Freight	279,823	12,609		292,432
Warehousing	173,914	13,251		187,165
Indirect Cost	77,730	6,453	350	84,533
TOTAL	$7,636,597	$1,493,977	$6,324	$9,136,898

RECAP I

AID GRANT pha-G-1064

Training Costs

	Disbursements 7-1-74 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Unliquidated Obligated as of 8-31-80	TOTAL
Participant Costs	$1,757,653	$ 47,643		$1,805,296
Field Training	525,393	54,143		579,536
Educational Matls.	247,793	74,087		321,880
Maint. Agreements	26,690	(197)		26,493
Natl./Regional Pgms.	882,817	426,931	$110,124	1,419,872
Clinical Practice	151,316	71,738		223,054
U.S. Trng. Centers	5,021,702	266,454	20,000	5,308,156
Direct Support	128,253	195,578		323,831
TOTAL	$8,741,617	$1,136,377	$130,124	$10,008,118

RECAP J

DSPE CA-0083

	Disbursements 9-1-80 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Central Costs		$1,513,496	$2,080,000	$3,593,496
Planning/Development		277,331	354,066	631,397
Equipment Costs		265,237	1,184,182	1,449,419
Training Costs	14,805	1,478,747	5,360,535	6,854,087
TOTAL	$14,805	$3,534,811	$8,978,783	$12,528,399

RECAP K

DSPE CA-0083

Central Costs

	Disbursements 9-1-80 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Salaries		$847,786	$1,066,780	$1,914,566
Fringe Benefits		158,158	213,356	371,514
Supplies		39,917	52,000	91,917
Travel		6,225	10,000	16,225
Office Equipment		7,535	10,000	17,535
Telecommunications		122,251	150,000	272,251
Space Costs		94,209	110,000	204,209
Audit Fees			140,426	140,426
Other Direct		52,361	72,000	124,361
Indirect Cost		185,054	255,438	440,492
TOTAL		$1,513,496	$2,080,000	$3,593,496

RECAP L

DSPE CA-0083

Planning/Development

	Disbursements 9-1-80 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Consultant		$9,500	$11,000	$20,500
Travel		176,788	234,000	410,788
Conference Cost		9,458	13,584	23,042
Other Direct		47,510	52,000	99,510
Indirect Cost		34,075	43,482	77,557
TOTAL		$277,331	$354,066	$631,397

RECAP M

DSPE CA-0083

Training Costs

	Disbursements 9-1-80 thru 9-30-80	Disbursements 10-1-80/ 9-30-81	Proj. Disbursements & Unliquidated Obligations 10-1-81/9-30-82	TOTAL
Participant Costs		$769,734	$800,000	$1,569,734
Field Training		73,464	156,000	229,464
Educational Materials		146,114	411,887	558,001
Maintenance Agreements		9,430	75,894	85,324
Natl./Regional Programs		421,955	2,447,398	2,869,353
Clinical Practice	$14,805	43,545	53,650	112,000
U.S. Trng. Cntr.			982,580	982,580
Direct Support		11,606	410,794	422,400
Special Projects		2,899	22,332	25,231
TOTAL	$14,805	$1,478,747	$5,360,535	$6,854,087

APPENDIX

JHPIEGO

Meeting of the International Council of the Johns Hopkins Program for International Education in Gynecology and Obstetrics

RIO PALACE HOTEL
AVENIDA ATLANTICA 4-240 COPACABANA
RIO DE JANEIRO, BRAZIL

MARCH 16, 1981 TO MARCH 20, 1981

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INTRODUCTION

This booklet summarizes some of the presentations, discussions, and recommendations made at the JHPIEGO International Council Meeting held in March 1981, in Rio de Janeiro. The summaries are based on materials available and on brief notes taken during discussions. Obviously, therefore, this booklet does not do justice to all the fine presentations made during the meeting. The information in this booklet is intended only as a source of reference to JHPIEGO staff and other interested parties who were not present at the deliberations. We apologize in advance for any inaccuracies.

Ronald T. Burkman, M.D.
Director, JHPIEGO

Marilyn T. Hirsch
Editor, JHPIEGO

PARTICIPANTS

THE INTERNATIONAL COUNCIL

Dr. Helio Aguinaga
President CPAIMC
(Family Planning Health & Research Center)
Avenida Presidente Vargas, 2863
Rio de Janeiro, R.J. Brazil

Dr. Tahar Alaoui
Professor Obstetrics and Gynecology
University of Mohamed V
Director of Technical Services
Ministry of Health
Rabat, Morocco

Mme. Souad Chater
President/Secretary General
ONPFP (Office of Family Planning
and Population)
BP55 - Belvedere Tunis
Tunisia

Professor M.F. Fathalla
Department of Obstetrics and Gynecology
Dean Faculty of Medicine
Assiut University
Assiut, Egypt

Mrs. Laurice V. Hunter-Scott
Principal Nursing Officer
Ministry of Health and Social Security
10 Caledonia Ave., Kingston 5, Jamaica
(Mailing Address: 6 Carlisle Avenue
Kingston 8, Jamaica)

Professor T.P. Jain
Head Department of Prevention and
Social Medicine
S.M.S. Medical School
Jaipur, India 302004

Dr. Suporn Koetsawang
Professor, Department Obstetrics
and Gynecology
Mahidol University Faculty of Medicine
Director Family Planning Research Unit
Siriraj Hospital
Bangkok, Thailand

Dr. Oladapo Alabi Ladipo
Senior Lecturer
Consultant Obstetrician and Gynecologist
Univerity College Hospital
Ibadan, Nigeria

Dr. Jorge Martinez-Manautou
Chief of Family Planning Services
Instituto Mexicano Del Seguro Social
Reforma 506, Piso 12
Mexico 6, D.F., Mexico

Dr. J.K.G. Mati
Professor and Chairman
University of Nairobi
Nairobi, Kenya

Dr. Carlos Munoz
Consultant to the President of
Peru in Population Matters
Professor Cayetano Heredia University
Avenida San Felipe 652
Lima, Peru

Dr. Boniface T. Nasah
Associate Professor and Chief
of Obstetrics and Gynecology
CUSS
University Center for Health Sciences
University of Yaounde
P.O. Box 1364
Yaounde, The Cameroon

Dr. Virgilio Oblepias
Director Fertility Care Center
Mary Johnston Hospital
Tondo, Metro Manila
The Philippines 3117

Dr. Fernando Tamayo
President PROFAMILIA
Calle 34 No. 14-52
Bogota, Colombia

ADVISOR

Dr. Leo Dunn
Professor and Chairman
Department of Obstetrics and Gynecology
Medical College of Virginia
MCV Station Richmond, Virginia 23298

AID REPRESENTATIVE

Dr. Andrew T. Wiley
Project Monitor
Office of Population
Agency for International Development
c/o Department of State
Washington, D.C. 20523

AGENDA OF THE INTERNATIONAL COUNCIL MEETING OF JHPIEGO

Monday, March 16, 1981

Arrival of International Council Members

8:00 p.m.	Welcoming Reception and Buffet Dinner (JHPIEGO Board of Trustees and International Council)	

Tuesday, March 17, 1981

JHPIEGO International Council

9:00-9:15	Opening Remarks	Dr. Theodore M. King, President Dr. Ronald T. Burkman, Director
9:15-9:45	Review of Meeting Plan and Brief Report on JHPIEGO Activities	Dr. Ronald T. Burkman, Director
9:45-10:00	Coffee Break	
10:00-12:30	Reports by Established International Council Members on Previous Year's Activities and Trends in Reproductive Health in their Country	
	Dr. S. Koetsawang-Thailand Dr. Martinez-Manautou-Mexico Dr. Oblepias-Philippines Dr. Jain-India	Dr. Mati-Kenya Dr. Alaoui-Morocco Dr. Fathalla-Egypt Dr. Ladipo-Nigeria
12:30-2:00	Lunch	

Joint Meeting of JHPIEGO International Council and CPAIMC Meeting

2:00-2:30	The Social Debt and Family Planning	Dr. Rubem Vaz da Costa
2:30-3:00	Women's Rights and Family Planning	Senator Eunice Michillis
3:00-3:15	Coffee Break	
3:15-3:45	Child Welfare and Family Planning	Judge Siqueira
3;45-4:15	Discussion Period	
4:15-4:45	Family Planning in Brazil: Past, Present, and Future	Dr. Helio Aguinaga
4:45-5:15	Medical Student Education in Human Reproduction	Dr. Ronald Bossemayer
5:15-5:45	Graduate Medical Education in Human Reproduction	Dr. Alberto Henrique Rocha
5:45-6:15	Discussion Period	
9:00	Combined Banquet - CPAIMC Meeting and JHPIEGO International Council	

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Wednesday, March 18, 1981

9:00-12:00	Site Visit Program (JHPIEGO Board of Trustees and International Council) Visit to CPAIMC, including ambulatory service unit, family planning clinic, infirmary, and interview areas	
12:00-2:00	Lunch	
3:00-5:30	CPAIMC Meeting (Participation by selected JHPIEGO Staff and International Council Members) A Selected Review of Reproductive Health Program and Priorities in Brazil and Latin America	
3:30-3:45	Coffee Break	
3:45-4:30	Peru-Reproductive Health Needs and Program Development	Dr. Carlos Munoz
4:30-5:15	Film and Educational Material Display	
5:15-6:00	Discussion Period	

Thursday, March 19, 1981

JHPIEGO International Council
The Expanded Team Approach to Reproductive Health Education

9:00-9:25	Review of REHEP Concept (Santa Maria Project)	Dr. Hugh Davis
9:20-9:40	Review of Somalia Training Program	Mr. Wilbur J. Wallace
9:40-10:00	Assignment of Study Groups and Tasks	Dr. Ronald T. Burkman
10:00-11:15	Statements by New Council Members on Reproducive Health Objectives in their Respective Countries	Mme Souad Chater-Tunisia Dr. Boniface T. Nasah-The Cameroon Mrs. Laurice V. Hunter-Scott-Jamaica Dr. Carlos Munoz-Peru
11:15-12:30	Study Groups Assessing Various Approaches and Needs for Reproductive Health Education	

1. Curricular needs and the role of research and clinical training
2. Undergraduate medical student education in reproduction health
3. Indigenous health workers and Dai education in reproductive health
4. Nurse and paramedic education in reproductive health

12:30-2:00	Lunch
2:00-3:30	Further meeting of study groups and formulation of recommendations
3:30-3:45	Coffee Break
3:45-5:30	Recommendations of International Council Members to JHPIEGO
5:30-6:00	Close of JHPIEGO International Council Meeting

Friday, March 20, 1981

9:00-12:00	Review Meeting with CPAIMC Officers

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HIGHLIGHT STATEMENTS FROM THE JOINT MEETING OF THE JHPIEGO INTERNATIONAL COUNCIL AND CPAIMC

HIGHLIGHT STATEMENTS FROM THE JOINT MEETING OF THE JHPIEGO INTERNATIONAL COUNCIL AND CPAIMC

A number of papers presented at the CPAIMC meeting highlighted some of the problems in reproductive health in Brazil. Provided below is a synopsis of some of the statements and problems highlighted by the speakers.

Dr. Rubem Vaz da Costa indicated that the fact of Brazil's having a large population, particularly of rural and urban poor, has led to increased requirements for health care resources. He stressed that this situation is exceedingly difficult to manage, since the current economic situation in Brazil is one of ever-increasing inflation.

Senator Eunice Michillis indicated that women must become increasingly aware of their own rights. It is through women's awareness of both their needs and rights that family planning will become an integral part of all health care programs. Furthermore, she stated that the gaining of economic as well as reproductive freedom by women will probably play a major role in the promotion of reproductive health and fertility management in Brazil.

Judge Siqueira outlined the nature of the problems associated with the children of the poor in Brazil. For example, out of a population of 120 million, there are 28 million needy minors. Sixty percent of Brazilian children are estimated to go to bed hungry every night, even though Brazil is the sixth largest country in the world. Seven million children are out of school, 5 million families live below the poverty line. In fact, 46% of the inhabitants of the city of Sao Paulo live below the poverty line. He stated that it has even been suggested there over 18 million children in Brazil who have been either abandoned or neglected. Improved family planning to prevent the birth of unwanted children is one approach that must be used to address this major social problem.

Dr. Helio Aguinaga, President of CPAIMC, discussed the overall status of family planning in Brazil. He presented a historical review of the current trend toward approval on a national level of some type of family planning policy. He stated that family planning is now accepted by the government at least for reasons of health, and is available to varying extents in all states. There are two major factors, however, that are hindering the further expansion of services and the legalization of procedures: uncertainty about the outcome of the 1982 elections and renewed, significant opposition from the Roman Catholic Church.

Dr. Ronald Bossemeyer of Santa Maria University discussed his concept of reproductive health education. At present, most reproductive health education in medical or nursing schools is very compartmentalized, and varies from school to school. Dr. Bossemeyer stated that the concomitant training of nursing and medical students in a unified curriculum of maternal and child health is of great importance, since these individuals will be called on to work closely together in later professional life. The objectives of Dr. Bossemeyer's approach are to motivate students, emphasize the team approach, stress the importance of preventive health, prepare students for professional careers, furnish services, improve the curriculum of his and other institutions, respond to demands, and ultimately, of course, to lower the high morbidity and mortality experienced by women and infants in certain areas of Brazil.

Dr. Alberto Rocha discussed graduate medical education in Brazil, stressing the need not only to provide detailed technical discussions and material relative to family planning and reproductive health, but also to motivate graduate health professionals to provide services in this field. He indicated that the provision of postgraduate educationai experience, such as that supported by JHPIEGO, was useful in the attainment of some of these goals.

Dr. Coutinho discussed some of the research being carried out in Brazil in regard to contraception. His presentation outlined the dearth of understanding that exists in the field regarding oral contraception. He emphasized the need to continue seeking improved methods of fertility management, since currently there is no ideal approach.

REPORTS BY ESTABLISHED COUNCIL MEMBERS OF PREVIOUS YEAR'S ACTIVITIES AND TRENDS IN REPRODUCTIVE HEALTH

THAILAND

DR. SUPORN KOETSAWANG

Thailand, a small kingdom in southeast Asia, occupies about 200,000 square miles. The Thai people are predominantly Buddhist. Though the country has become rapidly industrialized, Thailand remains primarily agricultural. The Thai language is spoken all over the country, except in a few Moslem provinces in the South. The present population figures are shown in Table I.

Table I THAI POPULATION STATISTICS, 1980

Area	200,000 square miles
Population	46 millions
Married women of reproductive age	5.9 million
Birth rate	29
Death rate	8
Growth rate	2.1%

(Source: Research and Evaluation Unit, National Family Planning Program)

The first Thailand population census, carried out 70 years ago, showed a population of only 8 million. After the Second World War, Thailand experienced the problem of rapid population growth, due mainly to the great improvement in the public health service and the governmental policy of pronatalism.

Before the introduction of the family planning program, postpartum female sterilization, which has been popular for over 40 years, was virtually the only method used for family planning. Temporary methods, such as the condom, vaginal diaphragm and vaginal spermicides were prescribed in only a few hospitals and clinics. Also, some native drugs were used, mostly to induce menstruation. These had doubtful results.

The acceleration of family planning began in 1964, and the Thai government declared an official population policy in 1970. The National Family Planning Program (NFPP), of the Ministry of Public Health has been responsible for voluntary family planning services. At the time of its inception, the growth rate of the Thai population was 3.3%, one of the highest.

The National Family Planning Program was included in the third Five-Year National Economic and Social Development Plan (1972-1976). The Plan's objective was to reduce the growth rate from 3.3% to 2.5% by the end of 1976. The fourth Five-Year National Economic and Social Development Plan was to reduce the growth rate to 2.1% by the end of 1981 - (Table II). A Thai-U.S. evaluation team showed that NFPP had achieved its target. By the end of 1976, the growth rate had reached 2.55%.(1) The target of a growth rate of 2.1% by the end of 1981 had been already reached by 1978.(2)

The success of the family planning program in Thailand was due mainly to increasing the family planning budget, expanding research, training, and services in family planning, and improving coordination among all governmental and private family planning agencies.

Table II THAI NATIONAL FAMILY PLANNING POLICY

Population Policy Initiated in 1970
Five-Year National Economic and Social Development Plan

1971 - 1976 To reduce growth rate to 2.5%
1977 - 1981 To reduce growth rate to 2.1%
1982 - 1986 To reduce growth rate to 1.5%

New acceptors of different contraceptive methods since 1965 are shown in Table III. The percentage of new IUD acceptors has decreased from 35% in 1965 to 7.4% in 1980, while the percentage of new pill acceptors remains almost unchanged. The percentage of new injectable acceptors increased considerably. The new acceptors of sterilization also increased significantly.

Table III NEW FAMILY PLANNING ACCEPTORS (percentage of total)*

Year	Total Number	IUD	Pill	Injectable	Sterilization
1965-1971	953525	35.1	53.0	0.7	11.0
1972	456694	19.7	71.1	1.4	7.2
1973	422176	22.1	63.6	2.5	11.8
1974	494479	18.2	61.7	3.9	16.3
1975	535023	14.0	64.5	4.6	16.9
1976	627239	11.5	60.1	11.7	16.8
1977	758212	9.9	64.5	9.1	16.6
1978	890773	8.7	62.6	9.7	18.9
1979	984590	7.9	62.4	12.0	17.7
1980**	977427	7.4	61.7	14.0	16.9

*Figures exclude conventional methods, such as condom and vaginal spermicides.

**Figures for 1980 include January to November, 1980. (Source: Research and Evaluation Unit, National Family Planning Program)

There was a substantial increase in both male and female sterilization acceptors, especially male acceptors. The rate of female to male sterilization changed from 24:1 to 3:1 in 1978 and 5:1 in 1980 (Table IV).

Table IV RATIO OF FEMALE TO MALE STERILIZATION

Year	Female Sterilization	Vasectomy	Ratio Male:Female
1972	31,386	1,282	24:1
1973	46,804	2,802	17:1
1974	73,702	6,780	11:1
1975	82,650	7,534	11:1
1976	95,131	10,150	9:1
1977	106,816	19,123	6:1
1979	138,732	35,300	4:1
1980*	137,456	27,944	5:1

*Figures for 1980 include January to November, 1980

(Source: Research and Evaluation Unit, National Family Planning Program)

The objective of the next Five-Year National Economic and Social Development Plan (1982-1986) is to reduce the growth rate to 1.5% by the end of 1986. Difficulties anticipated during this period stem from the fact that there are still some outlying areas to be covered, and that certain population groups are still not receptive to family planning.

With regard to preparing physicians for the health care and family planning services, the seven medical schools in Thailand are now graduating approximately 700 doctors annually. It is now compulsory that newly graduated doctors serve the government by working in a small district hospital for at least three years before they can return to the medical institute for further specialized training. With the help of JHPIEGO, the Ministry of Public Health will hold a workshop in August or September 1981, to standardize the family planning curriculum in all medical schools. It is expected that newly graduated doctors will be able to deliver family planning services effectively.

Though the annual production of doctors will increase gradually, the shortage of doctors in rural areas is still apparent. To solve this problem, the Ministry of Public Helath, in collaboration with the medical schools, initiated a number of projects to train nurses and paramedical personnel for specific family planning services, such as IUD insertion, minilaparotomy, and vasectomy. The success of such projects will lead to the use of specially trained nurses and paramedical personnel to substitute for physicians in certain areas.

With regard to contraceptive methods, NFPP is now concentrating on permanent contraception. Advanced techniques are being studied to complement the techniques already in existence. In 1980, with the help of JHPIEGO, a Laprocator™ evaluation and training program was initiated by the NFPP in collaboration with two medical schools: the Faculty of Medicine of Siriraj Hospital, Mahidol University, and the Faculty of Medicine of Chulalongkorn University. Over 60 physicians from provincial hospitals were trained.

At present, the trainees are actively performing Laprocator™ ring sterilizations. Many of them have already produced second generation trainees. Up to March 14, 1981, 1,607 operative records had been sent back to our unit for analysis. The results so far are satisfactory. This training project may be extended in 1982.

Education and Motivation

Luckily, the majority of Thai are either self-motivated or easily motivated to accept family planning, as well as other health care. Certain religious groups, however, are quite difficult to motivate because of fixed, traditional beliefs or for political reasons.

It is hoped that, if added to the secondary school curriculum, sex education, or the more acceptable term, "Family Life Education", will improve motivation of the younger generation and will also reduce the number of premarital pregnancies. In Bangkok, the teachers responsible for family life education in the secondary schools and high schools have already been educated in a one-week, intensive training course, held five times yearly from 1978 through 1980 at the Faculty of Medicine of Siriraj Hospital. In other provinces, however, there is still a shortage of appropriate teachers for this "sensitive" subject. JHPIEGO is helping to plan a course for trainers (physicians and school health nurses) of teachers of family life education.

To reach the growth rate of 1.5% by the end of 1986, it is certain that all government and non-governmental agencies will have to work closely and tirelessly.

REFERENCES

1. Report of the Second Evaluation of the National Family Planning Program in Thailand, American Public Health Association, 1977.

2. Thailand National Family Planning Program Evaluation, American Public Health Association, 1979.

MEXICO

DR. JORGE MARTINEZ-MANAUTOU

For almost a decade, those interested in the demographic phenomena of Mexico had observed that the balance was changing between births, which remained high, and mortality, which was substantially decreasing. This on-going situation had caused, over the course of time, a lack of balance between Mexico's demographic growth and its economic development.

It became necessary then to restrain this demographic growth. To that end, the government made political decisions to make the laws involved more appropriate and to establish a plan which would determine short-, medium-, and long-term goals leading to the attainment of a congruent relationship between population growth and the country's resources.

GENERAL PANORAMA IN 1976

In 1976, when the present Public Administration was inaugurated, Mexico's situation, with an estimated population of 62 million inhabitants, could be summarized as follows:

- Annual births (per 1,000 inhabitants): 40
- Annual mortality (per 1,000 inhabitants): 8
- Annual population growth: 3.2%
- Global fertility rate: 5.42 children

During the 1970-1976 presidential administration, the Health and Social Security Institutions progressively implemented family planning services, concentrating their actions primarily in the urban environment, in programs basically oriented to satisfy demand.

In October 1977, when the National Family Planning Program was approved, a very ambitious, short-term goal was defined by this program. This goal was to reduce the estimated demographic growth rate of 3.2% in 1976 to 2.5% in 1982, or by the end of the present Public Administration.

Reducing this growth by seven-tenths in six years would mean that 8,400,000 women would join the program as service users, that is, 1,002,000 women per each tenth of the population growth reduction. According to most national and international experts' opinions, this would hardly be possible in such a short time.

Today, four years later, we wish to submit for your consideration the results of the last survey, conducted in 1979, and its projections for 1980 and 1981.

RESULTS

The achievements realized, according to the 1979 survey, can be summarized by the following data:

The global fertility rate, that is, the average number of children a woman would have by the end of her reproductive life, decreased from 5.42 children in 1976 to 4.63 in 1979.

The annual population growth was reduced to 2.7% in 1979.

The annual birthrate decreased from 40% in 1976 to 35% in 1979.

In this past year, 37.8% of childbearing women in union were using contraceptive methods; 14% had been using them but were not at the time of the survey, and 48.2% had never used contraceptives.

Regarding the type of contraceptive method used by the population, the fact that 80% are using highly effective methods is very significant. Thus, in 1979, 33.0% used the Pill 16.1% used IUDs 24.3% used surgery, and 6.7% used injectable methods. It was observed that surgical methods, as compared to the previous year, represented the highest increase in use.

In relation to the source of contraceptive supplies, 51.1% of the country's total users resorted to the public sector institutions and 48.9% to private services, including pharmacies. Within the public sector, 54.6% of users resorted to the services of the Instituto Mexicano del Seguro Social (Mexican Social Security Institute).

In spite of the above, a great difference may be observed between users of services in the public sector and those resorting to the private sector. For example, the public sector provides services to 78.4% of the Mexican women who are using devices, to 72.2% of those who have decided on permanent methods, and to 37.4% of those who are taking pills. Most of the private sector users are taking pills (62.5% of the women are using that method), and only 21.7% and 27.8% are using intrauterine devices and permanent methods, respectively.

As regards continuity in the use of contraceptive methods and considering all temporary methods together, a continuity rate of 79.7% was observed after one year and 66.5% after two years of use, instead of the 50% continuity rate after one year which had been estimated at the inception of the national program.

After surgical methods, the highest rate of continuity was observed with intrauterine devices, with 89.8% continuity after one year of use and 78.5% after two years. In the case of injectables, the rate of continuity was 73.1% and 57.2%, and with the Pill, 72.6% and 56.7% for the same periods.

Another fact of demographic importance is the reduction observed in the proportion of the total population presented by the zero to four year age groups. That proportion was reduced from 16.9% in 1970 to 13.9% in 1980, as recorded in that year's National Census.

It is also important to mention that of the total number of contraceptive users in Mexico, 54.3%, indicated they were using contraceptives in order to space their offspring, and 45%, to avoid the arrival of another child. In the first group, the average number of live-born children was 2.6, and, in the second, the average number was 4.9.

Summarizing from the overall analysis of the previously mentioned results and particularly from the changes observed in fertility, birth rates, contraceptive method use, and continuity of use (which was higher than expected), we may conclude that, if by 1979, an annual population growth rate of 2.7% had been attained, by the end of 1981, the goal of 2.5% projected for 1982 will have already been reached.

In this connection, we should mention that the study conducted jointly by our personnel and the University of North Carolina and published in December 1980 by the

International Laboratory Program for Population Statistics (POLAB) of that university, shows a gross birth rate of 33 per 1,000 in 1979; this gave a growth rate of 2.5% since the year 1979.

COMMENTS ON ACCOMPLISHMENTS

Generally speaking, the spectacular decline observed in the population growth rate is due, among other factors, to the use of more effective methods, to a more conscientious use of same on the part of the population, and to a substantial increase in the family planning services made available to the population by various institutions, especially by the Instituto Mexicano del Seguro Social, which, during the last years, had faced one of the most accelerated and dramatic increases in the volume of the population with its coverage.

MODERN CONTRACEPTIVE TECHNOLOGY

Regarding the most recent social modernization policies introduced by the Mexican government, mention should be made of the population policy, which encourages mass utilization of and access to fertility control mechanisms.

The government health institutions incorporated into their basic charter the resources to provide adequate services and orientation in the use of contraceptive technology to all citizens who request them. Family planning through the use of modern contraceptives is, therefore, no longer a privilege of the population at the higher economic levels.

CONTRACEPTION AS A SOCIAL PRACTICE

To really make contraceptive technology available to the population, the legal and administrative innovations were inadequate, because, although the population was becoming aware of the need for planning the family - considering especially the economic pressures of the 1970-1980 decade - it was necessary to put an end to the social inertia associated with high fertility which had prevailed for a long time. This could be possible only through concrete programs which would plan for not only the provision of family planning services, but also a series of auxiliary activities to introduce family planning as a social practice. In this way, society might attain, by means of efficient use of contraception, its demographic goals pertaining to the reduction of family size, which had increased substantially during the last decades, as a consequence of successful efforts to reduce mortality.

FAMILY PLANNING'S AUXILIARY ACTIVITIES

Among the activities that support the provision of family planning services, those that make them a social practice, mention should be made of the far-reaching programs in education, publication, communication, and sexual education, as well as those concerning biomedical, demographic, and psychosocial research. These activities will foster advances in contraceptive technology, in terms of knowledge about the population's response, and a better orientation of the educational programs.

The activities mentioned above were integrated into existing family planning programs which, although initiated at the end of the previous administration, reached institutional maturity within the National Family Planning Program established by the present administration. A major contribution to the implementation of this program may be attributed to the Instituto Mexicano del Seguro Social.

The fact of having met demographic goals a year ahead of the stipulated deadline while still maintaining the "couple's free will" principle in a voluntary family planning program, such as in the case of Mexico, serves to reinforce the importance of the following facts:

- the decision to implement a firm and precise population policy,
- the programming of activities which are suitable to said policy, thus facilitating the population's access to more efficient family planning services, and
- the efforts to institutionalize the National Family Planning Program, so as to ensure medium- and long-term continuity.

THE CHALLENGE OF THE COMING YEARS

To reach the desired annual population growth rate of 1.9% determined for the year 1988, it will be necessary to increase the number of active users of contraceptives from 3.7 million in 1979 to 6.3 million in 1988. To achieve this, the average number of new users per year must be 2.3 million, that is, almost double the annual average reached through 1979.

The goal set forth above constitutes a challenge greater than that encountered during the first stage, previously described, if we consider the following:

- The major impact of family planning programs has been felt among the urban working and middle classes, and in the social groups of the rural environment that are better situated economically. The latter have begun to modify substantially their reproductive patterns and to show a more pronounced demographic change. This implies a challenge to achieve broader service coverage in the rural areas.
- The population's access to family planning services depends ultimately on the availability of same and on the population's access to health services in general. Consequently, the challenge to be met, especially in the rural areas, is the implementation of an institutional framework for these services, one supported by communal primary health care. Since service availability alone is not enough to initiate a comprehensive service, the intensive development of promotional activities at all levels is imperative. This can be accomplished by using various means of communication, but above all, through the promotional and motivational activities that the institutional and communal personnel may carry out directly to provide the population with health care.

Finally, the biomedical, demographic, and psychosocial research related to family planning is of fundamental importance, if we are to:

- make the programs more suitable to Mexico's regional characteristics,
- apply the most effective and risk-free contraceptive technology, the one most widely accepted and which has a higher continuity of usage rate, and
- acquire a better knowledge, from the view points of demography and health, of the effects and consequences of said technology.

THE PHILIPPINES

DR. VIRGILIO R. OBLEPIAS

The reproductive health services of the Philippines generally developed simultaneously with its family planning programs. Although prior to family planning tasks, reproductive health was already the major concern of various groups in the country, such as the Institute of Maternal and Child Health, it was the concept of family planning that guided the organization of these efforts. No fewer than 40 agencies, both private and public, are now invloved in one or more aspects of family planning. These include: service delivery, research, information, education, communication, and training. Coordination of the activities of the various groups is carried out by the Population Commission, the governmental body on population planning.

POPULATION STATUS IN THE PHILIPPINES

The Philippine population grew by 5,843,357 between 1975 and 1980, or from 42,070,660 to 47,914,017 during the five-year period. Population authorities seem happy that the growth rate, once one of the highest in the world, appears to have abated for good.

According to a preliminary report on the 1980 census, the geometric growth rate in the five-year period was 2.64% per annum, as compared to the previous five-year annual average of 2.78%. In other words, the rate was down by .14%. The National Family Planning Program, started in the late 1960's is credited with the decline. The program has made progress in spite of opposition from the dominant Roman Catholic Church.

The Philippine population program had a treacherous start, despite the way paved for it by a heavy newspaper barrage beginning in the late 1950's. At that time, the Philippine population was said to be increasing at the rate of over 3% yearly. Predictions indicated that the Philippine population, then less than 25 million, would reach 50 million by 1980.

POPULATION POLICIES AND SERVICES

Family planning was adopted as a national concern through a presidential decree in 1971. The basic policies established were: noncoercion, integration of efforts, multi-agency involvement, and partnership between public and private sectors. The noncoercion policy means that all birth control techniques are offered, but couples are free to accept or reject whatever they wish. This has probably slowed the spread of family planning, but has also minimized opposition. Family planning was never made the domain of one single agency, but has instead been implemented through the combined efforts of many agencies working together.

Services delivered first started with the temporary methods of family planning: the pill, IUD, condom and foam dispensing, and rhythm. They were provided free, as most projects involved were funded by such international agencies as the United States Agency for International Development, the United Nations Fund for Population Activities, Family Planning and International Assistance, the International Planned Parenthood Federation, the Johns Hopkins Program for International Education in Gynecology and Obstetrics, and the University of Hawaii. In 1973, surgical sterilization, funded by FPIA and USAID, was offered by the pioneering Mary Johnston

Hospital and the University of the Philippines - Philippine General Hospital (UP-PGH). Acceptance of the program has since been remarkable (15,000 acceptors in 1975, 151,000 in 1977, and 260,000 in 1980), indicating the need of couples for a method whch terminates fertility rather than delays it. Surgical sterilization solves the problem of discontinuance evident in the use of temporary family planning methods.

Both temporary and permanent methods of family planning are available in the Philippines. Abortion, however, is still considered illegal. There are nevertheless illegal abortions performed by unqualified personnel, accounting for the deaths of women of reproductive age. A study of abortion law in the Philippines revealed a high incidence of illegal abortion, which poses a serious public health problem.

The target group for the family planning program is women of reproductive age. Service delivery is provided by physicians and nurses. Clinics have been set up in densely populated areas. Recently, however, strategies have been developed to improve service delivery and communication.

OVERALL COORDINATION OF AGENCIES

The multi-agency strategy of the national population program presents many problems, but provides impressive results, nevertheless. At the governmental level, measures adopted by the various agencies in support of the population program include the following:

1. The Ministry of Labor and Employment requires companies to provide family planning clinic services to its workers and urges a bonus scheme for acceptors.

2. The Ministry of Education and Culture has made reproductive health a part of the curriculum. The extent to which it is studied in each discipline depends on the relevance of reproductive health to the future practice of the profession.

3. The Ministry of Justice has allowed all commercial channels of distribution to dispense contraceptives. Previously, this had been restricted to pharmacies and drugstores. A medical prescription is no longer required for the Pill.

4. The Ministry of Health obviously has the greatest capacity to promote family planning services through its network of clinics, government hospitals, and rural health units. It also undertakes training of all service people, including indigenous health workers (hilots), in order to utilize them in family planning projects.

5. The Ministry of Social Services and Development, which pioneered in the delivery of social health service, includes family planning among its development programs.

6. The National Nutrition Council holds training activities for family welfare and family planning.

7. The Medicare, a Branch of the Social Security Council, now covers surgery for sterilization.

DEVELOPMENTAL APPROACH OF THE NATIONAL HOUSING AUTHORITY

Family planning is usually made a part of a total development project. This is best exemplified by the program of the National Housing Authority. In fulfillment of

the program goal of promoting self-reliance among settlers, it grants loans for housing materials to graduates of the adult education program. That program covers aspects of vocational training, community organization, health care, nutrition, environmental sanitation, and family planning. An effort is being made to recruit acceptors to family planning, and to reduce the growth rate of the community from 3.5 to 2.5 by the end of the five-year program.

TRAINING

In order to prepare an adequate number of personnel to meet the needs in service delivery, information, education, and communication, the program incorporated a training course in family planning. A total of 12 agencies, both public and private, are involved in training. They include the Institute of Maternal and Child Health and the Family Planning Organization of the Philippines. In the field of surgical sterilization, the Fertility Care Center - Mary Johnston Hospital, one of the agencies which pioneered in tubal ligation, offers laparoscopic training for local and foreign doctors through its program affiliated with JHPIEGO.

RESEARCH

In the area of research, several institutions have conducted evaluative studies on population. Among them are the University of the Philippines Population Institute, the University of the Philippines College of Medicine, the Institute of Philippine Culture, and the University of the Philippines Institute of Mass Communication.

RECENT TRENDS

Delayed Marriages

The Philippine Population Program will express in its next five-year plan a statement of concern for youth. The program intends to intensify its campaign to delay marriages, in the hope of reducing the proportion of married women under 20 years of age from 50% in 1978 to 42% by 1985. It is hoped the program's campaign will reduce also the high number of illegitimate births which have been found to occur among those under 20 years of age.

This concern for adolescent fertility is due to the fact that, medically speaking, teenage pregnancy is said to be of high risk, especially to those 15 years of age and younger.

Philippine women, according to recent surveys, now marry to an average age of 24 years instead of 22, as was the case in the 1940s. Late marriages reportedly contribute to reduced fertility. Philippine women are now opting for smaller families. About half of them want a family of three to four children. In 1968, three-fifths of Philippines women said they wanted to have at least five children. Approximately ten years later, only one-third of them wanted to have a family of the same size.

Contraceptive Awareness

Some 43% of the country's married couples of reproductive age were using contraception by the end of 1980. The rate of use is projected to reach 46% by the end of 1981, and, ultimately, 53% by 1985. Prior to getting married, couples are required to attend family planning seminars to promote awareness.

In regard to method preference, the Pill, which was popular in the early 1970s, took a steep dive starting in 1975, and is now third after the condom and rhythm. The

condom is preferred by 28% of the population, and rhythm, by 24%. The fourth preference, female sterilization, is preferred by 12%. The fifth and last preferences are the intrauterine device, preferred by 6%, and male sterilization, by 2%.

Studies have shown that a poor understanding of methods contributes to a inappropriate choice of family planning methods, for example, "Rhythm is the safest method." Communication strategies are geared toward solution of this problem.

The problem of resupply accounted, in part, for discontinuance of pill use. To remedy this problem, contraceptive supply points have been established in 43,000 villages throughout the Philippines. In 1979, the number of family planning clinics was increased from 3,250 to 3,621, which included 838 sterilization centers and 21 itinerant service teams.

Breastfeeding: A Vital Factor in Birth Intervals

It is now well established that in the absence of contraception, breastfeeding lengthens the period of infertility after birth by suppressing the normal ovulatory cycle. In addition to prolonging the 'safe' period of a woman who has just given birth, breastfeeding has a positive effect on the health of the child.

According to a recent survey, breastfeeding in the Philippines is practiced more popularly by older women than by younger ones, and is more widespread in rural areas. Therefore, an information drive is being launched to encourage younger women and urban dwellers to breastfeed their children.

Population Education

Socialization of youth in terms of population awareness and responsible family living is now well-recognized as an essential and integral part of general education. It was this realization that prompted the Ministry of Education and Culture to establish the Population Education Program, which aims to teach, among other concepts, population awareness and family planning values to youth.

The formal integration of population education into the various curricula of primary and secondary schools, as well as universities and colleges, is a deliberate endeavor of the Philippine education system to create among the youth of that country a profound and action-guiding change in the individual, the family, and the community. To this date, however, the impact of the entire program has not been fully assessed, although preparations are now being made to evaluate it nationally.

Innovations in Strategies

To better promote the concept of reproductive health and family planning, innovations in strategies were made. Programs oriented toward urban dwellers were reoriented toward rural areas. Using as a basis the well-established principle of rural development - "Start with what people know and build on what they have," a new strategy was formulated to promote acceptance of family planning in rural areas. An example of the strategy developed along these lines is the creation of the medical cooperative in Davao, Philippines. A trustee, or katiwala, was chosen from the community and trained as paramedical health visitor and family planning worker. In the health visitor program, which was the idea of the community itself, the health trustee takes care of minor ailments, refers major problems to the clinic, distributes family planning information, and encourages sanitation and good health practices.

The clinic-based system was innovated, and community-based centers were established. Under this strategy, the Botika sa Nayon project was launched in certain villages by the Family Planning Organization of the Philippines, funded by IPPF. The project is testing the viability and effectiveness of using a village pharmacy for community-based distribution of nonprescription contraceptives. A research component of the project will compare acceptor continuation rates in a community-based distribution area with an area lacking such distribution. Also through the program, pharmacy aides are being trained. They receive theoretical and on-the-job training, and are taught to dispense drugs. The progrm was recently turned over to the community for management.

In these programs, the traditional method of service delivery, i.e., utilizing medical and clinical service personnel, was modified to include trained workers. They have proven that it is possible to train persons with little education to be effective health workers, thereby freeing physicians and nurses for serious cases.

In the area of communication, strategies were developed for wider appeal and acceptance of family planning. There were created effective communication strategies which took into consideration the deeply-held cultural factors that work against the acceptance of family planning. Communication tools that have been recently developed cater to the particular needs of specific groups and are based on the regional, spiritual, and cultural background of the target group. The use of theater to communicate ideas and educate people was found effective among rural dwellers. In the city, the telephone is utilized for information, referral, and counselling purposes.

The Future

The long-range goal is attainment of replacement fertility by the year 2000. The goal would fix the average number of children at two per Philippine couple.

At present, studies are being conducted to determine the feasibility of local manufacture of contraceptives, especially oral contraceptives. A preliminary study done by PIACT-Philippines reports that the Philippine pharmaceutical industry has the technological and production competence to operate an oral contraceptive manufacturing plant.

Since the programs have already organized and are directed toward a definite goal, and since the implementing body, the Population Commission, is enthusiastic and competent, the aspect that needs most attention now is evaluation of the programs.

As a culture changes, so does the fertility behavior of its members. Measures must be adopted to cope with such changes. The recently concluded review by the Development Academy of the Philippines anticipates progress in rural development, given the increased investment in agriculture. The development of family planning programs in the Philippines will generally follow the same lines as rural development in the future.

INDIA

DR. T.P. JAIN
and
DR. S.D. GUPTA

Women of reproductive age constitute approximately 20% to 22% of the total population of India, and represent a vulnerable segment of the population. Besides facing the problems of the population in general, they are exposed to the additional health risks resulting from pregnancy, its complications, and childbearing. High maternal mortality and morbidity, unregulated fertility, and widely prevalent chronic malnutrition and anemia point strongly to the poor health status of Indian women, especially during the reproductive age of 15 to 45 years. Nonavailability and underutilization of health services, low socioeconomic levels, and a low standard of living have contributed significantly to the poor health of mothers. Eventually, most deliveries are conducted by untrained and unskilled traditional birth attendants (TBAs), and the fate of mother and child is decided by them.

MATERNAL MORTALITY

Maternal mortality in India continues to be high, despite a phenomenal decline of maternal mortality in developed countries. Currently, the maternal mortality rate varies from 7 to 13 per 1,000 in various parts of India. Death related to pregnancy and childbearing is a major cause of mortality among females. According to the reports published by the government, it is among the ten leading causes of death in India. Death due to pregnancy, its complications, childbirth, and puerperium accounts for 1% of total deaths in the general population, about 10.0% of the total hospital mortality in India. Hemorrhage, anemia, sepsis, toxemia, abortion, maldisposition and malpresentation during pregnancy and childbirth have been the common causes resulting in and contributing to high mortality among reproductive females. The causes of matenal death during pregnancy and childbirth in one state, Rajasthan, for a single year, have been tabulated below.

Table I

CAUSE OF DEATH DURING CHILDBIRTH AND PREGNANCY IN RAJASTHAN STATE

Causes	Total Maternal Deaths (%)
Abortion	6.7
Toxemia	6.7
Anemia	33.3
Bleeding of preg. puerperium	20.0
Malpresentation of child	6.7
Puerperial sepsis	13.3
Other	13.3

It was reported that 2.8% of the total deaths in this vulnerable group exhibited a high maternal mortality rate of 13.2 per 1,000 live births. Anemia, hemorrhage during pregnancy and puerperium, and puerperal sepsis emerged as the leading causes of death.

FERTILITY

High and unregulated fertility, with narrow spacing of births, high parity, early marriage and maternity, all have greatly influenced maternal health and increased the risk of mortality. Both the age-specific fertility rate (ASFR) and the age-specific marital fertility rate (ASMFR) are peculiarly high in India. This is more so in the rural areas than in the urban. ASFR and ASMFR are exceedingly high in women between 20 and 29, as shown in the Tables II and III.

Table II

FERTILITY INDICES FOR URBAN AND RURAL INDIA

	Rural	Urban
General Fertility Rate	174.4	134.1
Marital Fertility Rate	190.8	172.9
Total Fertility Rate	5.8	4.3
Total Marital Fertility Rate	6.8	6.0
Gross Reproduction Rate	2.7	2.0

Table III

AGE-SPECIFIC FERTILITY AND MARITAL FERTILITY RATE IN URBAN AND RURAL INDIA

	ASFR		ASMFR	
Age	Urban	Rural	Urban	Rural
15-19	52.2	97.5	220.6	211.5
20-24	220.6	273.5	312.6	312.9
25-29	247.3	283.4	284.3	302.8
30-34	173.4	227.2	201.2	248.8
35-39	108.2	151.2	123.7	170.1
40-44	43.3	82.7	52.2	94.5
45-49	13.0	32.7	15.7	32.4

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High fertility has affected adversely not only maternal health, but also the outcome of pregnancy. A study in rural Rajasthan showed a high incidence of fetal child loss which increased directly in proportion to the age of the mother. The average number of pregnancies also increased progressively with maternal age (Table IV). Other studies carried out in this connection suggest that fetal and maternal loss are higher among young and relatively elderly mothers, and lowest between 20 and 29 years of age. Fetal and maternal deaths revealed a typical J-shaped pattern in relation to maternal age.

Table IV

AVERAGE NUMBER OF PREGNANCIES, LIVING CHILDREN AND FETAL/CHILD DEATHS

	Maternal Age		
	15-24	25-34	35 and above
Average number of pregnancies	2.08	3.58	6.31
Average number of living children	1.55	2.75	4.82
Average fetal/child deaths	0.53	0.83	1.49

MORBIDITY

Hemorrhage, sepsis, toxemia of pregnancy, malpresentation and placental disorders, especially the triad of the first three, continue to be the major causes of obstetric morbidity in India, despite a significant expansion of health care services in the country.

Apart from these factors, chronic malnutrition and anemia, widely prevalent in India, are the major causes of ill health among reproductive mothers. These are found to be closely interrelated with infections and the consequences of unregulated fertility, i.e., multiparity and closely spaced pregnancies.

The results of dietary surveys in India have revealed that many of reproductive age suffer from malnutrition. The diets of pregnant and lactating women are deficient not only in quantity but also in quality. The calorie intake among women in our country is between 1,400 and 1,800, and proteins, which are derived mainly from vegetable sources, total 30 to 40 g, both of which are much less than the desired and recommended amounts for Indian women (Table V). The diet is deficient also in essential minerals. Poor nutritional status not only lowers the vitality of pregnant women, but affects the cause and outcome of pregnancy. The incidence of pregnancy wastage is higher, ranging from 28% to 32% among the nutritionally poor mothers, as is the incidence of toxemia of pregnancy. The latter, together with anemia, accounts for 50% to 60% of maternal deaths in India.

Several reasons have been identified for the poor nutritional status of mothers. These are more social in nature than the much-talked about shortage of food and medical care, and include:

1. poor purchasing power,

2. illiteracy and ignorance about foods that are nutritive, readily available, and cheaper,

3. cultural taboos,

4. large families with repeated and closely-spaced pregnancies,

5. food being served last, and

6. superstitions about a large baby being difficult to deliver.

Anemia of pregnancy is a major problem of public health in India. It is highly prevalent and is the rule rather than the exception during pregnancy. It is estimated that anemia alone is directly responsible for more than 20% of maternal deaths, apart from being a contributory factor in maternal and childhood mortality. Surveys in India indicate a high prevalence of anemia among childbearing and lactating women. The anemia is more marked during the third trimester of pregnancy (Table VI). It is due mainly to iron deficiency resulting from poor dietary intake, inadequate absorption in the intestine, chronic infection, and hookworm infestation.

Table V

DIETARY PATTERN AND RECOMMENDED ALLOWANCES DURING PREGNANCY AND LACTATION

Intake	Calories	Proteins gm	Calcium mg	Iron mg	Folic Acid
Dietary Intake in India	1400-1800	38-42	300	18	-
Recommended allowances:					
WHO: Pregnancy	2200+350	55+5	1000-1200	14-28	400
Lactation	2200+550	55+10	1000-1200	14-28	300
ICMR: Pregnancy	2200+300	45+10	1000	40	300
Lactation	2200+700	45+20	1000	30	150

Table VI

INCIDENCE OF ANEMIA IN PREGNANCY

Gestational Age (Wks)	Overall Incidence(%)	Parity			
		1-3		4 & Above	
		11.0 g%	8.5 g%	11.0 g%	8.5 g%
16	15.5	12.5	-	20.0	20.0
16-28	29.2	23.0	2.2	32.5	6.0
28-40	41.0	37.0	3.2	48.5	8.5

Furthermore, gynecological diseases are highly common among Indian women. As shown in a WHO study, nearly 50% suffer from various diseases of the genital organs, especially leukorrhea. Uterovaginal prolapse which is related to childbirth increases with the increased parity of eligible women. Cervicitis, cervical erosion, cancer of the cervix, vaginitis, and fibroids are other common gynecological ailments in Indian women (Table VII).

Table VII

ELIGIBLE WOMEN FOUND TO HAVE GYNECOLOGICAL DISEASES

	% Eligible Women Diagnosed at Parity					
	0	1&2	3&4	5&6	7&over	All Parity
Infective Diseases of Cervix Uteri (ICD 620)	4	4	4	4	2	4
Other diseases of Cervix (ICD 621)	1	4	6	5	5	4
Uterovaginal Prolapse (ICD 623)	0.7	1	2	3	3	2
Other Diseases of Female Genital Organs (ICD 629)	46	50	49	54	48	50

SERVICES AND PROGRAMS

Health and family welfare services have expanded tremendously during the last 30 years, and their budget expenditure allocation has reached over 4% of the total national budget. There is a growing realization of the vulnerability of mothers and children in the population. Maternal and child health services have been assigned a high priority in the already existing health care system of India. They are provided through the network of primary health centers (PHCs) and their subcenters. There is one PHC per 100,000 population, and one subcenter per 5,000 population in the rural areas. These subcenters are manned by auxiliary nurse-midwives (ANMs) to

provide MCH services. These services encompass antenatal care during pregnancy, natal and postnatal, infant and child care. Family welfare services, formerly called family planning, have become an integral part of MCH services in India. The MCH services have been reinforced by an immunization program for the prevention of tetanus and supplementation with iron to combat anemia.

Over 90% of deliveries in India are conducted by untrained traditional birth attendants who are uneducated, unskilled, and using unhygienic measures. Training of TBAs has been started on a large scale throughout the country, and aims at providing a trained TBA in each village. The TBAs selected are trained in conducting safe and normal deliveries, identification of high risk pregnancy, and asepsis. They are also involved in family welfare and immunization programs.

The Integrated Child Development Services (ICDS) scheme is another important project which aims at total health care for mother and children. The main components of this scheme are supplementary nutrition, health checkups, education, and immunization of mothers and children. These services are provided by anganwadi workers at the anganwadi center, at 1,000 population, along with the ANM of that area.

KENYA

DR. J.K.G. MATI

KENYA IN-COUNTRY TRAINING PROJECT

The in-country training program in reproductive health, associated with JHPIEGO, commenced in late 1979 with the establishment of the Reproductive Health Training Centre at the University of Nairobi. The aim of the project was two-fold, 1) to train physicians in endoscopy and new concepts in obstetrics and gynecology, and 2) to train the district health teams by means of update courses covering aspects of reproductive health, including family planning.

The endoscopy course has concentrated mainly on laparoscopy for diagnostic and surgical contraceptive purposes. In order to provide reasonable operating theatre exposure to the trainees, a special theatre has been set aside four mornings a week for laparoscopy only. A room has been renovated to take up to 12 patients for recovery before they go home. Thus, for the first time, we can operate an out-patient laparoscopy service. The services of an assistant anesthetist are at our disposal during the four sessions, but is hoped that soon laparoscopy under sedation and local anesthetic will reduce the need for general anesthesia.

So far, 14 physicians have received endoscopy training at our center, 13 of whom are Kenyans and 1 Malawian. As a result of this training, laparoscopy service is now available in six hospitals besides Kenyatta National Hospital. Three other hospitals are expected to receive laparoscopes before July 1981.

The update course has been attended by 8 medical officers and 12 nurses, all working in the districts. The course has been mainly didactic, and difficulties have been experienced in providing clinical training for such a mixed group. As a result, we propse a modification of this course, as follows: the didactic course will continue to be offered jointly to doctors and nurses for one week. Before returning to their district hospital, the doctors will spend another week in their provincial hospital, where clinical update training will be conducted, with our assistance, by the provincial gynecologist. This will not only facilitate an improved opportunity for clinical teaching, but it will also identify the provincial hospital as the focal point for continuing education of health workers in the region.

TRENDS IN REPRODUCTIVE HEALTH IN KENYA

In such a short presentation I can single out only a few areas to discuss. These will be 1) trends in family planning, 2) developments in investigation of infertility, and 3) some aspects of obstetric care.

FAMILY PLANNING

In 1980, two documents were published which have made a significant impact on the thinking of Kenyans. The first was the preliminary announcement of the 1979 National Census, and the second, the report of the Kenya Fertility Survey 1977-1978. These both showed that the population growth rate had increased since the previous decade, irrespective of the National Family Planning Program. The acceptance and continuation rates tended to be on the decline, and at the moment, only 4% of the target population is practicing contraception.

To some people, these revelations were seen as a blessing in disguise, because, since that time, every Kenyan leader has been concerned about population growth. For the first time in the history of the family planning movement in Kenya, it now has political support. Moreover, the President of Kenya is also the Patron of the Family Planning Association of Kenya. Perhaps the ground is now set for more positive progress.

It is not possible to discuss here all the reasons for poor acceptance of family planning. Indeed, many reasons remain unknown. Besides the previous lack of political backing, however, one can also identify cultural conflicts, adverse press publicity, and inefficient systems for distribution of contraceptives. Obviously, the last is the one which can be most easily tackled. It has become increasingly obvious that the Ministry of Health cannot be the only distributor of contraceptives; it is necessary to involve nongovernmental organizations to take part in their distribution.

Surgical contraception has become a fairly well-accepted method of family planning, although the majority of clients are still high-parity. Since late 1979, more than 200 laparoscopic sterilizations have been performed using Falope-rings. The follow-up has been very good; nearly 100 acceptors have been studied for one year. This follow-up allows a research project to assess not only the acceptability of the method, but also to learn whether there are any changes in bleeding pattern or sexual function, and to conduct a hormonal study of ovarian function.

Training in minilaparotomy will be the main focus of the clinical training at the provincial level.

INVESTIGATION OF INFERTILITY

Ironically, infertility remains the most common complaint in the gynecology clinics of Kenya. Tubal disease is still the leading cause of female infertility, and with expansion of laparoscopy service, more cases will be discovered. This calls for training in the surgical management of the cases considered suitable for surgery. Again, if a sizeable number of physicians are going to be trained, it might be necessary to consider introduction of an in-country training project.

During 1980, Kenyatta National Hospital acquired the capacity to estimate most of the hormones necessary for the investigation of infertility. This will enable us to study in depth other causes of infertility. Of interest here is the male factor: we now emphasize investigating the couple, rather than considering the female and male separately.

OBSTETRIC CARE

Kenya lacks adequate data on the quality and utilization of obstetric care and its influence on the outcome of pregnancy. In a study of a rural area, it was found that almost every expectant mother attends the antenatal clinic at least once, but only 26% eventually turn up at the hospital for confinement (Voorhoeve, 1979). A training program for traditional birth attendants was created after a follow-up study of a group of trained TBAs came to the conclusion that, on the whole, trained TBAs perform better than an untrained control group (1981).

There is at the moment an ongoing study, modelled on the British Perinatal Mortality Survey of 1958, but confined to the city of Nairobi. When it is completed, we hope to get information on the quality of antenatal care, child-spacing, contraceptive usage, etc., and their influence on outcome of pregnancy. We hope to achieve a reasonable autopsy rate, to permit a determination of the pattern of perinatal mortality.

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MOROCCO

DR. TAHAR ALAOUI

The kingdom of Morocco will face a number of important problems during the next several years. The question of how they will affect our family planning program and our plans for maternal and child health programs is best examined if one looks at some characteristics of the population and the current levels of health care.

In 1980, it was estimated that there were 21 million people in Morocco, approximately 40% of whom are infants and women of childbearing age. By 1983, it is expected that our population will increase to 23 million, with the same proportions of women and children as indicated above. The urban-surburban population accounts for about 42% of Morocco's total population, and there is currently some rural-urban migration. Other statistics of note include a birth rate of 46 to 48 per 1,000, a growth rate of approximately 3%, and a mortality rate of 80 to 120 per 1,000 population. In the urban areas, the mortality rate for infants from birth to 4 years of age is 100 per 1,000, while in the rural areas, it is 150 per 1,000.

A significant proportion of Moroccan women, 75%, do not deliver in hospitals. Unfortunately, there are only 1,600 obstetrical beds in all of Morocco. The rural and surburban areas in particular are not well covered by hospital beds. Furthermore, there is a shortage of medical personnel, such as midwives, who can render care, and even when such care is available, there is only a rudimentary infrastructure to assist in their delivery services.

Among women who do deliver in a hospital, and here I am referring to our experience at Rabat Maternity Hospital, over 95% do not work outside the home, and function only as housewives. Approximately 40% of the women who deliver are less than 25 years of age. The parity of women who deliver in a hospital may be summarized as follows: 50% are Para 1 to 3, 35% are Para 4 to 5, and 13% are Para 7 to 9. Of interest here are 90% of the women who deliver in Morocco. Seventeen percent carry on breastfeeding for at least 3 months, 19.6% for 3 to 6 months, and more than 21% for at least 12 months. For women who do breastfeed, the interval between pregnancies is from 1 to 2 years for 55% of them, and from 2 to 4 years for 27%. Surely, encouraging a more prolonged period of breastfeeding could be helpful in our overall strategy to lengthen intervals between pregnancies.

In terms of our objectives, a major one, obviously, is to provide more obstetrical beds, particularly at the rural level. This would require improving the dispensaries and sanitary centers so that they would have facilities for postpartum recovery beds. Furthermore, there is a need for more beds in the urban areas, and, in particular, specialized beds that can be utilized to manage high-risk situations. Of major concern is the lack of personnel; this will require increased training efforts. Currently, approximately 80 hours and 8 weeks of practice are required for female paramedics. We are now introducing to this same group, however, more family planning materials, and are introducing also a systemized approach for referral of abnormal pregnancies to more specialized centers. We are working on the coordination of activities with traditional birth attendants in rural areas, and hope to start offering courses that upgrade their skills.

At the medical school level, we are trying to upgrade obstetrical rotations, and are introducing more material in family planning. At the postgraduate level, we are trying to improve the education of obstetricians, and are encouraging medical students

to enter this subspecialty. Finally, within the entire system, we are trying to bridge the gap between traditional birth attendants and the health care system by providing some encouragement for TBA's to participate in learning modules relative to both family planning and obstetrics.

In conclusion, we face some major problems in Morocco regarding delivery of health care. Family planning is now an integral part of the education of al' health care personnel. We are hoping to focus our efforts in education not only on methods of family planning, but also on motivation and provision of information to patients. This will permit patients to be more fully informed about the benefits of family planning, and enable them to choose the method that will best meet their needs.

EGYPT

DR. M.F. FATHALLA

Reproductive health in Egypt, as in all other developing countries, leaves much to be desired, to say the least. The situation in Egypt, however, differs from many other developing countries in one aspect. We have what we consider a well-developed health service system that reaches all rural areas, and we cannot say that we have any shortage in the medical profession. In fact, there are many people who believe that we will soon be having an excess. Nevertheless, even with this health network well-manned by professionals and paraprofessionals, we must admit having failed to improve significantly the reproductive health of our people. Failure in life has one advantage. It makes one philosophical, and philosophical thinking has led us to believe that the health system alone is not able to improve reproductive health because there are three parties involved (or incriminated, you might say): the government, the people, and the medical profession. Poor environmental sanitation and nutrition are the responsibility of the government, and play a crucial role in reproductive health. Reproductive behavior is in the hand of the people, and if they choose to time their respective events to take place at times less suitable or least suitable for the reproductive process, there is a little we can do about it. We recognize, however, that the three factors are not separate, do not act separately, but are closely interelated. Take, for example, poor environmental sanitation and nutirition, as they relate to reproductive behavior. First, without control of excessive fertility and its resultant excessive population growth, the country will not be left with enough resources to improve the lot of the people, and to improve environmental sanitation and nutrition. Second, poor environmental sanitation and nutrition result in excessive child loss which, in turn, induces erratic reproductive behavior.

We need the concerted effort of the government, to improve the lot of the people; of the people, to rationalize their reproductive behavior; and of the medical professionals and paraprofessionals, to provide better services in order to produce a significant improvement in reproductive health.

STRATEGY FOR TRAINING

Our thinking about education and training in reproductive health has gone through three phases. In the first phase, with all the enthusiasm of the young, we started on the job of providing education and training for anyone and everyone who was involved in the delivery of reproductive health. This went on until we reached the second phase, when we realized that this was a task that could not be accomplished. Then, we became more selective. We thought it would be more valuable to provide training to some people rather than others, especially to the trainers-to-be. Now, we are in the third phase of our thinking. We still realize the importance of training people who are already in the service. We feel, however, that we have badly neglected the training of the people who are going to join the health service. The result is that we are sending people who are not adequately trained into the service, and then calling them back for further education and training, and this goes on and on. It has to stop! Postgraduate and undergraduate education and training should result in only trained people joining the system. Our priority, now, is improving the basic system in the University for Education and Training. We must stop playing this catch-up game, and start providing good training from the start. This is the only way we can move ahead.

We began with a three-step program. First was the improvement of the postgraduate course for the Master's degree in Obstetrics and Gynecology. This has

already started. No physician may be called a specialist in OB/GYN unless he or she has proper mastery of the necessary techniques. This person will not be called back for training unless a breakthrough in technology occurs, and this does not appear to be on the horizon. The second step is the improvement of the training of interns before they join the health service as general practitioners. The strategy has been developed and is ready for implementation. The third step, and it is a major one, will be the management of undergraduate education, and there, we need badly the input of JHPIEGO, technically and otherwise.

NIGERIA

DR. O.A. LADIPO

Although referred to as the giant of Africa, Nigeria is but one of the Third World African countries. It is a developing country having an accelerated population growth together with a familiar pattern of consumption, leading to the inevitable fragmentation of society into urban ghettos, poor and migrating rural communities, and a small group of the very rich.

A recent study conducted by Dr. Helena Chajackna of the Human Resources Research Unit of the University of Lagos, in Nigeria, revealed astonishing data that bespeak an urgent need for government intervention. Because of the rapid annual growth rate ranging between 3.21% and 3.36% since 1975, Dr. Chajackna forecast that by the end of this century, the population of Nigeria would be 148,880 million. This is based on data from the United Nations' conservative estimate of our population in 1975 at 65,663,000, and in 1980 of 77,082,000. The study also revealed that the typical Nigerian citizen is young. Children under the age of 14 comprise 48.4% of the total population, while the proportion of the population aged 15 to 55 in the labor force is 46.6%. This demographic trend can be attributed to a rise in fertility and a simultaneous decline in mortality, due to improved socioeconomic standards, nutrition, and progressive preventive and curative medical policies.

Providing health care for 80 million people must be rather like trying to predict when the rains will begin and end. There is no lack of advice, for experts theorize and laymen postulate, but the innumerable hidden variables leave the outcome quite unpredictable. Nigeria's sheer size and its remarkable ethnic diversity make it one of the most complex countries in Africa. Satisfying everyone is impossible; appeasing the majority is very difficult. Orderly development becomes highly complicated when on the one hand, electricity and clean piped water supplies are erratic or indeed unavailable to many people, especially in the rural area, where 80% of the population live, while, on the other hand, 13 university medical schools graduate hundreds of highly trained doctors, students of health technology, and other paramedicals every year. Tables I through IV give a guideline of health service facilities, skilled manpower available, population-manpower ratio, and summary of health establishments. Clearly, the government is striving to improve the health status of the community at large. This includes improved reproductive health through accelerated programs in maternal and child health that would help to reduce maternal, perinatal, and infant morbidity and mortality. The federal government is committed to implementing the Basic Health Care scheme in order to ensure for its teeming population primary health care by the year 2000.

FAMILY PLANNING IN NIGERIA

In 1964, the Family Planning Council of Nigeria was established, and by 1967 it had become a member of the IPPF. By 1977, it had 66 clinics serving about 90,000 acceptors. The clinics reported that oral contraceptives appeared to be the most popular method, followed by IUDs. Apart from service, it provided information and education to the urban areas in particular, although field work in rural areas was accelerated. Also, the National Population Council was established in 1975 to advise on population policy. The government plans to integrate family planning into the

national health service, along with maternal and child health, as pilot projects for eventual replication throughout the country. Family planning in Nigeria encompasses the following:

1. having the number of children one's resources can adequately support (feed, cloth, house, and educate), while maintaining the socioeconomic stability and well-being of the family and the nation,

2. spacing pregnancies in order to preserve the health of the mother and the child,

3. preventing unwanted pregnancies, i.e., having children by choice and not by chance, in order to avoid serious socioeconomic difficulties and attendant evils, such as illegitimacy, sterility, illegal abortions, abandonment of children, etc., and

4. helping infertile or subfertile couples to achieve the level of fertility they desire.

To achieve these objectives, the Family Planning Council provides information education, motivation, and clinical and medical research throughout the country. Private institutions and individuals provide the same by utilizing general hospitals, health centers, postpartum clinics, and mobile clinics.

The federal government, through the state government, is currently incorporating family planning with the maternal and child health component of the Basic Helath Service scheme.

PAST AND PRESENT ACTIVITIES OF THE FAMILY PLANNING CLINIC, UNIVERSITY COLLEGE HOSPITAL, IBADAN

In 1965, the Population Council of America gave a grant of two thousand dollars ($2,000) to the Department of Obstetrics and Gynecology, University of Ibadan for the establishment of an intrauterine contraceptive device clinic. The clinic was inaugurated and conducted by Professor O.A. Ojo and a part-time midwife. Despite initial difficulties in recruiting clients, the staff persevered with their campaign, which resulted ultimately in improved understanding of the rationale for the program by both educated and illiterate members of the community.

As a result of the success of the intrauterine contraceptive device clinic, the Pathfinder Fund of America invited that unit to participate in an international clinical trial of the M-Z11 intrauterine device.

In 1970, the University of Ibadan Postpartum Program was established at University College Hospital, Adeoyo State Hospital, and Inalende Maternity Center. This program, which proved highly successful, was funded by the Population Council for five years. As a mark of recognition of the success of our program, the Population Council funded in 1972 the first seminar on family planning in West Africa. Delegates attended from anglophone and francophone West African countries, the U.S.A., and the Philippines.

In 1973, the University College Hospital of Ibadan was designated by the World Health Organization as a Clinical Research Center in Human Reproduction. This was in recognition of the research done in reproductive biomedicine in the Department of Chemical Pathology and the excellent family planning program in the Department of

Obstetrics and Gynecology. Apart from the fertility control unit's activities, the Department of Obstetrics and Gynecology was actively involved in research on many aspects of human reproduction, includir.g:

1. twinning in Nigeria (epidemiological and endocrine study),
2. hemoglobinopathy and its effect on reproduction, especially the role of the S-gene in fertility profiles in Nigeria,
3. the high incidence of malignant trophoblastic disease,
4. cytological studies on women attending the infertility clinic,
5. epidemiology and the management of infertility,
6. venereology,
7. a comprehensive survey of abortion in the Western state of Nigeria,
8. cytogenetics and intersexual disorders, and
9. association of Herpes Type-2 virus with cervical cancer (immunovirological study).

In 1974, I initiated the menstrual regulation procedure as a back-up to contraceptive failure. This has gained wide acceptance and popularity among the physicians and nonphysicians who are frequently trained in our unit. Today, we do about 20 therapeutic and 40 diagnostic procedures weekly, using the Karmen syringe and cannular. It is worthy of note that all these procedures are performed by nonphysicians. the double-valve Karmen syringe and cannular are used by physicians for gestational age of more than eight weeks and for incomplete abortions. In a country that is currently on the threshhold of legalizing abortion, it is important that both physicians and nonphysicians be adequately trained to cope with the ever-increasing the epidemic of unwanted pregnancy.

As a complementary diagnostic and therapeutic procedure, laparoscopy was introduced in 1975 at the University College Hospital, Ibadan. Prior to that date, culdoscopy used primarily for sterilization had proven to be morbid, and so its use was short-lived once laparoscopy was introduced. Laparoscopy for diagnostic and therapeutic procedures has gained popularity among gynecologists and physicians, and more recently, physicians in the private sector are beginning to invest in this invaluable equipment. In 1979, IPPF funded a two-week training program for nine physicians from five African angiophone countries, and in 1980, the JHPIEGO in-country training program for endoscopy was commenced. The introduction of laparoscopy into medical practice in West Africa is credited to the continued support and foresight of JHPIEGO in areas related to reproductive health.

Briefly stated, the Family Planning Unit activities of the past and present are threefold: teaching, research, and service. The first function is a continuous process which involves the training of subsequent cadres of personnel in areas that relate to the improvement of reproductive health, with particular emphasis on maternal and child health, fertility, and infertility management, as well as current concepts, methods, and rationale for fertility regulation. Involved in this function are doctors, medical students, student nurses/midwives, students of health technology, community aides and assistants, and social workers.

The service component of our function, which was initially hospital-based, has been extended to institutions and government establishments in Ibadan City, as well as health centers in the rural villages near Ibadan. While the overall acceptance rate for contraception has been low, it is gratifying to note that the annual acceptor rate is on the increase, and that the default rate remains at the low level of 5% to 10%. All current methods of fertility control are offered in our clinics, although the Pill and IUD are preferred to sterilization.

A simple look at health conditions in the rural areas of most African countries will give one an idea of the health problems existing there. The majority of the people in the rural areas, nearly 80% of the total population, do not have access to modern health care. The services that do exist fail to meet their needs. For help, therefore, they have to rely on traditional birth attendants (TBAs) and traditional healers (THs). In order to encourage and assist the extension health workers in improving and modernizing the services they provide, a new project known as the "Low Cost Community-Based Distribution of Maternal and Child Health/Family Planning Services" has been developed and implemented. This project is being executed by the staff of the Department of Obstetrics and Gynecology, University College Hospital, Ibadan. It is funded by the U.S. Agency for International Development, through the Center for Population and Family Health at Columbia University, in New York. The objective of the project is to develop a model for the delivery of low cost community-based MCH/FP services that could be replicated at the state or national level.

The specific objectives of the CBD project are:

1. to establish the feasibility of the low-cost delivery project in the rural area, using nonprofessional community volunteers,

2. to establish the effectiveness of the existing network of trained midwives as the primary service of supervision of the community volunteers,

3. to compare the effectiveness of community agents operating under different levels of supervision, and

4. to compare the acceptance of services when cost to the consumer varies.

The Akinyele local government, of Oyo State, Nigeria, has been selected for this project because it is a virgin territory where no studies or similar projects have been performed. Due to the lack of accurate statistics, the population of the area selected is roughly estimated to be between 30,000 and 33,000, comprising eight villages with 691 hamlets or satellites.

These areas have been zoned to enable the health workers to function and be supervised effectively. A health center manned by a nurse/midwife is located in each village. Twelve midwives from these health centers have been trained for two weeks at the University College Hospital, Ibadan. The topics covered were:

1. family planning and maternal and child health,

2. proper use of supplies,

3. general approaches to recruiting agents,

4. teaching methods for training agents, and

5. techniques for supervision, retraining and resupply of agents.

Two hundred traditional birth attendants and voluntary health workers are currently being trained by the midwives in their various health centers. The training period is two weeks for all agents, with an additional two weks for the TBAs, to enable them to master the use of the obstetrical kits.

Each midwife in the health center is responsible for the training and supervision of 10 to 15 agents and/or TBAs in her village. She, in turn, is supervised by University College Hospital nursing staff.

Training for the agents includes:

1. introducing the project and describing services available to the community,

2. describing the importance and dangers of diarrhea, explaining preparation of Darrows/Oralyte/Pedialyte solution and correct instructions for its use,

3. teaching the importance of treatment for parasites,

4. explaining the symptoms and treatment of malaria,

5. teaching the importance of family planning and describing various contraceptive methods, their use, side effects, and contraindications,

6. creating an awareness of the importance of antenatal care, postnatal care, immunization, and breastfeeding,

7. explaining how and when to refer patients, and

8. teaching home economics, cooking, knitting, agriculture, etc.

At the end of training, certificates are awarded to the agents and TBAs. Refresher courses are also being given periodically to these individuals. Compensation is in the form of incentives; payment is given to the agents, and a bonus payment is made periodically to agents whose performance is good.

Our various areas of research have already been mentioned, and we hope that both the University and foreign agencies will continue to assist us in our research endeavors.

PROJECTED ACTIVITIES AND FUTURE REPRODUCTIVE TRENDS

As was previously highlighted, Nigeria will continue to experience a steady increase in population. It is envisioned that, provided with adequate education and motivation, youth will continue to subscribe to fertility regulation techniques. Thus, population growth will be kept within the limits of our economic resources. Similarly, the federal government's Basic Health Care scheme will improve the health status of the rural masses through its ultimate goal of markedly reducing morbidity and mortality.

In order to achieve these health objectives, more health personnel should be trained and encouraged to work in rural communities. Limited manpower and financial resources must be maximally and effectively utilized. In a developing country with limited manpower resources, there is a need for accelerated training of health personnel, good professional relationships, and the recognition of the potential value of the nonphysician's skills, to enhance our efforts to improve reproductive health care delivery to the majority of the people.

STRATEGIES FOR THE FUTURE

To improve maternal and child health and family planning services in Nigeria and other countries, the following strategies must be implemented:

1. Place greater priority on health, i.e., improve budget allocated to health, and place more emphasis on preventive and promotive health care services,

2. Maternal and child health services should be a right, not a privilege, and should therefore be made available, accessible, and acceptable to all our people, i.e., improve coverage,

3. Improve the effectiveness of health services presently available, with emphasis on prevention and promotional services by training more personnel, particulary of the intermediate cadre, and by provision of basic drugs and equipment,

4. Increase or enhance utilization of available health services through health education of the general public,

5. Recognize and train health manpower (TBAs and THs) and incorporate them into the modern health services scheme,

6. Require all deliveries to be attended by either certified health personnel or trained TBAs,

7. Improve immunization coverage:

   - All preschool children should be immunized against tuberculosis, tetanus, poliomyelitis, diptheria, whooping cough, measles, and smallpox,

   - Susceptible school children should be immunized against tuberculosis and tetanus,

   - Pregnant women as well as young adults should be immunized against tetanus,

8. Improve nutrition:

   - Encourage breastfeeding,

   - Provide timely and hygienic supplementary feeding, using locally available foodstuffs,

   - Increase production of food to an adequate quanity and quality,

   - Reduce price of foodstuffs by making more food available on the market,

   - Provide to public health education regarding consumption of foods in appropriate ways.

9. Increase acceptability of family planning services through community motivation and involvement of husbands, TBAs, local chiefs, and elders.

Family planning, by the way, should not be construed as being synonymous with birth control. Family planning implies, in fact, the various activities that are carried out to harmonize human reproduction (fertility and infertility) in an individual family with the health, economic, and social needs of that family.

10. Encourage innovative approaches designed to take advantage of the strengths within traditional African culture, especially the extended family system, self-help schemes, and other sociocultural aspects of local communities. All these will go a long way to enhance the health of families.

11. Implement appropriate control measures to reduce the incidence of diseases that are endemic in Africa, i.e., malaria, schistosomiasis, filariasis, and, particularly, onchocerciasis, guineaworm, meningococcal meningitis, trypanosomiasis, etc.

With the ultimate goal of a reduction in morbidity and mortality, the government should formulate policies on family planning within the cultural context.

The various obstacles to family planning programs, those that are conceptual, political, sociological, economic, or technological in nature, will in time be surmounted. Give increasing demographic pressure and its sequelae, it is envisioned that the theory of demographic regulation will prevail. Stated in simple terms, this meants that:

> "Every society tends to keep its processes in a state of balance, such that population will replenish losses from death and grow by collective norms. These norms are flexible, and readjust rather promptly to changes in the ability of the economy to support population."

Table I

HEALTH SERVICE FACILITIES

	1975	1976	1977	1978
No. of health establishments	6,628	6,962	7,163	7,816
No. of health centers	303	391	391	508
No. of clinics	2,205	1,961	1,109	2,581
Hospital beds	54,174	56,049	57,944	61,360
Teaching hospital beds	3,098	3,567	3,724	3,812
Maternity beds	11,707	11,884	12,560	N.A.
Neuropsychiatric beds	2,187	2,275	2,367	N.A.
Orthopedic beds	892	892	927	N.A.
Ophthanimic beds	230	277	420	N.A.
Population per				
Hospital bed	1,370	1,360	1,350	—
Teaching hospital bed	24,000	21,000	21,000	—
Maternity bed	6,300	6,400	6,200	—
Neuropsychiatric bed	34,000	34,000	33,000	—
Orthopedic bed	83,000	85,000	84,000	—
Ophthalmic bed	322,000	274,000	186,000	—

Table II

POPULATION TO MANPOWER RATIO

	1962	1972	1980
Estimated population (mid-year)	54 million	68 million	84 million
Population per			
Medical practitioner	40,000	22,000	14,000
Dentist	931,000	548,000	400,000
Registered midwife	7,800	4,200	3,000
Registered nurse	7,600	4,400	3,000
Community nurse	370,000	69,000	40,000
Pharmacist	92,624	68,000	40,000
Medical laboratory technologist	760,563	283,000	100,000
Radiographer	675,000	567,000	100,000

Table III

SUMMARY OF SKILLED HEALTH MANPOWER

	1962	1972	1980 (target)
Registered medical practitioners	1,354	3,112	6,000
Registered dentists	58	124	210
Registered midwives	6,917	16,034	28,000
Registered nurses	7,107	15,529	28,000
Community nurses	146	982	2,100
Pharmacists	583	1,005	2,100
Medical laboratory technologists	71	240	840
Radiographers	80	120	840

Table IV

SUMMARY OF HEALTH ESTABLISHMENTS

	1962	1972	1980 (target)
Total	2,793	4,958	10,000
(Beds)	(21,986)	(42,698)	(87,000)
Teaching hospitals	2(825)	6(2,798)	18(11,000)
General hospitals	N.A.	339(25,397)	400(32,000)
Psychiatric hospitals	N.A.	7(1,975)	12(3,000)
Maternity hospitals (homes and centers	905(3,5570)	1,293(4,602)	2,000(21,000)
Health Centers			
Health Clinics (dispensaries)	N.A.	1,605(82)	5,000(--)
Others	N.A.	1,469(6,624)	--
Population per hospital bed	2,500	1,700	1,000
Population per maternity bed	N.A.	13,000	4,000

Key: 6(2,000) = 6 health establishment with 2,000 beds.

N.A. - not available.

Source: Federal Ministry of Health, Nigeria.

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STATEMENTS BY NEW COUNCIL MEMBERS

TUNISIA

MADAME SOUAD CHATER

Tunisia is one of the smallest countries in North Africa. There are many reproductive health problems being faced by our country, but there are also many issues which are being addressed in our family planning program. In Tunisia, 50% of the population is situated in rural areas. Currently, there is an annual growth rate of 2.6%, and more than half the population is younger than 20 years of age.

Tunisia was one of the first countries in Africa to organize a concerted effort to meet the family planning needs of its population. Since 1973, Tunisia has had integrated health services for both family planning and reproductive health, and has attempted to strengthen its family planning program by taking other measures. For example, in 1975, abortion services were legalized.

The overall family planning program is conducted through the ONPFP (National Office of Family Planning and Population). The program essentially has three components: patient motivation, provision of services, and research. We are attempting now to utilize cultural centers for most family planning education, with programs being directed particularly toward adolescents. Furthermore, we are establishing programs which are directed toward workers in industry, as well as women at home. In the field of research, we are examining the demographic changes that have taken place. We have ongoing projects in psychosocial research, and clinical projects directed at improving either the methods or ways of providing family planning services.

There is one health unit in each of the 18 regions of Tunisia. Family planning is integrated into the services provided by each health unit, so all methods, such as IUDs, oral contraceptives, and surgical methods are readily available. In 1980, 8,600 sterilization cases were performed in Tunisia. The assistance provided by JHPIEGO in training physicians and nurses to better provide surgical services has been a major feature of our program. Without the assistance of JHPIEGO, we would probably be unable to provide services at our current level.

Unfortunately, like all developing countries, there remains in Tunisia a great deal to be done, although we do have a framework for accomplishing our goals and objectives. A major ongoing problem is the shortage of skilled health professionals, particularly in rural areas. Also, we need to further integrate services, so that physicians, midwives, and auxiliary personnel will work together much more closely. Nevertheless, it is hoped that over the next several years we will be able to show continued improvement in reproductive health.

THE CAMEROON

DR. BONIFACE T. NASAH

The Cameroon differs from many countries in Africa, in that it is bilingual French and English. In the Cameroon, 70% of the population resides in rural areas. The average family size is 5.6. Currently, the population growth rate is 2.3% per annum; the estimated growth rate by the year 2000 is 3.5%. Forty-one percent of the population is younger than 15 years of age, and 65% of the population consists of women and children.

A major problem in the Cameroon is the distribution of physicians. For example, it is estimated that there is only one physician for every 20,000 population, with most physicians practicing in urban centers.

Major maternal and child health problems in the Cameroon are related to infection, anemia, and parasitic diseases. There is a high perinatal mortality rate (about 25 per 1,000 births), and a maternal mortality rate of 140 per 10,000 births. It is estimated that 11% of the children are born prematurely.

The Cameroon is different from many countries, in that illegitimate children are entitled to governmental support. Also, breastfeeding is strongly encouraged. This has been very helpful in reducing some of the nutritional and infection problems of newborns. In fact, there are special programs which allow nursing women to continue working and to take time off during the work day in order to feed their infants.

The University of Yaounde has played a leadership role in the training of both physicians and traditional birth attendants. The overall educational objective of the obstetric and gynecologic divisions of the University is to improve health, of course, primarily through the reduction of maternal and perinatal mortality. This will be accomplished by improving services in obstetrics and family planning, as well as improving the approaches to the prevention and treatment of infertility. Unfortunately, many of these goals are not shared by the legislature and various governmental leaders.

In the Cameroon, as in other African countries, one must take a high risk approach to any effort to manage such a multitude of problems. Furthermore, one must recognize the importance of disease prevention. For example, sexually transmitted diseases are now increasingly being recognized as contributors to morbidity and mortality. Gonorrhea is found in approximately 15% of pregnant patients, 20% of patients in family planning clinics, and 20% of patients reporting to infertility clinics. Given such striking statistics, it is clear therefore that one must approach this problem from the point of view of preventive health. For example, the identification of patients at high risk during labor, particularly in rural areas, is being carried out through the use of the "partogram". This is a modification of the Friedman curve, which allows both trained and indigenous midwives to predict which patients will have problems during labor. This predictive approach allows the midwife to refer or transport a patient to a secondary or tertiary health care center, for proper management without undue delay.

Although governmental policy in the Cameroon is essentially pronatalist, there has recently been instituted the recognition of child-spacing in 1980, the right of couples to decide the size of their families was confirmed by the President. There is still no legislation, however, to allow full provision of family planning services. Nevertheless, the IUD does have some popularity, and even sterilization is being performed in certain hospitals. It is hoped that in time there will be further liberalization of policies to meet the needs of our couples.

JAMAICA

MRS. LAURICE HUNTER-SCOTT

Jamaica is a relatively large island country in the Caribbean. In 1610, there were only 1,510 people in Jamaica, but by 1980, the population of the island had grown to 2.2 million. The population is multiracial, and continues to grow. In Jamaica, there are 23 government hospitals within the 4 health divisions. In each division, there are approximately 155 primary health care centers. The current birth rate is 28 per 1,000 population, compared to 42 per 1,000 in 1968. Forty-six percent of the population in Jamaica is less than 15 years of age; in the United States, for example, 31% of the population is less than 15 years old. At this time, 70% of the budget for primary health care is directed toward maternal and child health. With the change of government in late 1980, there appear to be continuing efforts to expand programs in family planning and reproductive health.

A significant problem faced by Jamaica, as well as other countries, is the lack of sufficient manpower in health care. At present, there are only 756 physicians, 83 dentists, about 4,000 nurses, 450 midwives, 1,200 assistant nurses, and 1,000 community health aides. Thus, there is a need for continued expansion of the numbers of health professionals in order to meet the health needs of Jamaica. Unfortunately, emigration, particulary to Western Europe and the United States, continues to deplete the numbers of skilled professionals available.

In regard to the Jamaican family planning/family life program, its roots actually date back to 1939. Jamaica can be proud of the fact that it had one of the first family planning programs in the Western Hemisphere. In 1941, a family planning league was formed on the island, and since 1968, Jamaica has had also a family planning board. The objectivies during the 1980s of the family planning program are broad in scope, and include the following:

- improved health for all by the year 2000,
- a massive media-based educational program in family planning, directed toward all types of educational institutions,
- the introduction of family life into the curriculum of all schools,
- continuing education of physicians in order to promote their recognition of the need for family planning; the compilation of projections and the provision of statistical information to the population as a whole, so that they recognize the need for family planning; the continuation of rural projects that will meet health care needs and also improve the status of women; the stimulation of technical cooperation in order to increase the availability of contraceptives through industry, and
- the provision of family planning to the armed and security forces, as well as to adolescents.

As an ultimate long-range goal, the Jamaican family planning program hopes to hold the population to a maximum of 4 million individuals, with a birth rate of approximately 20 per 1,000 population. This is exceedingly important, considering that the country consists of only 4,400 square miles.

PERU

DR. CARLOS MUNOZ

Peru, located on the Pacific coast of South America, has a population of 18 million, nearly 70 percent of which is comprised of women of reproductive age and their children under age 15. While two-thirds of the population reside in urban areas, the remainder live in virtually inaccessible areas, where even the most basic medical and developmental resources are lacking.

With respect to maternal health, the current situation can only be described as unsatisfactory. The maternal mortality rate is estimated at 3.2 per 1,000 live births; the most frequent causes of death are hemmorhage, septic abortion, and toxemia. As might be expected in such circumstances, the infant mortality rate is quite high, at 95 per 1,000 live births for the entire country. There is considerable variation in the different regions. In Calla, for example, adjacent to the capital city of Lima, the infant mortality rate is 80 per 1,000, while in the rural town of Huancavelica, the rate is 215 per 1,000.

The National Fertility Survey of 1977-1978 revealed that fewer than half of the women responding had received prenatal care during their last pregnancy (49.3 percent), and that the last delivery of these women most frequently took place in the home. The same survey found also that the average age at first intercourse is 18 years, and that age at first intercourse is associated with socioeconomic and cultural status. Given the fact that 82 percent of the births occur during the first two years of marital union, one may assume that the large majority of women in Peru are mothers before they reach 20 years of age.

We should consider not only the fact that a large proportion of children are born to very young women, but also that a large proportion of children are born to women over 40 years of age, both of which constitute risk factors for the mother as well as the child. The fertility rate has decreased since the last census, from 6.4 children per woman in 1972 to 5.3 children per woman, at present. This rate varies according to urban or rural residence.

It is important to note that the 20 percent reduction of Peru's fertility rate in less than ten years, in the absence of a family planning policy, may be largely attributable to induced abortion, although the exact magnitude of the problem has not yet been determined.

Regarding nutritional status, the incidence of protein-calorie malnutrition is high (44.5 percent) in the under-five age group. Anemia in association with pregnancy is common. There is also a high proportion of low birth-weight infants.

Health services, including those of the Ministry of Health, have been directed largely toward the economically active population, especially those residing in rural areas, and tend, therefore, to neglect the outlying urban and rural populations. This is due primarily to geographic inaccessibility and socioeconomic and cultural conditions -- problems that have not yet been overcome.

The Emergency Plan of 1980 is Peru's most recent strategy to deal with its population problems. The objectives of this plan are 1) improvement in the quantity and quality of reproductive health services, 2) implementation of a coherent population and family planning policy, and 3) reduction in the morbidity and mortality

associated with unplanned repoduction. The plan took effect during the latter part of 1980 and will continue in 1981, which is considered a transitional year for this medium-range program. As part of its program to improve maternal and child health, the Emergency Plan proposes to reactivate the national immunization program for the half of the country that has available the necessary human and material resources. This will improve the logistical system for the preservation of vaccines in areas lacking adequate cold storage. A second measure is the establishment of oral rehydration services for children with enteric diseses who live in the slum areas of the large cities. It is hoped that these services will be extended to the entire population by encouraging the participation of parents who will have been trained and motivated to administer treatment in the home. A third measure of the Emergency Plan is the upgrading of hospitals and an increase in health services coverage, with particular emphasis on pediatrics, gynecology, and obstetrics.

It was in the late 1970s, however, that the government of Peru first recognized the tremendous need for improved reproductive health services, and accorded high priority to the implementation of effective programs in health and population. In January 1979, the Ministry of Health's National Directorate of Maternal and Child Health and Population was established by presidential decree. In order to further strengthen efforts in this area, the National Population Council was established, in November 1980, to serve as the organization responsible for the promotion, coordination, and supervision of population activities in the public and private sectors. This is to be accomplished through population research and diffusion of the findings. The Council officially represents the Peruvian government in its contacts with international organizations working in the field of population. It is multi-sectorial, situated at the highest political level, and is presided over by a representative of the President of the Republic.

The national health and population program of Peru has developed several objectives, the first of which is improvement of the four levels of maternal and child health care. The first target is primary health care at the local level, for which the family and community will be responsible. Such care is to be supported by health centers, which will train health promoters selected by the community. The next target is care at the health center, aimed specifically at promoting and protecting the health of nursing mothers, preschool and school-age children, and providing fertility regulation services. The third level is hospital care, for persons referred from health centers, and the fourth is specialized care, for persons referred from hospitals and health centers.

The activities planned at the four levels of health care are:

- provision of the full range of family planning methods, so that the mother or couple may select a method with the help of specialized health personnel who will diagnose specific contraindications,

- development of information and orientation activities which allow the concept of "free choice" to be put into practice and which provide correct information while at the same time respecting human dignity,

- promotion of education, in conjunction with the schools, regarding responsible parenthood and sex, thereby contributing to integrated health care and the well-being of the family,

- development of mechanisms to coordinate health and education at all levels of maternal and child care,

- detection and control of uterine and breast cancer,

- promotion of health care for nursing mothers, preschool and school-age children, and

- improvement of maternal and child nutrition.

The second objective of the national program is the extension of health coverage to mothers and children in rural and outlying urban areas, in order to improve efficiency and effectiveness. The third objective is the improvement of primary health care, with an emphasis on the following: technically supporting and/or implementing activities that promote and protect the health of mothers and children, community participation, and the utilization of health promoters.

Peru considers family planning to be an integral part of maternal health care, particularly as it relates to the promotion of family health and the protection of the woman from risk factors associated with reproduction. These factors include maternal age, child-spacing, multiparity, nutritional and/or medical considerations, and others.

These types of maternal and child health activities, including the fertility regulation component, are those which will contribute specifically to attainment of the objectives of the country's population policy.

Peru intends to concentrate efforts on the reduction of risk to mothers and children by promoting activities that protect the health of the mother during pregnancy, delivery, and the postpartum period. In this connection, emphasis will be placed on:

- education and social communication,

- promotion of prenatal services, adequate delivery, and postpartum care,

- development and/or improved utilization of professional and technical human resources,

- promotion of appropriate technology at each of the four levels of health care,

- establishment of an adequate system of referral among the levels of health care, and

- analysis of the feasibility of providing free pediatric and obstetric services at Ministry of Health Hospitals, in order to extend coverage to those most in need.

STUDY GROUP OBJECTIVES AND RECOMMENDATIONS

GROUP I - CURRICULAR NEEDS AND THE ROLE OF RESEARCH AND CLINICAL TRAINING

GROUP II - UNDERGRADUATE MEDICAL STUDENT EDUCATION IN REPRODUCTIVE HEALTH

GROUP III - INDIGENOUS HEALTH WORKERS AND DAI EDUCATION IN REPRODUCTIVE HEALTH

GROUP IV - NURSE AND PARAMEDIC EDUCATION IN REPRODUCTIVE HEALTH

I. CURRICULAR NEEDS AND THE ROLE OF RESEARCH AND CLINICAL TRAINING

To meet differing needs around the world, reproductive health educational programs must adapt to country or regional situations and also be able to introduce training in new technology that would be of maximum benefit in the field. Furthermore, in order to be effective, particularly in countries that have limited health resources, such programs must emphasize preventive rather than curative approaches. Although JHPIEGO's primary function is to provide educational courses, it should be recognized that pragmatic research endeavors addressing specific problems in reproductive health also are within the scope of the program.

The first objective of this study group is to review course curricula for content and relevance, and suggest changes or point our subjects that require particular emphasis. Provided for this review are outlines of the curricula of the JHPIEGO Infertility course, the academic skills course, the Somalia program, and the REHEP program. Each of these courses is aimed at a different audience, i.e., infertility, toward gynecologists who are specialists, academic skills, toward beginning medical school faculty; the Somalia program, toward primary health care physicians who are recent graduates; REHEP, toward medical students and nurses. Each curriculum should be reviewed for:

1. The relevance of the overall program to the group targeted,

2. The overall importance of the topics covered and, in view of limited time for training, topics to be emphasized or eliminated,

3. The importance of various educational approaches, i.e., lectures, case discussion groups, clinical sessions, country profiles (when applicable), and

4. Possible additions, deletions, and/or changes that might better adapt a course to a particular region, e.g., a course on sexually transmitted diseases.

A second objective of this study group is to review the role JHPIEGO might play in assisting in research. Questions to be discussed include:

1. Should approaches like the academic skills course be the only involvement of JHPIEGO, or should JHPIEGO actually fund courses?

2. How should projects be reviewed for funding: by whom, for what priorities, and in general, for what amounts?

3. Would the funding and subsequent reporting of results of simple research approaches to specific problems be of benefit to all who involved in JHPIEGO programs? Examples of possible projects include:

   a. Testing of standard Falope-Rings™ versus other models. If other models are effective, the result could be lower costs.

   b. A controlled study of the effect of barrier contraception on reducing frequency of sexually transmitted diseases.

   c. Are there suggestions for other projects?

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A final objective of this study group is to review the role of clinical training in JHPIEGO's educational program. In the past, techniques like laparoscopy and minilaparotomy have received emphasis, but now, new programs are providing training in microsurgery and IUD insertion. The group should discuss the following:

1. What are the minimum qualifications for individuals receiving training in the techniques named above? What should be the minimum standards for the institution to which equipment is donated?

2. In support of the above, is there need for programs to provide training to anesthesiologists in local anesthesia, to cover cardiopulmonary resuscitation in more detail, and even to provide basic kits?

3. Which other surgical techniques or procedures should be introduced: vasectomy, colposcopy? What emphasis should they receive in view of program constraints and funding restraints?

Recommendations

1. JHPIEGO courses must have relevance to the individual countries involved.

2. In the matter of research:

   a. Research projects should be reviewed and approved by the local institutions involved, and should include a determination as to whether or not particular investigators will be able to carry out the project within the prescribed time frame.

   b. Necessary funding should be available before any project is undertaken.

   c. The JHPIEGO academic skills course is an important program, in that it provides an understanding of the problems of research and the approaches to pragmatic problems. This is of great value to many professors and teachers.

   d. Any research that is approved by an institution should have arrangements for a follow-up component.

   e. Informed consent is required whenever clinical research is carried out within an institution.

3. In regard to specific types of clinical training:

   a. Microsurgery should be limited strictly to specialists at institutions where tertiary care is usually provided within the country.

   b. Nurses can probably receive training in IUD insertions, however, this is a decision of the country itself.

   c. Ideally, all clinical training of physicians in sterilization techniques should include vasectomy. The mortality rate for male voluntary sterilization is only one-eighth that of female voluntary sterilization.

   d. There is a need to train anesthetists in support of surgical services, in order to promote their understanding and use of local anesthesia.

e. Training and equipment for cardiopulmonary resuscitation should be provided for institutions requesting same.

4. JHPIEGO should not adopt a formal standard for operating rooms, since conditions vary greatly around the world. It was suggested that JHPIEGO's use of skilled consultants to evaluate each site on an individual basis is far more appropriate.

II. UNDERGRADUATE MEDICAL STUDENT EDUCATION IN REPRODUCTIVE HEALTH

Given the ever-increasing needs for health care for women and children, and the evolution of more advanced approaches, it is important to provide early in the education of health professionals subject matter in reproductive health. Certainly, medical students should receive such education, but in many institutions, the faculty may not yet recognize this need. Also, because of prevailing religious or social opinions regarding certain "sensitive" aspects of the subject matter, progress in institutionalizing such material in some medical schools may be slow.

The first objective of this study group is to review two different approaches to educating medical students in reproductive health. One approach, the REHEP concept, incorporates nurses, nursing students, and medical students in the same effort, so that the team concept to eventual delivery of services is stressed immediately. The second approach, one devised by Dr. Juan Vela for the medical school in Tampico, Mexico, with which he is associated, introduces many of the concepts of reproductive health by meeting the personal needs of the students and their families. Each approach should be examined, and the following questions posed:

1. Is the curriculum appropriate, and does it cover the major concepts of reproductive health?

2. Ideally, how much time should be made available for this subject matter?

3. Should the curriculum be introduced early (first two years) or late (last two years) in a student's medical school education?

4. What should be the additions or deletions to the curriculum? How much clinical training (IUD insertion, pill prescriptions) should be incorporated in the programs?

5. Are there other, innovative approaches to introducing such material into the curriculum?

The second objective of the study group is to consider ways to influence deans and faculty members of medical schools as to the importance of reproductive health. To consider the ways in which JHPIEGO could be of assistance:

1. Should JHPIEGO sponsor regional or national meetings for medical school deans or faculty, to acquaint them with priorities in reproductive health?

2. Is there a need to provide either a U.S.-based or regional course covering major concepts of reproductive health for such an audience?

3. What other approaches to meeting this need should JHPIEGO consider?

The third objective of the study group is to review the overall role of JHPIEGO, a U.S.-based program which is funded heavily by the government, in promoting reproductive health education in medical schools:

1. Is the material in question too sensitive to be supported significantly by a U.S.-based group?

2. Are there other methods, ones that present fewer problems, that JHPIEGO could use to promote the concepts?

Recommendations

1. One should utilize a broad approach in teaching reproductive health to medical students. Furthermore, it is helpful to present some of the training to nursing and medical students together.

2. Preventive medicine should be a major component of most undergraduate medical student programs.

3. One should not only teach the technical aspects of reproductive health, but also focus on the pertinent social isues of each country.

4. Any curricular change should be particularly relevant to the country involved, and should incorporate country-specific components. Each new curriculum must be evaluated and changed, as needed, in order to insure viability.

5. Any new undergraduate medical curriculum should take into account knowledge that students may have acquired prior to the medical school years. If possible, improved education in the premedical school years also should be a goal of medical school endeavors.

6. All curricula should undergo careful evaluation and planning. Such evaluation has to be prospective, retrospective, as well as on-going.

7. There is a need for innovation in making curricula for medical students far more effective. For example, in order to stimulate medical students in the area of service delivery, there should be early delegation of responsibilities. This could entail providing a family practice environment as a basis for some portion of their undergraduate studies.

8. There is a need for continual upgrading of educational materials. Whenever possible, one should stimulate local production of such materials, as opposed to production by outside sources.

III. INDIGENOUS HEALTH WORKERS AND DAI EDUCATION IN REPRODUCTIVE HEALTH

It is recognized that in many rural areas, indigenous health workers, or dais, provide a major share of reproductive health care to women and their children. Unfortunately, most of the dais are poorly educated and so employ nonhygienic and unsafe methods. The outcome of their work is often poor. It is only recently in many countries that the role of the dai has been recognized and that efforts have been made to improve the quality of care provided by the dai. A review of a dai training program in India by Dr. S.B. Mani has been presented to the group.

The first objective of this study group is to explore whether dai training is appropriate for JHPIEGO:

1. Is this type of educational program left more appropriately to the government of the locale in question?

2. Do major cultural differences interfere excessively with the ability of JHPIEGO staff or consultant specialists to devise curricula and training programs on the appropriate level?

The second objective of the study group is to assume that JHPIEGO should play a role in efforts to train dais. These questions should be considered:

1. What is the general basis of the curriculum? How long should training last? Should training be offered in one block or in several intermittent segments?

2. What clinical techniques should be covered as part of the training?

3. What is the best way to build an appropriate method of referral and the team approach into such educational endeavors?

4. What equipment or teaching materials should be provided as part of the training?

5. Should JHPIEGO develop educational materials for such training activities?

6. Should there be a diploma and/or "licensure" as part of educational programs?

The third objective of the study group is to consider ways that JHPIEGO might assist in bridging the gap between traditional, institutionalized health care and indigenous health care. Questions to be considered include:

1. Should JHPIEGO sponsor regional or national seminars that focus on the role of dais in health care delivery?

2. What other approaches might JHPIEGO take in addressing the problem?

Recommendations

1. JHPIEGO should consider getting involved in dai training only through acceptable local institutions. Such support of training should be undertaken only if there is an unmet need in a particular country, only after determining what other groups have ever been involved in such training efforts in that country,

only after determining what success and failure has been encountered previously, and finally, only after designing a plan for evaluating the effectiveness of such training.

2. Any training supported by JHPIEGO must focus on the trainers of indigenous health workers, not on the health workers themselves.

3. If such training is undertaken, appropriate manuals should be developed which are suitable for use by indigenous health workers.

4. It should be realized that indigenous health workers are essentially part-time health workers, therefore, their training should be both ongoing and intermittent, and they must be taught to recognize their own limitations. The promotion of preventive prenatal care and personal hygiene for their constituency should be emphasized.

5. In training programs for indigenous health workers, the clinical curriculum should include antepartal examinations, referral plans for high-risk pregnancies, referral plans for emergencies, treatment of infant diarrhea, treatment of upper respiratory tract infections of newborns, family planning, including the provision of contraceptives, and immunization or referral for immunization.

6. In any reproductive health training for indigenous health workers it is important to provide simple equipment, such as sterile birth packs, manuals of procedures, oral rehydration salts, and contraceptive supplies.

7. A possible role in this areas for JHPIEGO would be to conduct a seminar on the role of traditional birth attendants or indigenous health workers in reproductive health for a particular country or region.

IV. NURSE AND PARAMEDIC EDUCATION IN REPRODUCTIVE HEALTH

The shortage of physicians for delivery of health care, particularly in rural areas, has led to increased recognition of the fact that the team approach is required in order to meet the needs in reproductive health care of many countries. Nurses and paramedics are, in many instances, ideal health care providers, since their origin and social status allow a better understanding of local needs and problems. However, as the role of these nonphysicians expands from just support staff of physicians in hospitals to providers of primary health care, there need to be addressed questions regarding how much additional education to provide, and at what level.

The first objective of this study group is to review possible approaches to the education of nurses and paramedics. Provided for review by the group are outlines of JHPIEGO programs in Indonesia and Somalia. The Indonesian program is designed to emphasize educational methodology and counseling, while the Somalian program provides more emphasis on traditional subject matter. Both of those courses are targeted for instructors of nurses. Also provided for review is a description of the REHEP program, which is an approach integrating nurse education with medical student education.

1. Are these models useful? Should JHPIEGO expand its efforts by using similar models elsewhere?

2. What aspects of the curricula should be emphasized? What should be added or deleted? Are the courses too long or too short?

3. Are there other approaches JHPIEGO should consider?

The second objective is to review the role that nurses and paramedics can play in the delivery of clinical services relative to reproductive health. Provided for review in this connection are two papers: one by Einhorn and Trias from Bogota, Colombia, and one by Akin, Gray, and Ramos from Turkey and the Philippines.

The group should consider these questions:

1. To what level should nonphysician personnel be trained in the clinical delivery of services? For example, would IUD insertion be the "highest" level, or should one consider minilaparotomy?

2. What are the requirements for back-up and quality assurance when nurses and paramedics perform in expanded roles?

3. What should be the make-up of service delivery teams when nonphysicians assume these roles?

4. What should be required in the curricula for training in these areas?

The third objective is to consider whether JHPIEGO should assume a position of advocacy in promoting the concept of the expanded role for nurses and paramedics. In many countries, for example, nurses and paramedics are second-class citizens in the hierarchy of health care personnel.

1. Should JHPIEGO consider funding national or regional meetings for Ministry of Health officials, nursing educators, and medical school educators, in an effort to promote the team approach to health care and the nonphysician's role in the provision of reproductive health care?

2. Would a special course dealing with curricular development and the expanded role of nurse/paramedics be of benefit for key nursing school administrators?

3. What other approaches should JHPIEGO consider?

Recommendations

1. There is a need to enhance awareness of the importance of nurses and paramedics in the provision of health care in most countries.

2. Team training of short duration, that is, courses about one month in length would probably be ideal for most settings.

3. Any program should incorporate the education of trainers. In particular, training should stress curricular development, methodology, counseling, and technical information which is task-oriented.

4. Ideally, physicians and nurses should be trained together in management situations, so they they become aware of how each can complement the other's activities in a given setting.

5. Specific ways in which JHPIEGO might assist in improving the role and efficiency of nurses include the following: clinical training for nurses and paramedics, conferences that highlight the need to expand responsibilities and to develop career ladders, and courses for administrators that show the need for them to accept and expect that there are roles for nurses in such positions. Courses for administrators should be taught with the idea in mind that one must assess manpower needs before undertaking programs that may be in conflict with programs already in existence. It may be appropriate to include pharmacists and sanitarians in the development of curricula, therefore, some study of utilizing such individuals should perhaps be given consideration. Assistance in the development and distribution of simple training materials would be of major importance.