

JHPIEGO

ANNUAL REPORT

The Johns Hopkins Program for International
Education in Gynecology and Obstetrics



FISCAL YEAR 1984

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**ANNUAL REPORT OF THE JHPIEGO CORPORATION
FISCAL YEAR 1984**

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PREFACE

This JHPIEGO annual report summarizes in part the first decade of our existence. When it was established in 1974, JHPIEGO represented a consortium of U.S. universities providing fertility management training to specialized physicians. Although the ability to maintain university-to-overseas-institution relationships continues to be a vital component of our program, the scope of JHPIEGO's educational efforts has considerably broadened. The initial and continuing philosophy of training key health professionals from overseas institutions at JHPIEGO so that they can develop reproductive health programs within their own institutions has been successful. In addition, supporting programs that provide information on other components of reproductive health, such as infertility and sexually transmitted diseases, in addition to fertility management has led to expanded interest in and commitment by health professionals to providing this care to women and children in the developing world. As a result, JHPIEGO has evolved from a program involved primarily in U.S.-based training to one in which the vast majority of effort is concentrated on assisting major overseas institutions in their educational efforts. Through JHPIEGO's leadership role in reproductive health education, services in many less developed countries have expanded and improved. Furthermore, through the interest and enthusiasm generated by JHPIEGO's support, overseas health professionals have become more receptive to ideas and support provided by other funding agencies.

Although JHPIEGO's health professionals and support staff can proudly take credit for some of this success, the dedication and motivation of JHPIEGO's graduates to reproductive health has been a most important factor. In addition, the support of the United States Agency for International Development and other funding organizations over the years has also been a vital component of the success of JHPIEGO's programs.

During the next decade, JHPIEGO will continue to support institution building through its university-based program. New methodologies and approaches will be tried and relevant information about important medical advances will be incorporated into our educational programs. For example, this report discusses the correspondence course approach to family planning and reproductive health education in Asia and the use of a satellite communication network to reach health professionals in widely scattered islands of the Caribbean.

Available data suggest that a great deal of need for education in reproductive health overseas continues to exist and that much time, effort, and resources will be needed to meet this need. However, JHPIEGO feels that progress toward achieving our goal of improved reproductive health for women and children in the developing world is a vital component of the World Health Organization's resolution of health for all by the year 2000. We look forward to the future and to the continued success of our graduates in meeting these challenges.

EXECUTIVE SUMMARY

JHPIEGO is first and foremost a training organization. Its mandate is to help developing countries improve the health of women and children by upgrading the skills and knowledge of professionals involved in reproductive health and family planning. In a sense, JHPIEGO serves as the administration of a world university of reproductive health. The course participants comprise administrators, physicians, nurses, paramedical personnel, and medical and nursing students. The faculty is made up of obstetrician-gynecologists, anesthesiologists, general practitioners, and nurses, many of whom are graduates of JHPIEGO-supported programs. The curriculum covers the spectrum of reproductive health. All courses include detailed lectures on the rationale for family planning, the health benefits of child spacing, and clinical and nonclinical forms of contraception. Additional lectures cover issues related to the health of mother and child, for example, high-risk pregnancy, gynecologic infection and cancer, sexually transmitted diseases, infertility, prenatal care, nutrition for mothers and infants, and the organization of family planning programs. Qualified health professionals are offered clinical training in diagnostic and therapeutic laparoscopy, minilaparotomy, IUD insertion, and counseling of women using various forms of contraception. The facilities of the "university" include medical schools, hospitals, and health clinics; educational materials and equipment are supplied by JHPIEGO.

In its first ten years, JHPIEGO supported the training of over 24,000 health personnel from more than 3,200 institutions in 120 countries. Roughly 6,500 were physicians, 2,500 were nurses or paramedical personnel, 675 were administrators, and 14,500 were medical or nursing students. About 22,000 participated in programs in national or regional training centers; the rest were trained in the United States. This training has laid a solid foundation for JHPIEGO's priorities as the organization begins its second decade: expansion of programs in sub-Saharan Africa, innovative training programs in Asia and Latin America, and continued high-quality clinical training in the Near East.

EDUCATION AND TRAINING

Overview

In fiscal 1984, JHPIEGO supported the training of 8,271 health personnel. A total of 1,052 were physicians, 769 were nurses, 90 were administrators, and 6,360 were medical and nursing students. By region, JHPIEGO supported the training of 814 health professionals (physicians, nurses, and administrators) from sub-Saharan Africa, 272 from Asia, 554 from Latin America and the Caribbean, and 271 from the Near East. Ninety-eight percent of the undergraduate training was conducted in Latin America.

From fiscal 1983 to 1984,

- total trainees increased by one-third
- physician trainees increased by one-quarter
- nurse/paramedical trainees increased by 80 percent
- undergraduate trainees increased by one-quarter

The large increase in the number of nurses and paramedical personnel trained resulted from JHPIEGO's acceleration of activities in Africa during the year. Because of the shortages of physicians in the region, many programs have focused on the training of nurses and midwives.

Clinical training is JHPIEGO's specialty. The enrollment of physicians in clinical courses was roughly the same in fiscal 1983 and 1984, and the enrollment of nurses increased by 40 percent. More than one-third of the clinical training was conducted in the Near East in centers in Egypt, Morocco, Tunisia, and Turkey.

During fiscal 1984, JHPIEGO supported the training of health professionals from 384 hospitals, medical schools, and clinics that had not been reached before. JHPIEGO places a priority on the training of medical school faculty because they can set the standard of the reproductive health services that their students will deliver after they graduate. JHPIEGO has supported the training of at least one member of the faculty in 70 percent of the medical schools in countries in which AID authorizes training.

Africa

JHPIEGO launched nine programs in Africa during fiscal 1984, three of them in Nigeria. The governments of many sub-Saharan African countries have recently become more receptive to initiatives in reproductive health and family planning. The Government of Nigeria, in particular, has asked AID to coordinate a massive public health program including immunizations, oral rehydration therapy, and family planning. JHPIEGO has had a long-standing commitment to reproductive health training in sub-Saharan Africa; health personnel from all but three African countries have participated in programs supported by JHPIEGO.

In fiscal 1984, programs continued in Kenya, Nigeria, Somalia, the Sudan, and Tanzania, and programs were initiated in Cameroon, Mauritius, Nigeria, Sierra Leone, Uganda, Zaire, and Zimbabwe. Because of the lack of infrastructure -- especially health care systems -- and higher costs per trainee, the pace of training is slower in sub-Saharan Africa than in other regions. Clinical training is also difficult to arrange. The patient base in many health centers is too small to provide course participants with the minimum of 10 to 15 procedures that each must perform under supervision in order to master a technique. For these reasons, during fiscal 1984 the majority of African health personnel attended didactic courses that included lectures and clinical observation. Most of the programs that included clinical components offered training in minilaparotomy and IUD insertion rather than laparoscopy. This decision was based on the adequacy of clinical material for training as well as the need to provide appropriate skills to clinicians working in unsophisticated institutions. In fiscal 1985, however, JHPIEGO will support its first regional clinical training center in sub-Saharan Africa in Dakar, Senegal. The center will conduct courses in reproductive health that include training in diagnostic and therapeutic laparoscopy for physicians representing major institutions in Francophone African countries.

JHPIEGO shipped 39 laparoscopic systems and approximately \$80,000 worth of educational materials in support of its programs in Africa during fiscal 1984. A Repair and Maintenance Center was operating in Nigeria.

Asia

The first in-country training programs to receive support from JHPIEGO were in Asia. In countries that now have well-developed reproductive health services, JHPIEGO has begun to support small-scale experimental programs. In Indonesia, JHPIEGO supports a program to train teams of doctors and nurses from rural health centers to develop and administer family planning programs. In Malaysia in fiscal 1984, JHPIEGO supported a correspondence course in reproductive health that offered a diploma in family planning to general practitioners in rural health centers. Since fiscal 1983, JHPIEGO has supported a regional microsurgery course in Thailand.

JHPIEGO supported more traditional reproductive health programs that included laparoscopy training in the Philippines and Thailand during fiscal 1984. In Pakistan, JHPIEGO conducted equipment maintenance workshops in six cities at the request of the United Nations Fund for Population Activities.

JHPIEGO shipped ten laparoscopic systems and \$10,700 worth of educational materials to Asia during fiscal 1984. Support continued for Repair and Maintenance Centers in Malaysia, the Philippines, and Thailand.

Latin America/Caribbean

Most of JHPIEGO's reproductive health programs in Latin America fall into one of three categories: (1) programs for obstetrician-gynecologists, general practitioners, and nurses that include training in laparoscopy, minilaparotomy, or IUD management; (2) education programs for medical and nursing students; and (3) pilot programs that develop systems for classifying and referring women on the basis of the health risk that they would face if they became pregnant (these programs also include clinical training).

JHPIEGO supported all three types of programs in Brazil during fiscal 1984. The Center for Research and Integrated Assistance to Mothers and Children (CPAIMEC) administered clinical training programs for physicians and nurses. Programs for undergraduates were active in Santa Maria, Belo Horizonte, and Fortaleza, and a pilot classification and referral system based on reproductive risk is being set up in the state of Pernambuco in northeast Brazil.

Other clinical training programs in the region were conducted in Colombia and Jamaica. A second risk classification and referral system is being set up in Peru, and further undergraduate training was conducted in Guatemala, Honduras, and Mexico.

JHPIEGO funded an innovative satellite education program in the Caribbean. Five islands were linked in an interactive audio network over which courses for physicians and nurses were broadcast once a week for 12 weeks from Jamaica. The program was successful and will be expanded in fiscal 1985. Satellite education is a cost-effective method of reaching health professionals in inaccessible areas, and JHPIEGO plans to support satellite training in other developing countries, for example, Indonesia.

JHPIEGO shipped 17 laparoscopic systems and almost \$45,000 worth of educational materials to the region during fiscal 1984. Repair and Maintenance Centers were operating in Brazil, Colombia, Costa Rica, and Haiti.

Near East

The training centers that JHPIEGO supports in Egypt, Morocco, Tunisia, and Turkey specialize in reproductive health programs that include clinical training. Collectively, they offer instruction in laparoscopy, minilaparotomy, IUD insertion, and local anesthesia for outpatient surgical procedures. The North African centers serve as regional training centers for physicians and nurses from sub-Saharan Africa, and as clinical practice centers for physicians who attend courses at the Johns Hopkins Educational Center in Baltimore and request training in laparoscopy.

JHPIEGO's activities in Turkey have contributed to the liberalization of laws regarding family planning. The U.S. training of Turkish health professionals began in the mid-1970s. Support for in-country training in reproductive health, including instruction in laparoscopy, began in 1980 with a conference for Turkish administrators at the Johns Hopkins Educational Center in Baltimore.

JHPIEGO shipped 58 laparoscopic systems and approximately \$13,500 worth of educational materials to the Near East during fiscal 1984. Repair and Maintenance Centers were operating in Tunisia and Turkey.

U.S. Training

Virtually all the directors of overseas programs supported by JHPIEGO have been selected from among the approximately 2,200 administrators, physicians, and nurses who have participated in courses in the United States. The U.S. training supports overseas training by identifying key leaders in the field of reproductive health in developing countries. It also provides an opportunity for participants to exchange ideas and gain a fresh perspective on their national health problems.

Six courses were offered at the Johns Hopkins Educational Center in Baltimore during fiscal 1984 for 155 health professionals: 104 from Africa, 31 from Asia, seven from Latin America, and 13 from the Near East. The courses offered were Academic Skills for Medical School Faculty in Reproductive Health, Advances in Reproductive Health for Clinicians, Diagnosis and Treatment of Sexually Transmitted Diseases, Management of the Infertile Couple, Microsurgery for Tubal Reanastomosis, and Reproductive Health for Administrators of Family Planning Programs. The clinician and administrators' courses were offered in French. All the course participants received educational materials.

After completing the courses in the United States, four of the physicians were trained in laparoscopy at clinical practice centers in Egypt and Tunisia, and all have been recommended to receive Laproscators.

MANAGEMENT AND SUPPORT

Management of the Corporation

During the reporting period, members of the JHPIEGO Board of Trustees continued to contribute their talents and expertise to guiding and managing the affairs of the corporation. Among the major challenges of fiscal 1984 was the task of maintaining the momentum for the ever-increasing demand from third world countries for collaborative in-country programs within the limits imposed by a sharply curtailed allocation of funds by AID for overseas activities.

In December 1983, JHPIEGO and AID completed negotiations for the extension of the Cooperative Agreement (AID/USPE-CA-0083) through 30 September 1986. Funds allocated in the financial plan for national and regional programs averaged \$2 million a year for demonstrated requirements amounting to \$4 million annually. To accommodate this funding limitation, JHPIEGO found it necessary to delay the obligation of funds for a number of renewals and new educational programs. Although JHPIEGO has managed to maintain a delicate financial balance to keep overseas programs alive, the shortage of available funds will become manifest in mid-1985 and 1986 and could result in a reduction in the growth of training programs and outputs, unless additional funds are infused.

In January 1984 the president and the director conducted a two-day retreat for senior staff to deliberate on current practices and programs, future goals, technology and the role of surgical training, curricula content, and educational materials. A follow-up meeting was convened in September 1984 to review and modify the conclusions arising from these deliberations. JHPIEGO will continue its pre-eminent role in surgical training to make certain that technology and training are available when timely and appropriate. The evaluation of maturing programs will be ongoing to obtain programmatic insights and determine whether costs are appropriate for the benefits gained. A third conclusion of the meeting was the directive to conduct in-depth site visits to evaluate JHPIEGO-supported Repair and Maintenance Centers.

The offices of the president and director worked together to organize the meeting of the International Council in Izmir, Turkey, during the first week of April 1984. Council members stressed the importance of keeping family planning within the broader reproductive health context and avoiding programs that are too focused towards one modality.

Office of Resource Management

The Office of Resource Management coordinated the renewal of major agreements with the Johns Hopkins University for administrative management services, the Johns Hopkins University School of Medicine for training at the Johns Hopkins Educational Center, Brethern Services Center for warehousing and shipping of equipment and educational materials, and Peat, Marwick, Mitchell, and Company, for auditing of in-country programs.

A major part of the support provided by the Resource Management Office is financial reporting to each JHPIEGO office of subordinate agreement activities. Budget and Fiscal Status reports, issued monthly, were improved during fiscal 1984 to include anticipated expenditures and availability of funds. Resource Management monitored the finances of over 150 subordinate agreements during the year.

In the first quarter of calendar 1984, JHPIEGO's Federal Reserve Letter of Credit was closed and reissued to provide for electronic transfer of funds from the Federal Government. As a result, Resource Management made major adjustments to JHPIEGO banking procedures and internal financial management systems. The office developed methods to limit the amount of funds drawn from the U.S. Government to short-term use and at the same time meet the financial needs of in-country programs.

Information and Evaluation Services

Information and Evaluation Services (IES) is JHPIEGO's data processing office. It keeps track of information such as the number of participants in U.S. and overseas programs, their professional backgrounds, where they are from, and the equipment they have been given.

Much of this year's information system development activity involved the creation of error-checking programs to detect and report logical errors in the computer data files. Another form of data processing--word processing--is also managed by IES.

With the information system installed and functioning smoothly, IES began to expand its role in the evaluation of JHPIEGO activities. The office is developing a questionnaire to measure the attitudes of trainees toward family planning concepts, it is assisting the regional development officers in incorporating evaluation plans into their program proposals, and it is expanding the use of the Annual Participant Survey, which is sent to participants in in-country programs approximately one year after they complete a course. A summary of JHPIEGO's evaluation activities appears in the appendix. A full description can be found in the second volume of the annual report.

Program Support Office

The Program Support Office consists of the Admissions/Travel Unit, the Equipment Unit, and the Grants Unit.

Admissions/Travel

The Admissions Unit processed applications for candidates for 18 courses in regional training centers and nine courses at the Educational Center in Baltimore. Course participants were chosen by the Selection Committee. Candidates from African medical schools and teaching hospitals were given priority.

The Travel Unit processed approximately 300 trips to 49 countries for trainees, consultants, and staff. Three-quarters of the trips were made by trainees traveling to U.S. and regional training centers and the Johns Hopkins Educational Center in Baltimore.

Equipment Unit

The equipment that JHPIEGO ships in support of its overseas programs includes laparoscopic systems (mostly Laprocaters), microsurgery kits, minilaparotomy kits, and IUD kits, as well as spare parts for repair and maintenance of the laparoscopic equipment. During fiscal 1984, JHPIEGO shipped 124 laparoscopic systems and almost \$168,000 worth of spare parts. JHPIEGO has reduced the cost of spare parts shipped by 60 percent since 1980, despite the increasing number of systems in the field.

Following the directive issued at the meeting of senior staff, Equipment Unit personnel evaluated seven Repair and Maintenance Centers during fiscal 1984 in order to identify ways to improve their efficiency. The remaining four centers will be evaluated in fiscal 1985.

The office shipped approximately \$160,000 worth of educational materials to trainees and institutions in over 40 developing countries during fiscal 1984.

Grants Unit

The Grants Unit writes the subordinate agreements between JHPIEGO and overseas institutions that administer reproductive health programs with JHPIEGO funding, and it monitors compliance with the agreements. During fiscal 1984, the Grants Unit wrote 23 new agreements, 21 major program continuation amendments, and 102 simple amendments to current agreements.

Educational Materials

JHPIEGO maintains separate educational packages in English, French, and Spanish for physicians, nurses, medical and nursing students, and their institutions. The packages consist of books, films, filmstrips, and anatomical models. In fiscal 1984, the Educational Materials Committee eliminated separate packages for each course given at the Johns Hopkins Educational Center in Baltimore. All trainees in the U.S. courses now receive the same package that is sent to physicians in overseas courses.

JHPIEGO is putting together a collection of lectures with slides based on those delivered at the Educational Center. The lectures will be sent to graduates of JHPIEGO-supported programs.

FISCAL 1985

Highlights of JHPIEGO's fiscal 1985 programs include the following:

- In Africa, there will be continued focus on Nigeria, and the first courses will be held at the regional clinical training center in Dakar, Senegal
- In Asia, Bangkok Thailand, will be the site of the first JHPIEGO-supported academic skills course to be conducted overseas
- In Latin America, the classification and referral systems based on reproductive risk will begin to operate in Brazil and Peru
- In the Near East, curriculum development workshops will be conducted in Egypt and Turkey
- At the Johns Hopkins Educational Center, there will be continued emphasis on the training of African health personnel, and JHPIEGO will sponsor a workshop for Nigerian administrators.

In its second decade, JHPIEGO will continue to offer a wide array of training programs in its effort to upgrade the health of women and children throughout the developing world.

EDUCATION AND TRAINING

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OVERVIEW

Over 8,000 health professionals and undergraduates participated in JHPIEGO-supported programs in fiscal 1984. JHPIEGO has now trained over 24,000 health personnel since 1974.

AGGREGATE FIGURES

Fiscal 1984

Participation in JHPIEGO-supported reproductive health programs increased by one-third between fiscal 1983 and 1984. Table 1A shows the numbers trained from Africa, Asia, Latin America/Caribbean, and the Near East by type of course. The number of African health personnel trained more than doubled between fiscal 1983 and 1984. Nurses made up a large proportion of this increase. Seventy nurses took clinical or didactic courses in fiscal 1983, compared with 329 during fiscal 1984. Physician training contributed a smaller proportion of the increase: a total of 426 physicians were trained in clinical and didactic courses in fiscal 1984, compared with 220 in fiscal 1983.

The number of health personnel trained in Latin America increased by almost one-third between fiscal 1983 and 1984. Increases in the enrollment in reproductive health education courses for medical and nursing students accounted for most of the difference. There were also significant increases in the number of participants in clinical courses for nurses and didactic courses for physicians.

The number of Asian health personnel trained decreased by 12 percent from fiscal 1983 to 1984 from 409 to 358. A decrease in the number of administrators in didactic courses was matched by an increase in the number of nurses in didactic courses. There was approximately a one-third decrease in the numbers of medical students trained. The decrease in the number of participants in the programs in Asia is a result of the longevity of these programs. Several programs in Asia are among the oldest that JHPIEGO supports. As programs mature and health professionals from virtually all the medical institutions in a country participate in the courses, the numbers trained each year gradually decline. The reproductive health training program in the Philippines that includes endoscopy training is an example of such a program. As these programs are phased out, JHPIEGO has supported small-scale special projects that meet a specific need for a limited number of health personnel. The microsurgery course in Thailand and the correspondence course in Indonesia are examples.

In the Near East, the total number of health professionals trained was about the same in fiscal 1983 and 1984. Decreases in the numbers of physicians and nurses trained in clinical courses were matched by an increase in the number of physicians attending didactic courses.

TABLE 1A Number of participants at in-country, regional, and U.S. training centers, fiscal 1984

Region	Clinical Courses		Reproductive Health for Administrators	Academic Skills	Didactic Update			Undergraduate Training		Total		
	Physicians	Nurses			Admin.	Physicians	Nurses	Medical Students	Nursing Students	FY 84	FY 83	% change
Africa	229	109	30	8	21	197	220	18	0	832	347	139
Asia	69	62	8	14	5	57	57	86	0	358	409	-12
Lat. Amer./ Caribbean	150	160	0	0	20	158	66	6,147	109	6,810	5,192	31
Near East	103	95	6	1	0	66	0	0	0	271	287	-6
TOTAL	551	426	44	23	46	478	343	6,251	109	8,271	6,253	33

TABLE 1B Number of participants at in-country, regional, and U.S. training centers, inception through fiscal 1984

Region	Clinical Courses		Reproductive Health for Administrators	Academic Skills	Didactic Update			Undergraduate Training		Total
	Physicians	Nurses			Admin.	Physicians	Nurses	Medical Students	Nursing Students	
Africa	824	302	219	34	21	517	318	34	0	2,069
Asia	1,143	453	73	42	38	172	120	223	0	2,264
Lat. Amer./ Caribbean	1,635	608	233	16	20	1,000	66	13,932	365	17,875
Near East	846	559	73	11	0	525	0	0	0	2,014
TOTAL	4,448	1,922	598	103	79	2,014	504	14,189	365	24,222

There were significant trends in participation by type of course. There was an enormous increase in the number of nurses taking didactic courses. Enrollment in these courses in fiscal 1983 was 65, compared with 343 in fiscal 1984, an increase by a factor of five. Programs in Africa accounted for most of the increase. The number of nurses in clinical courses increased by about 40 percent between fiscal 1983 and 1984, largely because of the increase in the number of African nurses trained. Because of the shortage of physicians in sub-Saharan Africa, JHPIEGO has emphasized reproductive health training for nurses and para-medical personnel, who provide much of the health services at the local level.

The participation of physicians in didactic courses increased by 150 percent from 191 to 478. Physician training in Latin America and Africa contributed most of the difference. The number of physicians trained in clinical courses was roughly the same in fiscal 1983 and 1984. An increase in the number of African physicians trained was offset by decreases in the number of physicians trained from the other regions. In Latin America, some clinical training of physicians was postponed because of delays beyond JHPIEGO's control.

The number of medical students trained increased by almost one-third from fiscal 1983 to 1984, largely as a result of the reproductive health education courses in Latin America.

The courses on academic skills and reproductive health for administrators are conducted at the Johns Hopkins Educational Center in Baltimore. There was a decline in participation in the administrators' course between fiscal 1983 and 1984 because it was offered three times in fiscal 1983 in English, French, and Portuguese, but only twice in 1984 in English and French.

Cumulative Figures

Table 1B shows the cumulative totals of participants in reproductive health training programs since JHPIEGO was established. Sixty percent of the more than 24,000 health personnel that have participated in JHPIEGO programs have been medical and nursing students. Physicians outnumber nurses by 2.5 to one.

The annual enrollment of physicians in JHPIEGO-supported programs has always exceeded that of nurses and paramedicals since JHPIEGO's inception. Figure 1 shows the proportions of physicians, nurses/paramedical personnel, and administrators trained in selected years. The proportion of nurses and paramedical personnel has been increasing, and will most likely continue to increase, for three reasons: (1) JHPIEGO has emphasized the training of physician-nurse teams in surgical procedures, (2) the rapid expansion of JHPIEGO's activities in Africa, especially Nigeria, has included a large number of programs for the training of nurses, and (3) programs in Latin America that apply the concept of reproductive risk call for the training of large numbers of paramedical personnel to carry out the risk classification and referral system. In fiscal 1983, of the 1,087 physicians, nurses, and paramedical personnel who attended clinical and didactic courses, nurses and paramedical personnel made up 34 percent of the total, while in fiscal 1984, they made up 43 percent of the total.

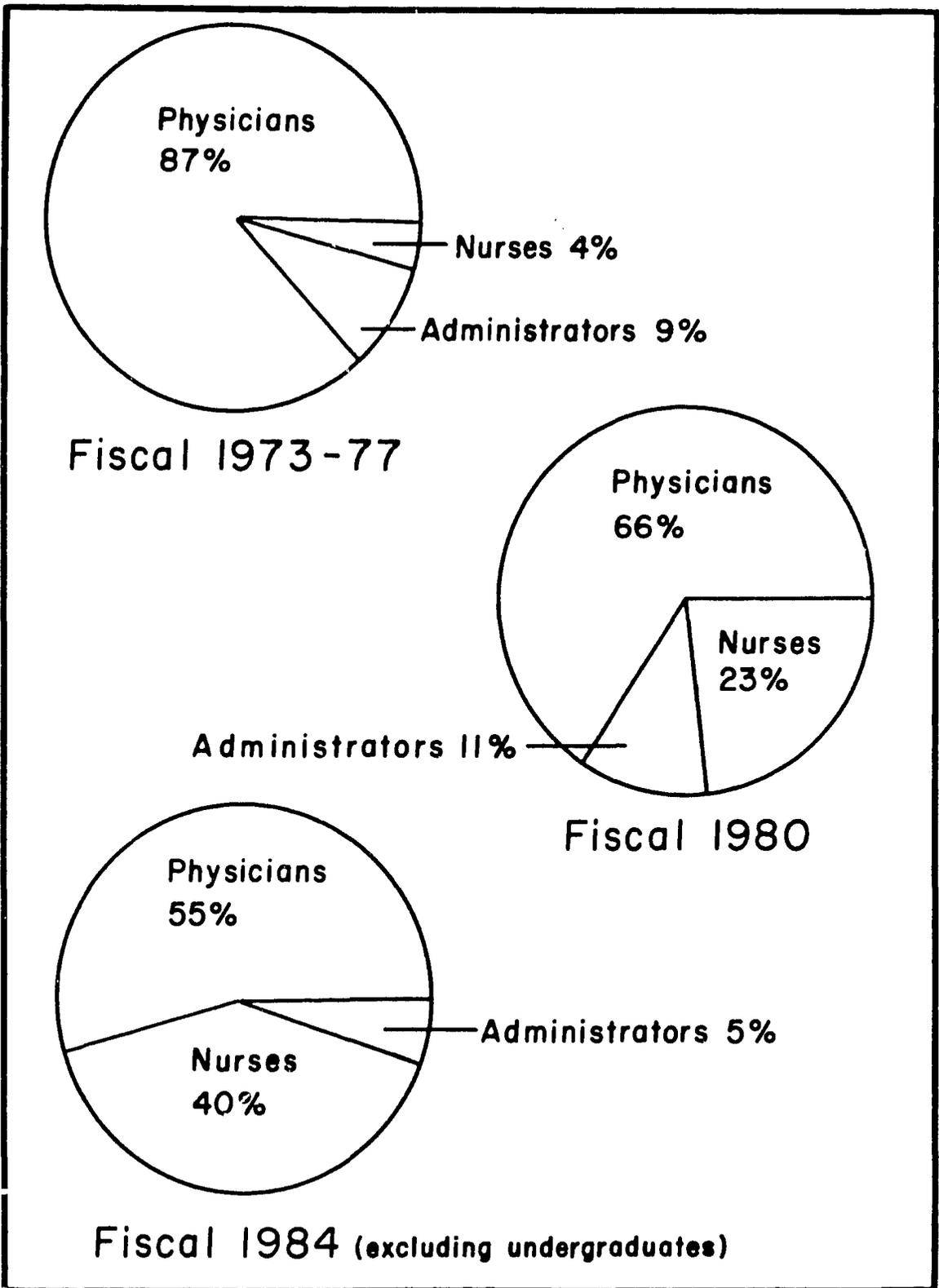


FIGURE I Proportions of physicians, nurses/paramedical personnel, and administrators in JHPIEGO - supported programs, fiscal 1973-77, 1980, and 1984

IN-COUNTRY AND REGIONAL TRAINING

In fiscal 1984, 98 percent of the participants in JHPIEGO-supported programs attended in-country and regional courses. Table 2A presents the distribution of these participants by course and region. Table 2B presents the cumulative in-country and regional training figures. Figure 2 shows the dramatic rise in overseas training since 1980.

Overall, in-country and regional training increased by one-third between fiscal 1983 and 1984. By region, approximately 90 percent of African and Asian health personnel and over 95 percent of Latin American and Near Eastern health personnel attended in-country and regional courses.

In the early years of JHPIEGO, health personnel trained in the United States outnumbered those trained overseas. Cumulative numbers of overseas trainees did not exceed the number of U.S. trainees until 1980 (Figure 2). Since 1980, overseas training has accelerated. Roughly 22,000 of the 24,000 health personnel who have participated in JHPIEGO-supported programs since 1974 attended in-country or regional courses. Two-thirds of the 22,000 health personnel were medical and nursing students. Of the remaining 9,700 health professionals (administrators, physicians, nurses and paramedical personnel), three-quarters attended in-country or regional courses.

U. S. TRAINING

As JHPIEGO has increased overseas training, it has decreased the number of courses held at the Johns Hopkins Educational Center in Baltimore. In fiscal 1984, 155 health professionals attended nine courses at the Center (Table 3A). In fiscal 1983, 11 courses were offered for 203 professionals. Two-thirds of the 1984 participants were African health professionals, compared with one-half in 1983. Since JHPIEGO's inception, 2,235 health professionals, 9 percent of the overall total, have attended courses in the United States (Table 3B).

CLINICAL TRAINING

JHPIEGO includes clinical training in reproductive health programs whenever there are adequate facilities and enough patients to meet its certification requirements in laparoscopy, minilaparotomy, IUD insertion, or local anesthesia/conscious sedation. Table 4 shows countries in which clinical training was offered during fiscal 1984 and the percentages of the training done in each region. The greatest proportion of physicians and nurses received clinical training in the Near East. This is to be expected since the training centers in Egypt, Morocco, and Tunisia serve as regional training centers for health professionals from sub-Saharan Africa. In Turkey, enrollment in the endoscopy program increased sharply from fiscal 1983 to 1984 after the government liberalized its family planning laws.

One-quarter of the professionals were trained in Africa, compared with 5 percent in fiscal 1983. New programs in Cameroon, Nigeria, and Sierra Leone contributed to the increase.

TABLE 2A Number of participants at in-country and regional training centers, fiscal 1984

Region ^a	Clinical Courses							Undergraduate Training		Total	
	Advances in Reproductive Health	Physicians			Nurses	Didactic Update			Medical Students		Nursing Students
		Micro-surgery	Anesthesiology			Admin.	Physicians	Nurses			
Africa	126	0	37		109	21	197	220	18	0	728
Asia	53	7	0		62	5	57	57	86	0	327
Lat. Amer./ Caribbean	132	0	11		160	20	158	66	6,147	109	6,803
Near East	67	0	30		95	0	66	0	0	0	258
TOTAL	378	7	78		426	46	478	343	6,251	109	8,116

Note: If a health professional attended more than one course, he or she is counted once for each course taken. This table includes some course participants who were trained in fiscal 1983 but whose documentation did not arrive in time for them to be included in last year's annual report. ^aParticipant's region of institutional affiliation.

TABLE 2B Number of participants at in-country and regional training centers, inception through fiscal 1984

Region ^a	Clinical Courses							Undergraduate Training		Total	
	Advances in Reproductive Health	Physicians			Nurses	Didactic Update			Medical Students		Nursing Students
		Micro-surgery	Anesthesiology			Admin.	Physicians	Nurses			
Africa	457	0	54		268	21	317	318	34	0	1,469
Asia	808	13	0		402	38	172	120	223	0	1,776
Lat. Amer./ Caribbean	850	36	109		598	20	1,000	66	13,932	365	16,976
Near East	614	0	71		556	0	525	0	0	0	1,766
TOTAL	2,729	49	234		1,824	79	2,014	504	14,189	365	21,987

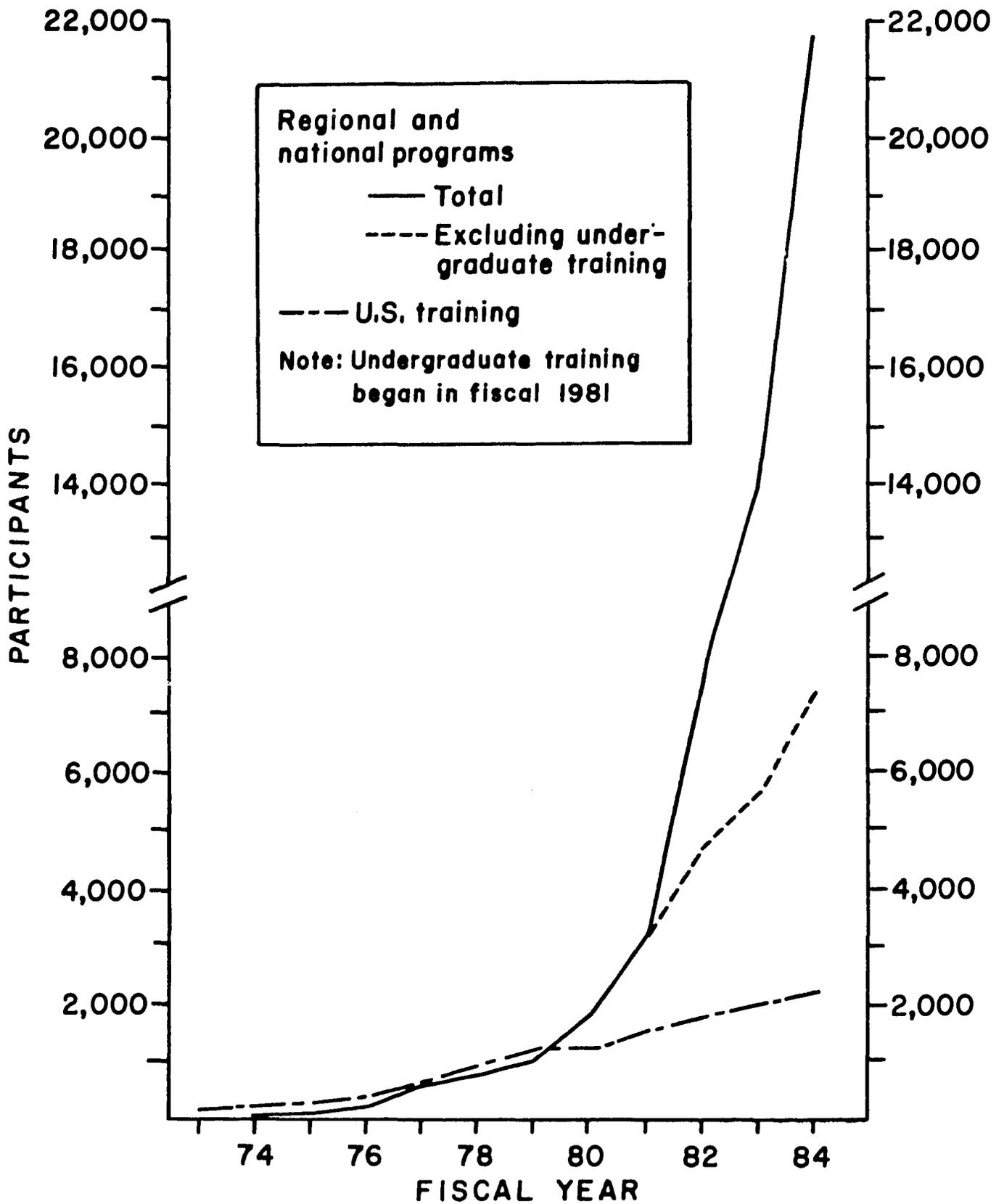


FIGURE 2 Cumulative totals of participants in JHPIEGO-supported programs by fiscal year

TABLE 3A Number of participants at the Johns Hopkins Educational Center, fiscal 1984

Region	Clinical Courses for Physicians				Reproductive Health for Administrators	Academic Skills	Total
	Advances in Reproductive Health	Sexually Transmitted Diseases	Infertility	Micro-surgery			
Africa	15	33 ^a	14 ^a	4	30	8	104
Asia	0	5	4	0	8	14	31
Latin America/ Caribbean	1	4	2	0	0	0	7
Near East	0	3	2 ^b	1	6 ^a	1	13
TOTAL	16	45	22	5	44	23	155

^aIncludes one trainee funded by the Noyes Foundation. ^bIncludes one privately funded trainee.

TABLE 3B Number of participants at U.S. training centers, inception through fiscal 1984

Region	Clinical Courses for Physicians				Reproductive Health for Administrators	Academic Skills	INEP ^a	Total
	Advances in Reproductive Health	Sexually Transmitted Diseases	Infertility	Micro-surgery				
Africa	115	68	116	14	219	34	34	600
Asia	281	9	26	6	73	42	51	488
Latin America/ Caribbean	504	11	111	14	233	16	10	899
Near East	109	4	41	7	73	11	3	248
TOTAL	1,009	92	294	41	598	103	98	2,235

^aInternational Nurse Education Program conducted from fiscal 1977 to 1979.

TABLE 4 Clinical training in fiscal 1984:
 Percentages trained by region and countries
 in which clinical training was conducted

Region/country	Percentage ^a
Africa	25
Cameroon	
Kenya	
Nigeria	
Sierra Leone	
Somalia	
Tanzania	
Asia	19
Malaysia	
Philippines	
Thailand	
Latin America/Caribbean	21
Brazil	
Colombia	
Jamaica	
Near East	36
Egypt	
Morocco	
Tunisia	
Turkey	

^aPercentages are based on 675 trainees with full documentation who attended in-country, regional, or U.S. courses.

TABLE 5 Number of medical institutions represented by course participants at in-country, regional, and U.S. training centers, by region, inception through fiscal 1984

Region	Total Institutions ^a	Medical Schools		
		In Region ^b	Represented by Course Participants	%
Africa	726	46	39	85
Asia ^c	765	81	54	65
Latin America/ Caribbean	1,298	187	127	68
Near East	449	46	31	67
Total	3,238	360	251	70

Note: Course participants include administrators, physicians, nurses, and paramedical personnel; students are not included.

^aIncludes all types of medical institutions providing reproductive health care, for example, medical schools, hospitals, or maternal and child health centers.

^bOnly current AID-designated countries are included.

^cExcluding China.

The percentage trained in Latin America dropped from about 40 in fiscal 1983 to 20 in fiscal 1984. Delays beyond JHPIEGO's control forced the postponement of clinical training programs in Brazil and Colombia.

Asian programs trained 19 percent of the professionals, about the same as in fiscal 1983. A decrease in training in Malaysia and the postponement of a course in Sri Lanka were offset by larger enrollments in Thailand.

INSTITUTIONAL OUTREACH

JHPIEGO encourages health professionals who have participated in JHPIEGO-supported reproductive health training programs to return to their institutions and pass along their new skills and knowledge to their co-workers. In this way, several professionals or an entire institution (medical school, hospital, or maternal and child health center) can benefit from the training that JHPIEGO has provided to an individual. Since its inception, JHPIEGO has trained professionals from over 3,200 institutions in developing countries (Table 5). During fiscal 1984, 384 institutions were reached for the first time.

Medical schools provide essential support for many of JHPIEGO's overseas programs. Courses are often taught by medical school faculty and they are conducted in medical school facilities, clinics, or affiliated hospitals. JHPIEGO's strategy in a country usually includes plans to upgrade the reproductive health training provided in medical schools. JHPIEGO has trained health professionals from 70 percent of the medical schools in countries in which AID authorizes training (Table 5). The highest proportion, 85 percent, has been reached in Africa. Roughly two-thirds of the medical schools have been reached in Asia, Latin America, and the Near East. JHPIEGO has reached 79 percent of the medical schools in countries with ten or fewer schools.

The following chapters describe reproductive health programs in each of the regions and at the Johns Hopkins Educational Center in Baltimore.

AFRICA

In fiscal 1984, JHPIEGO supported 15 programs in 11 countries in sub-Saharan Africa, an increase from six programs in five countries in fiscal 1983. The expansion of JHPIEGO's activities in Africa is part of a larger strategy formulated by AID to increase development activities in the region. The governments of many sub-Saharan African countries have recently become more receptive to initiatives in reproductive health and family planning as they have recognized the harmful effects that rapid population growth has on economic growth and public health, especially the health of women and children. The successful family planning programs in Asia and Latin America have also persuaded African officials of the benefits of family planning. As a leading organization in the field of reproductive health training, JHPIEGO is playing an important role in the upgrading of family planning services in sub-Saharan Africa.

JHPIEGO has had a long-standing commitment to sub-Saharan Africa. Health personnel from all but three sub-Saharan African countries have participated in reproductive health training programs supported by JHPIEGO (Angola, Namibia, and Swaziland are the exceptions). Since JHPIEGO's inception, over 2,000 physicians, nurses, and medical students from 726 medical institutions have participated in JHPIEGO-supported programs. These past activities in sub-Saharan Africa have laid a solid foundation for the current acceleration of training in the region.

The focus on sub-Saharan Africa is apparent throughout this annual report. The number of African health personnel trained rose almost 140 percent from fiscal 1983 to 1984, from 347 to 832 (Table 1A). More health professionals (i.e., excluding medical students) from Africa participated in JHPIEGO-supported programs than from Asia, Latin America, or the Near East. Two-thirds of the health professionals who took courses at the Johns Hopkins Educational Center in Baltimore in fiscal 1984 were from Africa (Table 3A). Half of the trips made during fiscal 1984 for program development, site visits, or field visits by JHPIEGO staff or consultants were made to sub-Saharan Africa. The number of laparoscopic systems shipped to sub-Saharan African countries increased by one-third between fiscal 1983 and 1984, and over \$80,000 worth of educational materials, one-half of the total value of materials shipped during the year, went to countries in sub-Saharan Africa. To manage this burgeoning activity, JHPIEGO hired a third assistant regional development officer for Africa.

In fiscal 1984, programs continued in Kenya, Nigeria, Somalia, the Sudan, and Tanzania, and programs were initiated in Cameroon, Mauritius, Nigeria, Sierra Leone, Uganda, Zaire, and Zimbabwe. Nigeria has been singled out for intensive development of its health care system by AID. JHPIEGO contributed to this effort with five programs in fiscal 1984. Early in the year, JHPIEGO sponsored a workshop

for Nigerian health officials in Baltimore to develop proposals for reproductive health training in the priority states designated by the Federal Government of Nigeria. Ten new programs are planned for fiscal 1985.

JHPIEGO's strategy in sub-Saharan Africa is indicated by the numbers of physicians and nurses trained in fiscal 1984. Africa was the only region in which the enrollment of nurses in didactic courses exceeded that of physicians (Table 1A). Because of the shortage of physicians, nurses and paramedics provide a large share of the health care in the region. As a result, JHPIEGO has emphasized the training of nurses and paramedical personnel in many of its programs. Substantial emphasis is given to training of trainers in order to ensure that reproductive health concepts are incorporated into the curricula of nursing schools and other training institutions.

Regional and U.S. training of health professionals is another important aspect of JHPIEGO's strategy for the region. Regional training offers specialized instruction that is not generally available or that would be too costly to provide in many sub-Saharan African countries. Approximately 60 physicians and nurses from sub-Saharan African countries participated in reproductive health training programs in Egypt, Morocco, and Tunisia that included instruction in laparoscopy, minilaparotomy, local anesthesia/conscious sedation, and IUD insertion. Clinical training south of the Sahara is difficult to establish because the patient base in many health centers is too small to provide course participants with the 10 to 15 procedures that each must perform under supervision in order to master a technique. Accordingly, Africa was the only region in which the enrollment of physicians and nurses in clinical courses was less than that in didactic courses. In fiscal 1985, JHPIEGO will support its first regional training program south of the Sahara in Dakar, Senegal. The center will offer courses in reproductive health and family planning, including diagnostic and therapeutic laparoscopy.

Approximately 100 key physicians, senior nursing personnel, and administrators from Anglophone and Francophone African countries attended courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. The proportion of African health personnel rose from one-half in fiscal 1983 to two-thirds in fiscal 1984. Many of the project directors for in-country programs in sub-Saharan Africa are selected from participants in these U.S. courses.

Despite the significant progress shown this past year, JHPIEGO's experience in Africa has shown that the pace of training is slower there than in other regions for five reasons:

- poor infrastructure
- lack of defined facilities for clinical training
- lack of knowledge about available family planning services
- lack of national commitment to family planning or only a recent commitment
- higher costs per trainee

In addition, lack of funds has slowed implementation of approved programs and restricted program expansion.

The following pages describe JHPIEGO's activities in Africa south of the Sahara. Programs in North Africa are included in the section on the Near East.

WEST AFRICA

BENIN

One physician and one anesthetist from Benin were trained in Tunisia during fiscal 1984. Four health professionals from Benin took courses at the Johns Hopkins Educational Center in Baltimore. Two attended the course on sexually transmitted diseases, and one each attended the administrators' course and the course on advances in reproductive health.

BOURKINA FASSO (formerly Upper Volta)

An anesthetist, a physician, and a nurse from Bourkina Fasso participated in programs in Morocco and Tunisia during fiscal 1984. Three health professionals took the administrators' course given at the Johns Hopkins Educational Center in Baltimore.

GHANA

One health professional from Ghana took the academic skills course given at the Johns Hopkins Educational Center.

GUINEA

One physician and one nurse from Guinea were trained in Morocco during fiscal 1984. Three health professionals took courses at the Johns Hopkins Educational Center. One each took the courses on advances in reproductive health, STDs, and reproductive health for administrators.

IVORY COAST

As in many developing countries, reproductive health training in the Ivory Coast is divided among obstetrics, gynecology, pediatrics, and public health, and the training for physicians is different from that for nurses and other health care workers. A site visit was made to the Ivory Coast in the summer of 1984 to develop a reproductive health education program that will offer a comprehensive course to medical students, obstetrician-gynecologists, and nursing and midwifery students. The program will begin in fiscal 1985 and is expected to run for three years.

During fiscal 1984, one field visit was made to Daloa in the central region of the Ivory Coast to inspect a laparoscopic system.

Regional and U. S. Training

One anesthetist and one physician from the Ivory Coast were trained in, respectively, Tunisia and Morocco, during fiscal 1984. One physician attended the course on advances in reproductive health given at the Johns Hopkins Educational Center in Baltimore.

LIBERIA

Reproductive Health Training Program (NCA-54)

The Ministry of Health in Liberia is moving steadily toward its goal of providing family health services in each of the 288 government health facilities. The Reproductive Health Training Program assists the Ministry of Health and Social Welfare in training 36 physicians in government hospitals and health centers.

In fiscal 1984, seven health professionals from the Ministry's In-Service Training Division attended a one-week lecture and clinical observation course on reproductive health. (Due to delays in sending documentation, they are not included in Tables 1 and 2.) These professionals -- physicians, nurses, and environmental

health specialists -- are responsible for all in-service training and continuing education activities conducted by the Ministry. The course included lectures on child spacing, oral contraception, nutrition for mothers and young children, management and treatment of sexually transmitted diseases, the treatment of infertility, and the organization and administration of family planning and maternal and child health services in Liberia. The clinical observation section included visits to outpatient family planning clinics, including clinics for voluntary surgical contraception. These professionals will continue the training of physicians when the JHPIEGO program has ended.

Regional and U.S. Training

Two Liberian nurses were trained in Egypt during fiscal 1984. Three health professionals from Liberia took courses at the Johns Hopkins Educational Center in Baltimore. Two attended the administrators' course and one attended the microsurgery course.

MALI

JHPIEGO has designed a reproductive health training program in cooperation with the National School of Medicine and Pharmacy in Mali for third-, fourth-, and fifth-year medical students. The medical school is currently reviewing its needs with regard to the proposal.

Regional and U.S. Training

Four physicians, three nurses, and an anesthetist from Mali were trained in Tunisia and Morocco during fiscal 1984. Three health professionals took courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. One each took the courses on advances in reproductive health, STDs, and reproductive health for administrators of family planning programs.

MAURITANIA

Two health professionals from Mauritania attended JHPIEGO courses in the United States. One took the STD course and the other took the administrators' course.

NIGER

Four health professionals from Niger took courses at the Johns Hopkins Educational Center in Baltimore. Two took the course on advances in reproductive health and one each took the STD course and the administrators' course.

NIGERIA

In early 1983, the Government of Nigeria asked AID to coordinate a major integrated family health program consisting of family planning, oral rehydration therapy, and immunization. Initially, three states were designated as "accelerated states," in which program activities were to be especially intense. By August 1984, 15 states had become accelerated. UNICEF and the World Health Organization were called on to manage oral rehydration therapy and immunization programs, and UNFPA and AID were to handle family planning programs. The active role of AID in Nigeria is expected to last for five years, from 1984 to 1989.

JHPIEGO has supported an endoscopy course in Ibadan since 1979. In 1983, a Reproductive Health Training Program was established at Ahmadu Bello University in Zaria, Kaduna State. With the AID initiative, JHPIEGO activity in Nigeria expanded to five programs in fiscal 1984; ten new programs are planned for fiscal 1985. Figure 3 shows the location of JHPIEGO-supported training centers in Nigeria and those proposed for fiscal 1985. Planning for the new initiative in Nigeria began with a meeting in October 1983 of Nigerian administrators in Baltimore to develop a



FIGURE 3 Nigeria: Arrows indicate the location of fiscal 1984 and 1985 training programs (adapted from "Nigeria," Background Notes, U.S. Dept. of State)

strategy for training in reproductive health. Project directors for the Nigerian programs have been chosen from among the Nigerian health professionals who have attended courses at the Johns Hopkins Educational Center.

University of Ibadan Endoscopic Training Program (NCA-11)

JHPIEGO supports an endoscopy training program in Nigeria that began in May 1979. An operating area devoted to endoscopy was opened at the University College Hospital of the University of Ibadan in July 1984. In fiscal 1984, this program called for the training of teams of Nigerian physicians and operating theatre nurses in reproductive health care with emphasis on diagnostic and therapeutic laparoscopy.

The physician courses are conducted in two-week sessions. The physicians attend lectures on the basic reproductive health and family planning curriculum. Additional lectures cover local and general anesthesia for laparoscopy and minilaparotomy, the care and maintenance of the laparoscopic equipment, preparation of the operating room, and basic techniques of instrument sterilization. Each trainee performs a minimum of 15 endoscopic procedures. A JHPIEGO in-country consultant conducts a three-day field visit to install Laproscators at the institutions of the physicians who have been certified as competent to perform laparoscopy.

The course for operating theatre nurses is one week long and is given during the first week of the physician course so that the nurses can assist the physicians as they perform their endoscopic procedures. The physicians stay an extra week to perform the required number of procedures. The nurses are recruited from the same hospitals as the physicians so that there is at least one physician and one nurse team trained in laparoscopy at each hospital. The nurses and physicians attend lectures together, and nurses receive follow-up training in patient counseling.

Nine physician-nurse teams were trained in July 1984, and another 11 teams are expected to take the course in early fiscal 1985. In fiscal 1985, two JHPIEGO consultants are scheduled to demonstrate the new techniques of local anesthesia/conscious sedation.

The program will be renewed and another 24 teams are expected to be trained in fiscal 1985. A new component -- training for eight anesthesiologists, anesthetist-technicians, and physicians in techniques of local anesthesia/conscious sedation -- will be included in the renewal program.

Repair and Maintenance Center (NMA-18)

During fiscal 1984, the Femope Marketing Company delivered laparoscopic systems to four hospitals and assisted physicians in the installation of the equipment. The company made six visits to repair equipment and 19 preventive maintenance visits. It provided on-site training to eight nurses at four institutions in the maintenance of laparoscopic equipment.

Reproductive Health/Family Planning Training for Tutors of Nurses, Midwives, and Community Health Workers (NCA-70)

There are a total of 41 schools of nursing, schools of midwifery, and schools of health technology in Lagos, Niger, Ogun, Ondo, and Plateau states. These five states were among the first to be designated as accelerated states. Currently, instruction in reproductive health and family planning in these schools generally consists of only four hours of lectures and one day observing a family planning clinic. The Ministry of Health has identified three broad areas where the knowledge and skill of the tutors need to be improved: reproductive health/family planning, patient assessment and management, and clinic management and outreach. This

program is designed to update the clinical skill and knowledge of approximately 90 tutors, at least two from each school, who are responsible for teaching family planning. It is the first reproductive health program in Nigeria designed solely for tutors. The program is administered by the College of Medicine of the University of Ibadan.

The course covers the rationale for family planning, family planning in Nigeria, child spacing, contraceptives and their side effects, infertility, and special problems of the adolescent. The tutors learn to take a patient history, do a physical exam, and determine when a patient has to be referred to a doctor. In a clinical management section, the course covers the issue of informed consent for use of contraceptives, strategies in dealing with the community, confidentiality in recordkeeping, personnel issues, and inventory.

The course stresses clinical skills. In the clinical component, each tutor must demonstrate proficiency in five areas: (1) screening and referral of high-risk patients; (2) breast, abdominal, and gynecological examination, IUD insertion (each tutor must insert at least ten IUDs), and diaphragm fitting; (3) performance and interpretation of diagnostic tests for infertility, sexually transmitted disease, pelvic inflammatory disease, and pregnancy; (4) patient counseling and informed consent, immunization and oral rehydration therapy, and nutrition in pregnancy; and (5) clinic administration and reproductive health at the local level. The tutors advise about 50 new family planning clinic clients. After their training, they return to their teaching duties at their schools.

Four courses were held for 58 tutors in June, July, August, and September 1984. The remainder of the training will be completed during fiscal 1985.

The program has become well known in Nigeria, and the University of Ibadan has received requests for tutor training from all over the country. Tutors will be accepted from other states in addition to the initial five accelerated states. When the program is renewed, tutors will be recruited from the entire country.

Integration of Family Planning into the Curriculum of Nurses, Midwives, and Community Health Workers (NCA-69)

This program builds on the previous one that trains tutors in the schools of nursing, midwifery, and health technology. Its intent is to upgrade the curriculum in reproductive health in these schools.

A core committee met in July 1984 in Ibadan to plan a workshop for tutors and chief nursing officers. It consisted of seven representatives from the Federal Council for Midwifery and Nursing, the West African College of Nurses, the National Association of Nurses and Midwifery, and one tutor each from a school of nursing, a school of midwifery, and a school of health technology. The committee formulated the agenda for the workshop, identified group leaders, decided on presentation topics, and chose guest speakers.

The workshop for 41 tutors from the schools of nursing, midwifery, and health technology, and for 12 chief nursing officers is scheduled for early fiscal 1985 in Ibadan. There will be one tutor from each of the 41 schools in the five states of Lagos, Niger, Plateau, Ogun, and Ondo, and they will all be graduates of the course in reproductive health. The tutors and nursing officers will discuss and develop a graduated curriculum in reproductive health/family planning that could be integrated into the current curriculum of the schools.

A follow-up meeting of the core committee is planned for late fiscal 1985. In addition to the original committee, representatives from each of the initial five accelerated states will attend to present proposals for innovative methods of integrating family planning into the curriculum of the schools of nursing, midwifery,

and health technology in their states. JHPIEGO will support the best proposals. Upgrading the curriculum in reproductive health of these schools is an important activity, and JHPIEGO expects that workshops will eventually be held for most states. A four-day curriculum development workshop in Zaria for the northern states is being planned for fiscal 1985.

Reproductive Health Training Program, Bendel State (NCA-62)

Medical officers in rural health centers and hospitals have little opportunity to improve their skills in family planning and maternal and child health care. This program establishes a regional Reproductive Health Training Center in the Department of Obstetrics and Gynecology in the University of Benin Teaching Hospital in Benin City, Bendel State, and it supports two two-week courses in reproductive health for 40 physicians from Bendel, Ondo, Ogun, and Kwara states.

In addition to the basic curriculum in reproductive health and family planning, the course covers infectious diseases and general medicine, antenatal care as a preventive measure, maternal and perinatal mortality in Nigeria and in the area of Bendel State, high-risk pregnancy, recent advances in obstetrics and gynecology, and gynecological disorders (zuvovaginitis, pelvic inflammatory disease, sexually transmitted diseases, infertility, and cancer of the genital tract). There is also a section on child health that covers infant and child diseases, immunization, breast-feeding, and malnutrition. Clinic sessions are held in the family planning clinic, antenatal clinic, gynecology clinic, and the labor ward. The physicians participate in the clinical activities of the Department of Obstetrics and Gynecology during the evenings to observe the treatment of high-risk pregnancies and gynecological problems.

In June 1984, 21 medical officers from hospitals in Bendel State took the course. A second course for 19 medical officers from Bendel, Kwara, Ogun, and Ondo states will be held in early fiscal 1985 to reach the 40 physicians stipulated in the agreement. The extension of the program beyond fiscal 1985 is expected to include the training of 48 medical officers from these four states and from Iro and Cross River states as well.

Ahmadu Bello University Reproductive Health Training Program (NCA-48)

This program is designed to upgrade reproductive health care in Kaduna State by providing postgraduate or refresher training to personnel working in Ministry of Health facilities. The goals of the program are (1) to establish a reproductive health care training center in the Department of Obstetrics and Gynecology at the Ahmadu Bello University in Zaria, and (2) to train medical officers, senior nurse-midwives, and community health workers in the Ministry of Health of Kaduna State in child-spacing services. The program started in July 1983.

Courses are two weeks long and consist of lectures and clinical demonstrations. Instruction in child spacing includes contraception, strategies for administering family planning and maternal and child health (MCH) programs, and the organization of in-service training for family planning and MCH in rural health centers. Additional lectures cover issues in obstetrics and gynecology (high-risk pregnancy, hypertension, anemia, prolonged labor, pelvic infection, sexually transmitted disease, vaginitis, etc.) Physicians and paramedical personnel take the course together and are expected to return to their home institutions and train their colleagues. The participants are provided with extra books for the health professionals that they train at their home institutions.

During fiscal 1984, 51 health care personnel took the course. Ten physicians and 25 nurses or paramedical personnel took courses in March and July 1984. A

course in December 1983 was attended by 16 nurses and paramedical personnel. Most of the course participants were from Kaduna State. Several were from Niger and Kano states, two of the accelerated states, and had received special permission to attend.

During fiscal 1985, three courses are scheduled for 60 health personnel. Because of the number of requests from neighboring states to participate in the course, health personnel from Niger, Sokoto, and Kwara states will be allowed to attend.

A clinical component of the course will be offered in fiscal 1985. It is one of three new programs that are being initiated in northern Nigeria. They are described in the next section.

Fiscal 1985/86

JHPIEGO's strategy for future training in Nigeria has three main components: (1) continued clinical training in reproductive health in underserved states, (2) further programs to improve the curriculum in reproductive health and family planning of the medical and nursing schools, and (3) programs to broaden the ability of the infrastructure to deliver services.

Clinical Training

JHPIEGO will support three programs in the northern states of Kaduna, Kano, and Plateau in fiscal 1985. The program in Kaduna State will provide for two-week clinical practice courses for health personnel from Kaduna and three states in northwest Nigeria: Kwara, Niger, and Sokoto. The program will be coordinated with the lecture/observation courses at Ahmadu Bello University in Zaria. It will cover major topics in reproductive health and family planning, IUD insertion, and provision of contraceptive services. Fifteen 1984 graduates of the Ahmadu Bello program and all 60 of the participants in fiscal 1985 are expected to participate.

The Kano State program will provide reproductive health training for 45 physicians, nurses, and midwives from Kano and three neighboring states in northeast Nigeria: Bauchi, Borno, and Gongola states. The course will also be open to 60 paramedical students.

The Plateau State program at the University of Jos will support the training of 24 medical officers in the Plateau Ministry of Health. One goal of the program is to strengthen reproductive health training at the University so that it can become a regional training center for personnel from other states in northern Nigeria.

JHPIEGO will collaborate with the Pathfinder Fund on a fourth reproductive health training program in Anambra State.

The Army Medical Corps of Nigeria will conduct a reproductive health training program for 170 physicians and nurse-midwives in the army, navy, and air force. JHPIEGO will supply educational materials and equipment.

JHPIEGO will support a reproductive health training program for nurses, midwives, and nursing and midwifery students in Bendel State in fiscal 1985. It will be administered by the University of Benin and the Ministry of Health and will include one week of lectures and two weeks of clinical practice.

Curriculum Development

JHPIEGO will support a training of trainers course at the College of Medicine of the University of Ibadan for tutors of nurses, midwives, and community health workers from Bendel, Cross River, and Kaduna states. The course will include instruction in reproductive health and academic skills. The contingents from Bendel, Cross River, and Kaduna states will subsequently conduct courses in their states with the help of consultants from the University of Ibadan. A fifth experimental course will be

conducted in Ogun State by consultants from the University of Ibadan without a previously trained state contingent. If the Ogun State course is successful, it may be used as a model for tutor training in other states.

Following up the successful curriculum development workshop in Ibadan, JHPIEGO is planning a four-day curriculum development workshop at Ahmadu Bello University in Zaria, Kaduna State, for the northern states of Nigeria. About 40 nurse-midwife tutors are expected to participate.

JHPIEGO is planning a three-day seminar for the provosts or deans of Nigeria's 13 medical schools and the chairmen of the departments of Obstetrics and Gynecology and Community Medicine to standardize the curriculum of the medical schools in reproductive health.

Broadening of Services

Two courses on sexually transmitted diseases (STDs) in fiscal 1985 will be supported for 40 Nigerian physicians and nurses. In fiscal 1986, regional STD courses will be held for health personnel from Anglophone African countries. The site of the training will be the Department of Microbiology of the College of Medicine, University of Ibadan.

The College of Medicine of the University of Lagos and the Lagos State Ministry of Health will organize a reproductive health program with JHPIEGO support to improve health care in the urban, semiurban, and rural areas of Lagos and Ogun states. The program will provide postgraduate or refresher training, emphasizing techniques of health protection and promotion, to physicians, senior nurse midwives, and community health officers in the state's Ministry of Health facilities and the local government health departments.

Following up the fruitful October 1983 planning workshop in Baltimore, JHPIEGO has been asked to organize and conduct a two-week planning/management workshop for health professionals employed by state ministries of health and health management boards. It is hoped that physicians and nurse-midwives will attend from the 14 states that were not represented at the previous workshop. The participants will attend presentations on reproductive health and they will discuss the logistics for implementation of the family planning program in the individual states. Other agencies in the field of reproductive health are expected to contribute.

Regional and U.S. Training

One Nigerian nurse was trained in Egypt during fiscal 1984. Nineteen health professionals from Nigeria took courses at the Johns Hopkins Educational Center in Baltimore. Five attended the STD course and the administrators' course, four attended the academic skills course and the infertility course, and one took the microsurgery course.

SIERRA LEONE

Sierra Leone has no medical school and there are only about 400 physicians in the country; the shortage of physicians is particularly acute in rural areas. The Princess Christian Maternity Hospital in Freetown is the only specialized hospital in the country. JHPIEGO has trained 15 doctors or administrators from Sierra Leone in U.S. courses since 1978, but some are no longer in government service. Therefore, JHPIEGO continues to support in-country training.

Reproductive Health Training Program (NCA-47)

Fiscal 1984 was the first year of this three-year training program, which is conducted at the Princess Christian Maternity Hospital and at four other family planning centers in Freetown. Three combined courses for 14 physicians and 20 nurses and midwives were conducted in February, March, and May of 1984. Health

personnel from each of the 12 districts of the country and the Western Area attended the courses. Nine institutions sent a physician-nurse team.

The courses comprised two weeks of lectures on reproductive health and one week of clinical practice. Physician clinical training focused on minilaparotomy. The nurses and midwives learned to assist the physicians during minilaparotomy procedures, and they also received training in IUD insertion.

In fiscal 1985, the program calls for the training of up to 15 physicians and 20 nurses or midwives. Clinical training for physicians will again focus on minilaparotomy and that for nurses/midwives on patient counseling and IUD insertion.

Regional and U.S. Training

Two nurses from Sierra Leone were trained in Egypt during fiscal 1984. Two health professionals took courses at the Johns Hopkins Educational Center in Baltimore. One each attended the STD course and the infertility course.

SENEGAL

JHPIEGO has long been convinced of the need to offer clinical training in reproductive health in a sub-Saharan, Francophone African country. Until now, health personnel from Francophone Africa had to travel to Morocco or Tunisia to receive their clinical training in programs supported by JHPIEGO. During fiscal 1984, two site visits were made to Senegal to develop a clinical training center at the Faculty of Medicine and Pharmacy of the University of Dakar, one of the oldest medical schools in Francophone Africa. It was created in 1948, having taken over the African School of Medicine, which had been established in 1919. The Faculty of Medicine is experienced in regional training in obstetrics and gynecology; a large number of obstetrician-gynecologists from West and Central Africa have been trained at the Faculty of Medicine. One-third of the graduates of the University of Dakar are not Senegalese.

Fiscal 1985 will be the first year of this multiyear program. Two courses are scheduled for 32 physicians and nursing personnel from Senegal and other Francophone African countries. The courses will emphasize prevention in maternal and child health and will include training in family planning and laparoscopy. The first course will cover the range of contraceptive methods and their role in preventing maternal and infant mortality. The second course will emphasize the prevention and treatment of sterility through the use of laparoscopy.

Regional and U.S. Training

One anesthetist and two nurses from Senegal were trained in Morocco and Tunisia during fiscal 1984. Four Senegalese took courses at the Johns Hopkins Educational Center in Baltimore. Two took the course on advances in reproductive health and two took the STD course.

TOGO

Two nurses and one physician from Togo were trained in Morocco and Tunisia during fiscal 1984. One health professional from Togo took the administrators' course given at the Johns Hopkins Educational Center in Baltimore.

CENTRAL AFRICA

CAMEROON

JHPIEGO supported two programs in Cameroon in fiscal 1984: a postgraduate reproductive health training program and an anesthesia update course.

Postgraduate Reproductive Health Training Program (NCA-51)

The Postgraduate Reproductive Health Training Program calls for the training of obstetrician-gynecologists, general practitioners, and certified nurse-midwives in a three-week course.

The course for the obstetrician-gynecologists was offered by the University Center for Health Sciences (CUSS) in Yaounde. It included 30 to 40 hours of lectures on reproductive health and family planning, epidemiology, biostatistics, preventive obstetrics and gynecology, screening for sexually transmitted diseases and gynecologic cancer, prenatal assessment, and so on. The clinical component covered IUD insertion, the infertility workup, and the indications for referral of patients. The physicians performed a minimum of 15 laparoscopic procedures for the diagnosis of infertility and for fertility control.

The three obstetrician-gynecologists trained in fiscal 1984 were from Douala, Bamenda, and Limbe. Laparoscopy equipment is being installed in their home institutions. (Because of delays in sending documentation, these physicians are not included in Tables 1 and 2.) It is hoped that the reproductive health training program will lead to the establishment of regional training centers for instruction in laparoscopy and methods of child spacing, and to the establishment of more family planning clinics in Cameroon. There are currently only two family planning clinics in Cameroon, both in Yaounde.

Anesthesia Update Training Program (NCA-50)

The services of surgery and obstetrics and gynecology in Cameroon suffer from a severe shortage of qualified health personnel in anesthesia. There are only four anesthesiologists and approximately 30 nurse-anesthetists in two central hospitals and five provincial hospitals. Anesthesia in the majority of the institutions is performed by health personnel who have not received specialized training. Only ten nurse-anesthetists graduate every year from the specialist training school.

The anesthesia update training program is designed to improve the skills of health personnel who currently perform anesthesia. Courses emphasize local anesthesia for endoscopy and minilaparotomy, which is safer than general anesthesia. Each course includes lectures and demonstrations on preoperative assessment, patient counseling, anesthesia risk, premedication, anesthesia methods, resuscitation techniques, patient monitoring, anesthesia for reproductive health services, and the principles of communication and education. The program is administered by the Ministry of Public Health and it supports the Postgraduate Reproductive Health Training Program. Anesthesia personnel are selected from institutions at which there are physicians trained to perform endoscopic procedures under local anesthesia.

Two one-week seminars were held in July 1984, one in French at the Central Hospital in Yaounde for 12 anesthesia trainers, and the other in English at the Bamenda Provincial Hospitals for eight anesthesia trainers. These 20 key medical and paramedical anesthesia trainers are from the major medical institutions in each province of Cameroon.

The course in Yaounde was held at the same time as the initial training course for the three obstetrician-gynecologists in the postgraduate reproductive health

training program so that the physicians could become familiar with local anesthesia techniques. It is hoped that the anesthesia trainers will follow the example and invite both physicians and anesthesia personnel to the seminars that they hold in their provinces.

Fiscal 1985/86

JHPIEGO has developed a didactic and clinical training program for nurses and certified nurse-midwives working in missionary hospitals in the northwest and southwest provinces of Cameroon. It is expected to begin in fiscal 1985.

Regional and U. S. Training

One nurse and one anesthetist from Cameroon attended courses in Tunisia during fiscal 1984. Six health professionals from Cameroon took courses at the Johns Hopkins Educational Center in Baltimore. Two took the course on advances in reproductive health, and one each took the courses on sexually transmitted diseases, microsurgery, reproductive health for administrators, and infertility.

CENTRAL AFRICAN REPUBLIC

One physician and two anesthetists from the Central African Republic attended courses in Tunisia during fiscal 1984. Four health professionals attended courses at the Johns Hopkins Educational Center in Baltimore. Two took the courses on advances in reproductive health and one each took the STD and administrators' courses. JHPIEGO installed a Laprocator for the first time in the Central African Republic in fiscal 1984.

CONGO

One health professional from the Congo took the STD course given at the Johns Hopkins Educational Center in Baltimore.

GABON

One health professional from Gabon took the administrators' course at the Johns Hopkins Educational Center in Baltimore.

ZAIRE

Reproductive Health Update (NCA-58)

Since 1981, AID and the Government of Zaire have supported a rural Primary Health Care Project, SANRU (Sante Rurale), to "implement a health system that emphasizes health promotion, prevention, and primary curative services." The project is administered by the Eglise du Christ au Zaire.

The Reproductive Health Update program is part of SANRU. It calls for the training of 115 physicians, nurses, and midwives in five eight-day seminars combining lectures and clinical experience. The participants are from 34 institutions in the 32 health zones of Zaire. A health zone contains a hospital, three basic health centers, and about 20 health posts that serve 100,000 people.

The lectures cover family planning services (the rationale for family planning, prescribing contraceptives, and managing follow-up), organization and administration of health services (communication skills, education and training methods, supplies, follow-up and referral systems, supervision of personnel, and evaluation of programs), and prenatal, postnatal, and well-child care.

The participants are expected to organize clinical practice for themselves in their communities and to train other health personnel. The clinical sessions will also help the participants plan for the delivery of reproductive health services in their health zones.

Seminars were held in Kaziba and Kimpese in April 1984 and in Karawa in July

1984 for a total of 74 participants. A fourth and final seminar was held in Tshikaji early in fiscal 1985. The program will be continued.

Regional and U.S. Training

Twelve members of the Zaire Urban Family Planning Project Team attended a course in Tunis in November 1983 on the administration of family planning programs. They also had an opportunity to observe the well-run family planning clinics managed by the Tunisian National Office for Family Planning and Reproductive Health. One anesthetist from Zaire also attended a course in Tunisia.

Two health professionals from Zaire took courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. One attended the STD course and the other attended the administrators' course.

EAST AFRICA

BURUNDI

In fiscal 1985, JHPIEGO will support a Reproductive Health Education Program to train 24 medical students, 32 recent graduates of the medical school, and ten midwives in reproductive health and contraceptive methods, with emphasis on the major health problems in Burundi. One visit was made to Burundi during fiscal 1984 to develop the program.

Regional and U.S. Training

Two nurses and an anesthetist from Burundi attended courses in Morocco and Tunisia during fiscal 1984. One physician from Burundi took the STD course given at the Johns Hopkins Educational Center in Baltimore.

ETHIOPIA

Three Ethiopian health professionals took courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. One each attended the STD course, the administrators' course, and the infertility course. Two were supported by funds from the Noyes Foundation.

KENYA

University of Nairobi Human Reproduction Training Center (NCA-10)

JHPIEGO has been working with the Faculty of Medicine of the University of Nairobi since 1981 to train physicians and nurses from district and provincial hospitals in reproductive health. The objective of the program is to raise the level of surgical contraceptive services in the hospitals and to provide essential training in reproductive health to medical school graduates who rotate through the district and provincial hospitals. Before fiscal 1983, the training was conducted in Nairobi; since then it has been conducted in four provincial hospitals. The program has two components: training of physicians, nurses, and paramedical personnel in reproductive health, including minilaparotomy and IUD insertion; and an endoscopy course for physicians.

Physicians, nurses, and paramedical personnel attend two weeks of lectures on modern aspects of reproductive health, including the benefits of child spacing, clinical and nonclinical methods of contraception, high-risk pregnancy, and the diagnosis of sexually transmitted disease. Course participants receive one week of clinical training. Physicians are instructed in minilaparotomy and IUD insertion while nurses and paramedical personnel are trained only in IUD insertion. Three courses were conducted in January and April 1984 for a total of 34 participants. Since the beginning of the program, 190 physicians, nurses, and paramedical personnel have participated in the program.

A two-week endoscopy course was conducted for six physicians in March 1984. Laparoscopy training has been offered only to Ministry of Health personnel, but within the next three years it will be offered to physicians from nonprofit organizations, such as family planning associations and church-affiliated groups.

Other Activities

JHPIEGO sponsored a laparoscopic equipment maintenance workshop in November 1983 in Nairobi. The workshop covered assembly and disassembly of Laproscators, sterilization of equipment, storage of equipment, external electrical and gas fittings, use of room air for insufflation, handling of equipment during an operation, repair of equipment, and informed consent. Nine doctors and 16 nurses from hospitals throughout Kenya attended the workshop.

In August 1984, the Department of Obstetrics and Gynecology of the

University of Nairobi, sponsored by JHPIEGO, conducted a national conference on reproductive health. The objective of the conference was to bring together former JHPIEGO trainees from Kenya. Forty-three physicians, 43 nurses, and two administrators attended. Other participants included representatives from church organizations, voluntary family planning organizations, and consultants from JHPIEGO and the International Programs Division of the Association for Voluntary Sterilization. For the first time, the various organizations in Kenya involved in reproductive health got together to coordinate their activities. Because the conference was sponsored by an academic department, it also bridged the gap between academic research and the provision of services in the field of family planning. The participants generally agreed that there is great demand for surgical contraception in Kenya. They felt that there should be more coordination among the organizations responsible for training in reproductive health, and they recommended that the training be standardized and that it include program management and data collection.

Reproductive Health in Africa was published in 1984. It is the proceedings of a symposium held in Kenya in February 1982, which was sponsored by JHPIEGO and the Kenya Obstetrics and Gynecology Society. Physicians and Ministry of Health administrators from selected Anglophone countries were invited to deliberate on the major reproductive health problems in Africa.

U.S. Training

Three Kenyan physicians took courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. Two took the infertility course and one took the STD course.

RWANDA

Rwanda ranks among the poorest nations of the world. It has a per capita GNP of 200 dollars per year and the highest population density in Africa, 196 people per square kilometer. In fiscal 1985, JHPIEGO will support a reproductive health education program designed for physicians and sixth-year medical students at the National University of Rwanda and paramedical personnel working for the Ministry of Health.

Regional and U.S. Training

Two physicians, two nurses, and three anesthetists from Rwanda attended courses in Morocco and Tunisia during fiscal 1984. Three Rwandans took courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. Two took the STD course and one took the administrators' course.

SOMALIA

Reproductive Health Training Program (NCA-29)

Somalia has undertaken a long-term program to strengthen primary health care services in rural areas. The Ministry of Health would like to reinforce the referral system from the district level to regional hospitals. Since 1981, the Reproductive Health Training Program administered by Benadir Maternity and Children's Hospital in Mogadishu has contributed to this effort by training primary care physicians and medical students from the School of Medicine of the National University. Graduates of the medical school are usually placed in district health facilities.

Lectures cover the core curriculum in reproductive health and family planning, obstetrical emergencies, high-risk pregnancy, nutrition in pregnancy, lactation, complications arising from female circumcision, gynecologic problems, and the organization of health services. Educational methodology is also included to encourage the physicians to train other members of their health care team. In the

clinical part of the course, trainees have hands-on experience with patients, i.e., patient counseling and management of women using different forms of contraception.

Through fiscal 1984, the course was offered to fourth-year medical students during their rotation at the Benadir Maternity and Children's Hospital. The students attended the same lectures as the physicians but had less clinical practice.

Two physician courses were held in February and June 1984 for 43 participants. Since the beginning of the program, 121 physicians have been trained. One course for 18 medical students was held in July.

In fiscal 1985, more primary care physicians will be trained, and, instead of fourth-year medical students, interns at the Benadir Maternity and Children's Hospital will participate to include more clinical practice in the course.

U.S. Training

Five Somalians attended courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. Two each took the STD course and the academic skills course and one took the infertility course.

SUDAN

Continuing Education in Reproductive Health for Medical Officers (NCA-21)

Communication and transportation problems in the Sudan make it difficult for general practitioners in rural health centers to keep abreast of advances in reproductive health. The Ministry of Health, with the assistance of JHPIEGO, has planned and implemented a program of continuing education in reproductive health for these physicians. There are no other continuing education courses in reproductive health in the Sudan besides those funded by JHPIEGO.

Two courses for a total of 46 physicians were held in Khartoum in October and December 1983, one course for eight physicians was held in Wad Medani in November, and a fourth course for 15 was held in Port Sudan in August 1984. Each course was three weeks long and included lectures on reversible methods of contraception, natural family planning, reproductive risk and the management of women in the high-risk category, diseases of pregnancy, and management of gynecological disorders. Several lectures covered issues in pediatrics. The physicians were divided into small groups for observation of laparoscopy, minilaparotomy, and IUD insertion. The physicians also visited a family planning clinic, a well-baby clinic, an infertility clinic, and prenatal and postnatal clinics.

A Repair and Maintenance Center that was established in 1982 was phased out in fiscal 1984. A laparoscopic equipment maintenance workshop was conducted in August 1984.

Regional and U. S. Training

One Sudanese physician was trained in Egypt during fiscal 1984. One health professional from the Sudan attended the STD course given at the Johns Hopkins Educational Center in Baltimore.

TANZANIA

Reproductive Health Program (NCA-37)

One of the major components of the maternal and child health programs of the Tanzania Ministry of Health is child spacing through modern methods of contraception. Infertility treatment is also an important part of the family planning services. General duty medical officers (GDMOs) are the primary health personnel dealing with child spacing and infertility referrals from medical assistants, nurses, and rural medical aids. The Reproductive Health Program supported the training of the medical officers and graduate nurses in didactic and clinical courses held at the

Kilimanjaro Christian Medical Center in Moshi and hospitals in Bugtando and Muhinbili.

Lectures focused on the various methods of fertility control and on the diagnosis and treatment of infertility. The clinical part of the course included team training of the medical officers and nurses in minilaparotomy and IUD insertion. At least ten minilaparotomies were performed by each team, and the medical officers certified as competent were given a minilap kit. The doctor-nurse teams also observed laparoscopic procedures for the diagnosis of infertility; performed at least two basic infertility diagnostic workups including a physical examination, history, and sperm analysis; prescribed contraceptives for five new acceptors; and provided follow-up care for at least five oral contraceptive users at their return visits.

One course was held in October 1983 for 12 physicians and 17 nurses. A second course was held in August 1984 for five physicians and seven nurses; because of delays in sending documentation, these trainees are not included in the tables. A total of 38 doctors and 39 nurses were trained in the program. Because of political problems, it will not be continued.

Regional and U.S. Training

Two Tanzanian nurses were trained in Egypt during fiscal 1984. One Tanzanian took the administrators' course given at the Johns Hopkins Educational Center in Baltimore.

UGANDA

Reproductive Health Training Program for Health Professionals (NCA-36)

The annual rate of population growth in Uganda increased from 2.6 percent in 1980 to 3.1 percent in 1984. The crude birth rate is 46 per 1,000 population, the total fertility rate is 6.1, and the infant mortality rate is 96 per 1,000 live births. The Reproductive Health Training Program for Health Professionals assists the Ugandan Government in instituting measures to decrease these high fertility and mortality rates, which impede efforts to improve public health and stimulate economic growth.

The program supports a five-day lecture course administered by the Makerere University in Kampala for physicians and one nurse, the Ministry of Health Principal Nursing Officer, who is in charge of training. Physicians are selected from the Ministry of Health staff, district and regional hospitals, missionary hospitals, the family planning association of Uganda, and from among private practitioners. One medical officer will be selected from each of the district hospitals.

In addition to the basic curriculum in reproductive health and family planning, lectures cover community health, maternal and child health, anatomy and physiology of reproduction, high-risk pregnancy, infertility, and administration of family planning programs. The participants also outline a curriculum for training physicians, nurses, and other paramedical personnel in reproductive health. The physicians and nurse are expected to assist in the development of future training programs.

The first course was conducted in September 1982 for 10 physicians and the nursing officer. Participation in that course was hampered by transportation and security problems. Lack of water and security problems delayed a second course until 1984 for eight physicians.

Regional and U.S. Training

Two Ugandan nurses were trained in Egypt during fiscal 1984. Five Ugandans took courses at the Johns Hopkins Educational Center in Baltimore. Two took the administrators' course and one each took the STD course, the academic skills course, and the infertility course.

SOUTHERN AFRICA

BOTSWANA

One nurse from Botswana was trained in Egypt during fiscal 1984, and one physician attended the infertility course given at the Johns Hopkins Educational Center in Baltimore.

COMORO ISLANDS

One anesthetist from the Comoro Islands was trained in Morocco during fiscal 1984.

LESOTHO

One physician from Lesotho took the STD course given at the Johns Hopkins Educational Center in Baltimore during fiscal 1984.

MADAGASCAR

Maternal and child health programs are a priority in Madagascar. One visit was made to Madagascar in fiscal 1984 to develop a reproductive health training program that will begin in fiscal 1985. The program calls for 31 hours of instruction for fifth-year medical students at the University of Madagascar in Antananarivo.

Regional and U.S. Training

JHPIEGO supported the training of three surgeons, one anesthetist, and two nurses from Madagascar in laparoscopy at centers in Morocco and Tunisia during fiscal 1984. At the request of the Ministry of Health, JHPIEGO has trained one surgeon in laparoscopy from each province in Madagascar.

Eight health professionals from Madagascar attended courses at the Johns Hopkins Educational Center in Baltimore. Four took the administrators' course, three took the course on advances in reproductive health, and one took the STD course. Their participation in the U. S. courses contributed to the development of the in-country program.

MALAWI

Three health professionals from Malawi attended courses at the Johns Hopkins Educational Center in Baltimore. Two took the STD course, and one took the administrators' course.

MAURITIUS

Comprehensive Reproductive Health Education and Training Program (NCA-73)

The long-term goals of the Ministry of Health of Mauritius include reducing the average number of children per family to two by 1987, reducing infant mortality from 35 to 20 per 1,000 live births by 1987, and making family planning services available at the village level. One visit was made to Mauritius in fiscal 1984 to develop a program with the Ministry of Health (MOH) to support the training of 100 physicians and 200 nurses or paramedical personnel in reproductive health. There is no medical school in Mauritius. The responsibility for updating the training of MOH personnel rests with the Ministry of Health.

Training will cover fertility management and reproductive health care, concepts of primary health care, the epidemiology of reproduction, immunization, pediatric emergencies, high-risk pregnancy, and nutrition. Clinical demonstrations will emphasize the management of family planning clinic clients, prenatal and postpartum care, and well-baby care.

During fiscal 1985, 50 physicians and 100 nurses or paramedical personnel, the majority from the Maternal/Child Health and Family Planning Division of the

Ministry of Health, are expected to take the course.

The courses will be conducted by 20 trainers who attended a five-day workshop in August 1984 on reproductive health and teaching techniques. The workshop was run by staff of the Mauritius Ministry of Health, with assistance from a JHPIEGO consultant, at the World Health Organization's Regional Training Center in Pamplounse.

Fiscal 1985

JHPIEGO is considering the establishment of a regional training center in Mauritius to train African physicians in surgical techniques of endoscopy and minilaparotomy.

JHPIEGO representatives met with Action Familiale, a private family planning organization, to plan an international conference on natural family planning (NFP) in Mauritius for the spring of 1986. Natural family planning has been promoted in Mauritius since the early 1970s and there is a well-established program in the country. Fifteen percent of contraceptive users in Mauritius use NFP. The objective of the conference would be to brief African health personnel on the various methods of NFP and to allow them to observe the management, administration, and evaluation of family planning programs that emphasize NFP.

Regional and U.S. Training

One physician, one nurse, and one anesthetist from Mauritius attended courses in Morocco and Tunisia during fiscal 1984. Two health professionals attended, respectively, the STD and the microsurgery courses at the Johns Hopkins Educational Center in Baltimore.

ZIMBABWE

Reproductive Health Training Program (NCA-41)

The purpose of this project is to support the development within Zimbabwe of training in reproductive health for postgraduate primary care general medical officers, clinical officers and/or senior nursing sisters/midwives staffing district hospitals or primary care centers. The courses are two weeks long and include lectures and clinical management seminars. The program is administered by the Child Spacing and Family Planning Council of Zimbabwe, in cooperation with the Faculty of Medicine of the University of Zimbabwe, on behalf of the Ministry of Health.

The topics covered in the course include child spacing (the demography of Zimbabwe, reversible and permanent methods of contraception, and patient counseling), obstetrics (antenatal care, toxemia of pregnancy, anemia, prolonged labor, cephalopelvic disproportion, obstetrical emergencies, and nutrition during pregnancy), gynecology (vaginitis, pelvic inflammatory disease, and sexually transmitted disease), and infertility (female and male factors). The clinical management seminars include discussion of case studies, review of the problems studied during the lectures, and observation of patient management. The courses are held in Harare.

A third component of the program calls for one-day outreach tutorials to be held monthly for ten months at district hospitals and primary care centers. On these field visits, an obstetrician-gynecologist from the University of Zimbabwe conducts teaching ward rounds, reviews difficult cases, and discusses problems with the trainees. Because of staff shortages in the Department of Obstetrics and Gynecology, it has not been possible to make all the visits stipulated in the agreement. The tutorials have been so successful, however, that the faculty of the Department of Obstetrics and Gynecology decided that only six visits would be required. The agreement has been amended.

Two courses were held in October 1983 and May 1984 for ten nurses and 20 physicians. The program is expected to continue in fiscal 1985.

Fiscal 1985/86

There are 32 institutions for the training of nurses and midwives in the eight provinces of Zimbabwe. Zimbabwe was visited in fiscal 1984 to develop a training program with the Ministry of Health in child-spacing methods for approximately 135 teachers at these institutions. This is a two-phase program scheduled for fiscal 1985-86.

Regional and U.S. Training

Two nurses from Zimbabwe were trained in Egypt during fiscal 1984. Three health professionals took courses at the Johns Hopkins Educational Center in Baltimore. Two took the infertility course and one took the STD course.

ASIA

JHPIEGO has contributed to the advanced state of reproductive health in Asia by supporting the training of over 2,200 health professionals. JHPIEGO has been active in Asia since the mid-1970s. The first in-country reproductive health program to receive support from JHPIEGO was in South Korea in fiscal 1975. Other countries in Asia that received JHPIEGO's early support for in-country training were Pakistan and the Philippines. In several countries, reproductive health programs that were initiated with funding from JHPIEGO are now supported by the national government. In Pakistan, for example, the government has assumed responsibility for in-country reproductive health training that JHPIEGO first funded in fiscal 1977.

As the training programs in reproductive health in Asia have matured, JHPIEGO's strategy in the region has evolved to meet changing needs. Programs have been cut back or eliminated as the objective of reaching health professionals in the major medical institutions has been reached. At the same time, JHPIEGO has begun to support small-scale experimental training programs. In Malaysia, for example, JHPIEGO supported an innovative correspondence course in fiscal 1984 that offered a diploma in family planning to 20 general practitioners in rural areas. The first microsurgery course sponsored by JHPIEGO in Asia was conducted in Thailand for six physicians in fiscal 1982. It was offered again in fiscal 1984, and a third course is planned for fiscal 1985. In Indonesia, JHPIEGO is considering the support of a satellite education program in reproductive health.

Another indicator of the evolving JHPIEGO curriculum in Asia is the increasing proportion of administrators, nurses, and paramedical personnel in the numbers trained annually. JHPIEGO-supported in-country training generally begins with courses for physicians and later includes other health personnel. In Asia in the last two fiscal years, the number of physicians trained has been roughly equal to the number of administrators, nurses, and paramedical personnel trained. In fiscal 1982, physicians made up 60 percent of the total trained.

The training of Asian professionals is accomplished for the most part in in-country and regional programs. In fiscal 1984, over 90 percent of the trainees attended courses in overseas programs. Thirty-two Asian health professionals attended courses at the Johns Hopkins Educational Center in Baltimore. Fourteen took the academic skills course, eight took the administrators' course, and five each took the STD and infertility courses.

JHPIEGO staff or consultants made six visits to Asian countries to develop programs or evaluate training sites during fiscal 1984. One field visit was made to Papua New Guinea. JHPIEGO also shipped ten laparoscopic systems to the region during the year.

EAST ASIA/OCEANIA

BURMA

Burma has a pronatalist population policy, but its health policy emphasizes integrated maternal and child health and family planning services. In fiscal 1980, four Burmese physicians attended courses at the Johns Hopkins Educational Center in Baltimore. This training marked the first time in ten years that Burma had participated in an AID-sponsored program. In fiscal 1981, JHPIEGO sponsored a two-week laparoscopic training program for 16 physicians and 25 nurses from the three principal medical institutions in Burma. Twenty-eight physicians and 24 nurses participated in the program in fiscal 1982. JHPIEGO is planning an update course in maternal and child health and family planning for 20 physicians in fiscal 1985.

Fiji

JHPIEGO has supported the training of 15 physicians from Fiji in advances in reproductive health either in the United States or in regional training programs. JHPIEGO has also equipped several major hospitals in Fiji with laparoscopic equipment. Fiji has a large influence on the entire South Pacific, and its School of Medicine has trained physicians from many South Pacific nations.

JHPIEGO has been working with the Ministry of Health in Fiji to develop two programs to begin in fiscal 1985. One is a refresher seminar on advances in reproductive health for physicians and nurses working in the provincial and district hospitals and medical centers. The second is a Reproductive Health Education Program for medical students at the Fiji Medical School in Suva.

Regional Training

One physician and one nurse from Fiji attended the Endoscopy Training Program in the Philippines.

INDONESIA

Indonesian Fertility Management Training Program (NCA-27)

Indonesia needs administrators in reproductive health who are sophisticated in the art of management and capable of influencing large populations. The Indonesian Fertility Management Training Program trains administrators and teams of doctors and nurses from rural hospitals to develop and administer reproductive health service programs. The intent is to decentralize family planning services to the community level. The program is administered by the University of Indonesia in Jakarta.

Participants in the program attend two weeks of lectures covering recent advances in reproductive health and the planning, implementation, and evaluation of public health programs. Nineteen administrators, physicians, nurses, and paramedical personnel attended a course given in March 1984. Since this program began in 1982, five courses have been held for 100 participants. In fiscal 1985, five courses are planned for 105 participants.

Regional and U. S. Training

Two Indonesian physicians attended the microsurgery course conducted in Thailand in January/February 1984. Ten Indonesians attended courses at the Johns Hopkins Educational Center in Baltimore. Four took the academic skills course, three the administrators' course, two the STD course, and one the infertility course.

Fiscal 1985/86

Indonesia is a 3,000-mile archipelago with five major islands and more than 13,500

smaller islands. Physicians in the remote areas have little opportunity to learn about advances in reproductive health. Indonesia has a recently installed satellite communications program that links the islands; JHPIEGO will support the development of a pilot program in reproductive health education for physicians, paramedical personnel, or administrators that will prepare the Indonesian Family Planning Board to utilize this type of technology.

JHPIEGO plans to support a course in microsurgery for tubal reanastomosis in 1986.

KIRIBATI

One health professional from Kiribati, an island group in the South Pacific, took the administrators' course given at the Johns Hopkins Educational Center in Baltimore.

MALAYSIA

Malaysian Reproductive Health and Endoscopy Training Program for Physicians and Nurses (NCA-25)

JHPIEGO supported a two-day evaluation workshop in Kuala Lumpur in May 1984 that marked the end of the Malaysian Reproductive Health and Endoscopy Training Program for Physicians and Nurses. The program was administered by the National Family Planning Board of Malaysia and trained a total of 45 physicians and 45 nurses. It had two components: endoscopy training and a correspondence course for general practitioners.

Fifty-five physicians and nurses participated in the workshop. They attended update lectures on reproductive health and diagnostic and therapeutic laparoscopy and evaluated the training program. Among their recommendations were (1) stricter criteria for selection of course participants, (2) a higher volume of cases for clinical training, (3) holding courses in rural areas, (4) posting of technicians in rural areas, (5) distribution of a quarterly bulletin to promote communication among participants in the family planning program, and (6) regular meetings of the participants to discuss common problems or to present papers. JHPIEGO will incorporate these recommendations in future reproductive health programs in Malaysia.

JHPIEGO supported an innovative correspondence course for general practitioners in rural health centers during fiscal 1984. It was administered by the Malaysian National Family Planning Board and offered a diploma in family planning as an addition to the diploma in general practice/family medicine. It was the first time a diploma in family planning has been awarded in Malaysia.

Each installment of the course was mailed weekly to the participants by the College of General Practitioners. The curriculum focused on fertility behavior and fertility regulation methods and covered other topics such as the anatomy and physiology of human reproduction, the pharmacology of sex hormones, the infertile couple, and elements of epidemiology. A multiple choice test was included in each package.

Three-hour tutorials were organized at four locations at roughly four-week intervals during the course. The tutorials allowed the trainees to review the information in the course and check the answers to the multiple choice questions. There were also three weekend lecture workshops during the course. Clinical experience for at least four hours a week was organized at family planning service centers set up by the National Family Planning Board (NFPB). The trainees observed and participated in clinical activities: they examined and provided family planning counseling to a minimum of 100 clients, performed at least 15 IUD insertions, and they learned record-keeping procedures. Minilaparotomy training was available to physicians who had surgical experience.

At the end of the course, there was a three-day review workshop in Kuala Lumpur followed by an examination. The general practitioners who completed the course now form a part of the NFPB network that provides family planning services in Malaysia. Twenty general practitioners took the course in fiscal 1984 (because of delays in the processing of documentation, they are not included in this year's tables).

The Repair and Maintenance Center in Kuala Lumpur, which was created in 1981, continued its activities in fiscal 1984.

U.S. Training

One Malaysian physician attended the academic skills course at the Johns Hopkins Educational Center in Baltimore.

PAPUA NEW GUINEA

Two laparoscopic systems were shipped to Papua New Guinea and one field visit was made during fiscal 1984.

PHILIPPINES

JHPIEGO supported a reproductive health/endoscopy training program and a reproductive health education program in the Philippines during fiscal 1984. Two program development visits were made to the Philippines during the year.

Philippines Endoscopy Training Program (NCA-15)

JHPIEGO's main contribution to the Philippine National Family Planning Program has been the training of physicians and nurses in reproductive health, including laparoscopy, minilaparotomy, and vasectomy. JHPIEGO has also provided laparoscopy equipment to the major Philippine medical institutions through the endoscopy training program at the Mary Johnston Hospital in Manila. This program has helped to increase the acceptance of interval tubal ligation in the Philippines.

The physician endoscopy course includes one week of lectures on reproductive health (family planning, laparoscopy, prenatal care and assessment, nutrition and pregnancy, etc.) and one week of clinical training in laparoscopy, minilaparotomy, and vasectomy. The trainees must assist at a minimum of five laparoscopy procedures and perform 15 laparoscopies and/or minilaparotomies.

During their three-week course, the nurses attend lectures on the benefits of child spacing, contraceptive methods, the nurse's role in family planning, management of sexually transmitted disease, and so on. In the clinical part of the course, the nurses assist the physicians during their laparoscopy, minilaparotomy, or vasectomy procedures. They learn to prepare an operating room for endoscopy procedures and to care for the laparoscopic equipment.

The program at the Mary Johnston Hospital includes a regional training program for physicians and nurses from other Asian countries. Participants receive three weeks of didactic and clinical training. The hospital also serves as a clinical practice center in laparoscopy for Asian physicians who have taken courses at the Johns Hopkins Educational Center in Baltimore.

Thirty-two Filipino physicians and 32 Filipino nurses were trained in courses held between October 1983 and May 1984. One regional physician was trained from Fiji. Three regional nurses were trained from Fiji and the Maldives. Since the beginning of the program, 206 Filipino physicians and 143 nurses have been trained. Fifteen physicians and 17 nurses from Tonga, the Maldives, the Solomon Islands, Fiji and Indonesia have also taken the course. Since the Mary Johnston Hospital became a clinical practice center, approximately 25 physicians from Burma, Fiji, Indonesia, Pakistan, and Papua New Guinea have received their clinical training there.

JHPIEGO sponsored the Second National Convention on Gynecologic Endoscopy in Manila in May 1984. Fifty physicians and 50 nurses who had completed the course in endoscopy at the Mary Johnston Hospital attended presentations on sterilization services in the Philippines, the role of laparoscopy in reproductive health, microsurgery, the Philippines endoscopy program, and anesthesia for laparoscopy. The participants met in small groups to discuss the establishment of a sterilization program and repair and maintenance centers, and the training of doctors and nurses in reproductive health.

The Repair and Maintenance Center at the Mary Johnston Hospital will be continued because, in addition to its maintenance activities, it serves as the link between JHPIEGO and the Filipino physicians who have been trained and equipped with support from JHPIEGO.

Integrated Reproductive Health Education Program (NCA-34)

JHPIEGO supported a reproductive health education program (REHEP) for medical students at the University of the Philippines. The program was administered by the Department of Obstetrics and Gynecology of the College of Medicine and the Philippine General Hospital. This was a three-year program offered to medical students in their second, third, and fourth years. Second-year students attended 28 hours of lectures on the anatomy and physiology of the female reproductive tract, history and physical examination in obstetrics and gynecology, and prenatal care and assessment. The rationale for child spacing was covered, as well as family planning methods; there was an emphasis on natural family planning, which is used widely in the Philippines. For third-year students, there were 40 hours of lectures covering gynecologic infection, sexually transmitted disease and concepts of reproductive health and high-risk obstetrics. There were also 21 hours of clinical management seminars. Fourth-year students underwent a six-week rotation in reproductive health at the Philippine General Hospital. The course began in June 1982. A total of 257 students participated in the first year. Because of delays in sending documentation, no students are reported in this year's tables.

U.S. Training

One Filipino physician attended the academic skills course given at the Johns Hopkins Educational Center in Baltimore.

SOLOMON ISLANDS

The Solomon Islands received their first laparoscopic system from JHPIEGO during fiscal 1984.

SOUTH KOREA

JHPIEGO supported its first in-country reproductive health training program in South Korea in 1975. Since then, South Korea has become a graduate country in reproductive health. Four hospitals have continued to serve as clinical practice training centers for Asian physicians who have taken courses at the Johns Hopkins Educational Center in Baltimore. These centers will not be needed in the future because most countries in East Asia have established their own clinical training programs.

THAILAND

JHPIEGO supported two programs in Thailand in fiscal 1984: a reproductive health/endoscopy program for physicians and nurses and a microsurgery course. One trip for program development was made to Thailand during fiscal 1984.

Thailand National Endoscopy Educational Research Program (NCA-44)

JHPIEGO has supported training in reproductive health and endoscopy as part of the Thai National Family Planning Program since fiscal 1980. It has equipped 72 centers in Thailand with laparoscopic equipment and supports a Repair and Maintenance Center that is managed by the Ministry of Public Health. Medical institutions in Thailand are now well staffed with physicians trained in reproductive health and endoscopy, and future JHPIEGO support will be minimal. Twenty physicians and 27 nurses attended a course in May 1984.

Workshop in Gynecological Microsurgery for Reversal of Sterilization (NCA-53)

Very few gynecologists or surgeons from Asian and Near Eastern countries have been trained in microsurgical tubal reanastomosis. JHPIEGO has received many requests from physicians in these countries for microsurgery training at the Johns Hopkins Educational Center in Baltimore and in in-country programs funded by JHPIEGO. JHPIEGO sponsored its first microsurgery program in Asia in Thailand at the Chulalongkorn University in Bangkok in fiscal 1982. The second course, offered in January/February 1984, was attended by seven physicians: three from Thailand, two from Indonesia, one from India, and one from Pakistan. The course comprised approximately 80 hours of training given four hours a day over two weeks. It included lectures on tubal physiology and the use of the operating microscope, loops, instrumentation, and suture material in microsurgery. The participants practiced microsurgery on animals and observed a physician performing a tubal reanastomosis. The highlight of the course was the playing of a videotape of the reanastomosis on closed circuit television. The director of the program, Dr. Kobchitt Limpaphayom, received her training in microsurgery at the Johns Hopkins Educational Center in Baltimore in fiscal 1979. A third microsurgery course is planned for fiscal 1985.

U.S. Training

Nine Thai health professionals attended courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. Four took the academic skills course, two each took the STD and administrators' courses, and one took the infertility course.

Fiscal 1985/86

JHPIEGO is planning to support a regional academic skills course or a course on sexually transmitted diseases at the Chulalongkorn University. There are also plans for a regional epidemiology course to be held in Thailand in cooperation with the Centers for Disease Control.

SOUTH ASIA

BANGLADESH

JHPIEGO is considering the support of a dean's conference to standardize the teaching of reproductive health in the seven medical schools in Bangladesh.

INDIA

JHPIEGO is planning to fund five workshops in India in 1985 to train physicians and health workers in natural family planning. Approximately 150 participants are expected.

One Indian physician attended the microsurgery course conducted in Thailand during fiscal 1984. Three Indian health professionals took courses at the Johns Hopkins Educational Center in Baltimore. Two took the academic skills course and one took the STD course.

MALDIVES

One physician and two nurses attended the Philippine Endoscopy Training Program during fiscal 1984.

NEPAL

In order to increase the availability of contraceptive services, especially surgical contraception, in Nepal, JHPIEGO is planning to support the training of gynecologists and general practitioners in reproductive health and tubal ligation in fiscal 1986.

PAKISTAN

JHPIEGO has not had major AID-supported activities in Pakistan because of political constraints. These constraints were removed recently, and the government of Pakistan began again to nominate physicians to participate in courses at the Johns Hopkins Educational Center in Baltimore. During fiscal 1984, two trainees from Pakistan participated in the course for administrators of family planning programs. One Pakistani physician attended the microsurgery course conducted in Thailand in January/February 1984. At the request of the Islamabad office of the United Nations Fund for Population Activities, JHPIEGO conducted equipment maintenance workshops in Rawalpindi, Islamabad, Lahore, Multan, Karachi, and Peshawar in May 1984.

Fiscal 1985/86

There is a great need to standardize the teaching of reproductive health in Pakistan's medical schools. JHPIEGO is considering support for a conference of medical school deans and chairmen of the departments of Obstetrics and Gynecology in Pakistan in 1986 to standardize the curriculum. Based on the recommendations of this conference, JHPIEGO will support a model reproductive health training program in one medical school.

SRI LANKA

Sri Lanka Laparoscopy Program

The second course in the Sri Lanka Laparoscopy Program, scheduled for April 1984 for ten physicians and ten nurses, was delayed until November. Ten physicians and ten nurses were trained in the first course held in fiscal 1983. The course includes lectures on reproductive health and clinical training in laparoscopy that emphasizes the use of local anesthesia. The course is administered by the Ministry of Health/Government of Sri Lanka. JHPIEGO expects that training in endoscopy will

eventually be supported entirely by the Government of Sri Lanka.

U.S. Training

Four Sri Lankan health professionals took courses at the Johns Hopkins Educational Center in Baltimore during fiscal 1984. Two each took the academic skills course and the infertility course.

Fiscal 1895/86

Plans for a Reproductive Health Education Program (REHEP) in Colombo and Kandy had to be revised because of political and ethnic unrest. A REHEP in Colombo University in 1985 is being explored.

A two-day conference of JHPIEGO alumni from the Asia region is being planned to coincide with the Tenth ASCEAN Congress of Obstetricians and Gynecologists, which will be held in Sri Lanka in 1985.

LATIN AMERICA/CARIBBEAN

Since 1974, almost 18,000 health professionals and students from Latin America and the Caribbean have participated in reproductive health programs supported by JHPIEGO. JHPIEGO has been able to reach a large number of health personnel in the region by emphasizing the health rationale for family planning and, more recently, the concept of reproductive risk. In fiscal 1984, approximately 6,800 physicians, nurses, administrators, paramedical personnel, and medical and nursing students participated in JHPIEGO-supported programs.

Most of JHPIEGO's programs in Latin America fall into one of three categories: clinical programs for obstetrician-gynecologists, general practitioners, and nurses that include training in laparoscopy, minilaparotomy, and IUD management; education programs (REHEPs) for medical and nursing students; and pilot programs to train health professionals, especially paramedical personnel, to carry out reproductive risk classification and referral systems.

In fiscal 1984, reproductive health courses that included training in laparoscopy, minilaparotomy, and IUD management were conducted in Brazil and Colombia. Over 100 physicians and nurses participated in these reproductive health training programs. The figure would have been higher had it not been for delays in training beyond JHPIEGO's control.

JHPIEGO supports reproductive health education programs in Brazil, Guatemala, Honduras, and Mexico. The intent of the programs is to instill in medical and nursing students an appreciation of reproductive health and family planning early in their careers. The program in Mexico differs somewhat from those in Brazil, Guatemala, and Honduras, in that its prime intent is to teach the students family planning for their own use with the expectation that this knowledge will carry over to their clinical practice. Over 90 percent of the 6,800 health personnel trained in Latin America and the Caribbean during fiscal 1984 were medical and nursing students. Two-thirds of the students participated in the Mexican medical school program. JHPIEGO expects that, once its support ends for these programs, they will be absorbed into the standard curriculum of the medical and nursing schools.

JHPIEGO initiated two reproductive risk programs to link community and clinically based family planning services in Brazil and Peru. These are grassroots programs in which paramedical personnel are taught to classify women by factors such as age, parity, and time since their last birth. The health workers refer high-risk women to a physician who has been trained in the program in clinical and surgical techniques of contraception. By identifying women at risk and helping them to space their births, have smaller families, and have pregnancies at favorable ages, these programs can help to reduce maternal and infant mortality and morbidity. The key to applying the reproductive risk concept is to keep the classification system simple so that it can be used by all levels of health personnel, including village health workers. This strategy encourages the perception of family planning

as a health intervention among health providers, especially obstetrician-gynecologists, because it links family planning with gynecologic and obstetrical care.

A fourth highlight of training in the Latin America/Caribbean region during fiscal 1984 was the pilot satellite education program administered by the University of the West Indies in Jamaica. Five islands in the Caribbean were linked in an interactive audio network over which reproductive health courses for physicians and nurses were broadcast. The pilot project was successful and the program will be expanded in fiscal 1985.

For the past few years, JHPIEGO has emphasized in-country training and gradually decreased the number of health personnel trained in the United States. This trend is especially apparent in Latin America. The Johns Hopkins Educational Center in Baltimore no longer offers courses in Spanish or Portuguese, and only seven health professionals from Latin America and the Caribbean were trained in the United States in fiscal 1984. Since 1974, almost 900 health professionals from the region have attended courses at the Educational Center, compared with roughly 600 from Africa and 500 from Asia. JHPIEGO has by and large fulfilled its objectives with regard to the U.S. training of health personnel from Latin America and the Caribbean.

Other important activities were carried out in the region during the year. Clinical practice centers in Brazil, Colombia, Jamaica, and Mexico provided surgical training in minilaparotomy and laparoscopy to 111 physicians. JHPIEGO supported equipment maintenance centers in Brazil, Colombia, Costa Rica, and El Salvador. The Repair and Maintenance (RAM) Center in Brazil was restructured and streamlined.

LATIN AMERICA

BOLIVIA

JHPIEGO is developing a reproductive health, laparoscopy, and minilaparotomy training project with Centro de Orientacion Familiar in Bolivia that will emphasize the training of personnel from outside La Paz. A pilot project to promote the concept of reproductive risk among high-level health officials will be included.

BRAZIL

JHPIEGO supports five programs in Brazil: the Brazilian Family Planning Training and Development Center, three reproductive health education programs, and a community family health program based on the concept of reproductive risk. Figure 4 shows the location of these programs.

JHPIEGO support for laparoscopy training is being phased down in Brazil and support for minilaparotomy training in the regions is being emphasized. It is anticipated that JHPIEGO will continue to support training in laparoscopy for a minimum of 20 physicians each year through 1987. JHPIEGO will continue to support the training of nurses and anesthetists in numbers proportional to complement physician training.

Training in other family planning methods, including minilaparotomy and IUD management, will be emphasized, given the relatively greater need. It is anticipated that JHPIEGO will continue to support training of 75 physicians in minilaparotomy and IUD management through CPAIMC each year through 1987. JHPIEGO also plans to support training of 40-50 physicians in minilaparotomy and IUD management through BEMFAM each year through 1988.

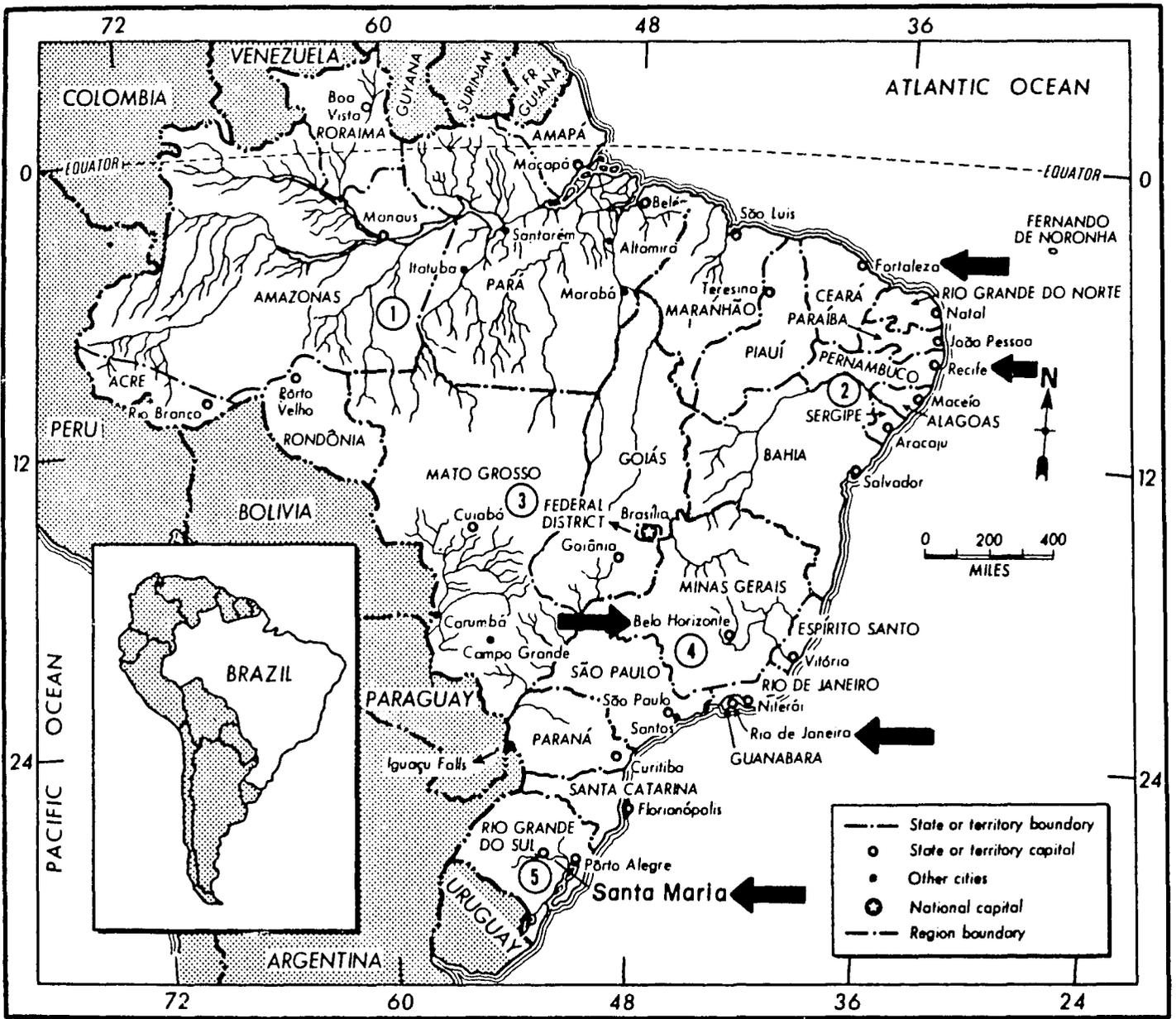
Given the increasingly favorable climate towards family planning in Brazil, training needs in reproductive health and contraceptive technology will probably be increasing in the near future. This may require JHPIEGO to adjust projected training figures upward. JHPIEGO will continue to be receptive to needs and requests for training in Brazil in both the private and public sector.

Continued support for reproductive health education programs at the university level will depend on findings of an evaluation that JHPIEGO is conducting of the three currently funded medical and nursing student programs. Results from this evaluation will be available in fiscal 1985.

Brazilian Family Planning Training and Development Center (NCA-35)

JHPIEGO first established a reproductive health education program in Brazil in fiscal 1980 to train physicians and other health professionals in methods of fertility management. Fiscal 1984 was the fifth year of the Brazilian Family Planning Training and Development Center, which is administered by the Center for Research and Integrated Assistance to Mothers and Children (CPAIMC). It supports the training of obstetrician-gynecologists and general practitioners in reproductive health and general family planning skills. Obstetrician-gynecologists receive additional training in laparoscopy and general practitioners are instructed in minilaparotomy. The program also supports the training of nurses and anesthetists. CPAIMC estimates that roughly 7.5 million women are potential requestors of voluntary surgical contraception in Brazil, and that anywhere from 1,900 to 3,000 physicians need to be trained in laparoscopy and minilaparotomy to meet the expected demand for sterilization.

The course for obstetrician-gynecologists includes five days of lectures and six days of clinical practice. Physicians must perform a minimum of 18 laparoscopic procedures under supervision to be certified as competent. General practitioners



- ① NORTH
- ② NORTHEAST
- ③ CENTRAL-WEST
- ④ SOUTHEAST
- ⑤ SOUTH

FIGURE 4 Brazil: Heavy arrows indicate the location of fiscal 1984 training programs (adapted from Weil et al., Area Handbook for Brazil)

attend six-day courses that include instruction in IUD insertion and management techniques for family planning programs. They observe laparoscopic procedures and must perform at least 12 minilaparotomies to be certified.

In the five-day nurse endoscopy course, nurses learn to assist doctors during laparoscopic procedures and to maintain laparoscopic equipment. The course includes a basic practicum in operating room procedures, cleaning and maintenance of equipment, patient management in the ambulatory family planning clinic, and client counseling, especially with regard to informed consent for the use of surgical contraception.

The course for anesthetists consists of five days of training in local anesthesia for outpatient contraceptive surgical procedures. One-on-one tutorial sessions of approximately four hours each day are conducted in CPAIMC operating theatres.

Since the beginning of this program in 1980, CPAIMC has trained 246 obstetricians-gynecologists in laparoscopy, 131 physicians in minilaparotomy, 185 nurses, and 80 anesthetists. In fiscal 1984, 22 obstetrician-gynecologists, 35 general practitioners, 41 nurses, and 11 anesthetists were trained. One general practitioner trained in fiscal 1983 is included in this year's tables. In the future, minilaparotomy and IUD training will continue to be emphasized in order to meet the needs of rural women for reproductive health services.

Reproductive Health Education Programs

JHPIEGO began support for the training of medical and nursing students in reproductive health in 1980 in Santa Maria in southern Brazil. Reproductive Health Education Programs (REHEPs) were subsequently started in Belo Horizonte in central Brazil in 1981 and in Fortaleza in the northeast in 1982. There is a great need for the education of medical students in reproductive health. The curriculum in most medical and nursing schools is curative rather than preventive in its orientation.

The REHEP courses, though they vary somewhat at each site, include lectures, seminars, and clinical observation. The lectures cover the permanent and reversible methods of family planning, pediatrics, and issues in obstetrics and gynecology. During the seminars the students discuss case studies in small groups, and during the clinical observation component, they observe pediatric and family planning clinics. The courses are popular because they provide students with the opportunity to learn how to control their own fertility. They also include small-group discussion; this is unusual in medical schools in Brazil, where lectures are the general rule. Project directors have found the clinical observation sessions to be particularly effective, and they are increasing the percentage of time spent at the clinics.

In Santa Maria, the REHEP (NCA-28) is conducted by the Santa Maria Institute of Reproductive Health (SMIRH). In fiscal 1984, training was scheduled for 100 students, but because of a teachers' strike the course was postponed. A total of 115 medical and nursing students were trained in fiscal 1983 but were not included in last year's annual report because of delays in sending documentation. They are included in the fiscal 1984 tables. One hundred medical and nursing students are expected to be trained in fiscal 1985, the final year of funding.

In Belo Horizonte, the program (NCA-31) is conducted by the Centro de Estudos e Pesquisa Clovis Salgado (CEPECS). In fiscal 1984, 35 medical students were trained. Sixty-one medical students and 31 nursing students were trained in fiscal 1983 but were not reported in last year's annual report. They are included in this year's tables. A total of 325 students are scheduled to be trained in fiscal 1985, which is the final year of funding.

The program in Fortaleza (NCA-40), in the relatively underserved northeast state

of Ceara, is conducted by the Sociedade de Assistencia a Maternidade Escola Assis Chateaubriand (SAMEAC). In fiscal 1984, 69 medical students and 28 nursing students were trained. In fiscal 1985, 150 students are expected to be trained. This project will continue through fiscal 1986.

Based on the encouraging preliminary results of these three REHEP programs, JHPIEGO will explore the expansion of the REHEP projects to other medical and nursing schools in Brazil and to other countries in Latin America.

Development of Human Resources for a Community Family Planning Program Based on the Concept of Reproductive Risk (NCA-61)

Maternal mortality in Brazil is about 134 per 100,000 live births, nine times the average of 14.8 deaths per 100,000 live births reported in developed countries. The purpose of this program is to train physicians from municipal clinics in minilaparotomy, IUD management, and other family planning skills, and to develop a system of classification and referral based on the concept of reproductive risk. The site of the project is the northeast state of Pernambuco. The maternal mortality rate in Recife, the capital of Pernambuco, is 220 per 100,000 live births.

This is a four year program to train 180 physicians and 600 paramedics and to develop and test a reproductive risk classification and referral system. The project also calls for seminars for health professionals, medical students, and municipal leaders on the importance of reproductive risk in maternal and child health.

The Brazilian Civil Society for Family Welfare (BEMFAM) administers the program. Pernambuco was chosen because of its high maternal mortality rate and because BEMFAM has been operating a community-based distribution (CBD) system there since 1975.

Physicians are to be trained in family planning and reproductive risk and surgical and nonsurgical techniques of contraception at the Institute of Human Reproduction of Pernambuco. The paramedical trainers take a three-day course covering reproductive risk concepts, contraceptive methods, and the objectives of the project. They train distributors in the CBD system, mostly paramedics, to carry out the reproductive risk classification and referral system. The system is to be tested in and around Recife and eventually extended statewide.

During fiscal 1984, 44 physicians, 15 paramedical trainers, and 50 paramedics were expected to be trained, and the classification and referral system was to be tested in and around Recife. Because of the U.S. Government funding moratorium on Brazil, however, training will not begin until early fiscal 1985. The conference inaugurating the first year of the program is scheduled for early fiscal 1985 in Rio de Janeiro.

Repair and Maintenance Center

The Brazilian Maintenance Center began operating in November 1979. It has managed the installation and maintenance of 243 laparoscopic systems in 170 institutions in Brazil. Three technicians were trained to manage the maintenance activities throughout Brazil.

In fiscal 1984, the maintenance center was restructured to improve efficiency and reduce costs. The number of maintenance visits was reduced because on-site maintenance has proved to be sufficient. Technicians no longer conduct installation visits; rather, the laparoscopic systems are installed by the physicians. Ninety-five percent of the spare parts are mailed instead of delivered, and the number of technicians has been reduced to two. Based on the records of maintenance activities, it appears that the center is functioning well.

U.S. Training

One Brazilian health professional attended the infertility course offered at the Johns Hopkins Educational Center in Baltimore.

COLOMBIA

JHPIEGO supports three reproductive health training programs in Colombia. Two include instruction in surgical techniques of contraception and the other emphasizes training in IUD insertion for general practitioners.

Colombia National Program of Pelvic Endoscopy and Surgical Techniques (NCA-30)

Fiscal 1984 was the fourth year of this five-year program to assist Colombia in establishing facilities for voluntary surgical contraception in public and private sector institutions. The tripartite agreement involving JHPIEGO, the Ministry of Health, and Profamilia is administered by Profamilia. Since 1980, 202 laparoscopic systems have been placed in over 100 institutions, principally in MOH teaching hospitals, regional hospitals, major maternity hospitals, and Profamilia clinics.

The training of doctor-nurse teams is encouraged. Physicians are taught techniques of laparoscopy and minilaparotomy; the advantages of local anesthesia for endoscopic procedures are stressed. The nurses are trained to assist the physicians during the endoscopic procedures. They receive instruction in operating room procedures and in the care and maintenance of laparoscopic equipment and minilaparotomy kits. During the clinical practice, physicians perform a minimum of 18 procedures, either laparoscopies or minilaparotomies, and nurses must assist in a minimum of 18 procedures. The training is conducted in 14 minilaparotomy clinical practice centers and in the eight laparoscopy clinical practice centers throughout the country.

Because of changes in personnel in the Ministry of Health, the program was temporarily suspended. As a result, only ten physicians and six nurses were trained in fiscal 1984. Twenty physicians and 14 nurses trained in fiscal 1983 were not reported in last year's annual report because of delays in sending documentation. They are included in this year's tables. In fiscal 1985, a new training program in reproductive health will be designed based on equipment and training surveys to be conducted by the MOH.

Reproductive Health and IUD Training Program for General Practitioners (NCA-59)

According to a report issued by the Colombian Social Security Institute (ISS) in 1981, two major causes of hospitalization of women of childbearing age in the ISS system were complications of pregnancy and abortion. In order to decrease the hospitalization of women of childbearing age, the ISS launched its Program in Human Fertility in April 1982. JHPIEGO is providing funds through the Colombian Association for Population Studies (ACEP) to train approximately 75 percent of the ISS general practitioners (about 1,500 doctors) over four years in family planning and its relationship to maternal and child health, human reproduction, methods of contraception, including surgical methods, and infertility. A smaller number of nurses will take the lecture component of the course. The course will emphasize the provision of IUDs and oral contraceptives. It will be given in training centers that have been established in obstetrics and gynecology clinics of the ISS hospitals in the five major cities of Colombia: Bogota, Cali, Medellin, Barranquilla, and Bucaramanga. The course plans call for eight hours of lectures, four hours of seminars or demonstrations, and eight hours of clinical practice. The training in this program was delayed in fiscal 1984; it is expected to start in fiscal 1985.

Profamilia International Training Center

Profamilia has administered a clinical training center with support from JHPIEGO since 1978. The center serves as a regional training center for Latin American physicians and as a clinical practice center for participants in courses at the Johns Hopkins Educational Center in Baltimore. It was the first JHPIEGO-supported clinical practice center.

Five physician-anesthetist-nurse teams from Peru and four from Bolivia were trained in laparoscopy at the center in fiscal 1983. During fiscal 1984, a physician from Uruguay was trained at the center, and the project coordinator for the Peruvian Reproductive Health Training Program (see below under Peru) took his clinical practice there after attending the clinician course at the Johns Hopkins Educational Center. Three more teams from Peru are expected to be trained at the center in fiscal 1985.

Fiscal 1985

JHPIEGO plans to support a contraceptive update symposium for health professionals from the public and private sector.

COSTA RICA

Reproductive Health Training for General Practitioners (NCA-56)

The government of Costa Rica has made primary health care in rural and marginal urban areas a high priority. The purpose of this program is to provide reproductive health training to 180 general practitioners in the social security system. These 180 physicians make up 70 percent of the general practitioners working in rural areas for the social security system. Six physicians per year from other countries in Central America will also be allowed to take the course. A second component of the program is a pilot project in reproductive health that includes the training of paramedical personnel in the reproductive risk concept and the design of a classification and referral system based on reproductive risk.

Sixty general practitioners a year are expected to take the 165-hour six-week course. The course is scheduled four times a year for approximately 15 physicians per session. Sixty hours of lectures, 30 hours of seminars, and 75 hours of clinical practice are planned. The lectures will cover family planning, infertility, obstetrics, gynecology, neonatology, nutrition of mother and child, and pediatrics. The clinical practice will include instruction in pediatrics and IUD insertion; each participant must do a minimum of ten insertions to meet the course requirements.

The pilot project in reproductive risk calls for the Ministry of Health (MOH) to select the rural and marginal areas to be included in the project and the identification of paramedical personnel to be trained. The MOH will also be responsible for the design of the classification and referral system. It is expected that CENDEISS (the training section of the Social Security System) and the MOH will train approximately 100 paramedics in family planning methods, reproductive risk concepts, and the classification and referral system. There will be an evaluation workshop to review the classification and referral system and its effect on the delivery of clinical contraception by the general practitioners in rural health centers.

Training in this program was scheduled to begin in fiscal 1984 but was postponed because of bureaucratic delays; it is expected to begin in fiscal 1985.

GUATEMALA

Guatemalan Reproductive Health Education Program (NCA-42)

Fifth-year medical students at the University of San Carlos are instructed in

reproductive health, family planning, and maternal and child health in an extracurricular 30-hour didactic course. A second part of the course offers clinical training in family planning and IUD insertion for student instructors --recent graduates of the university working for the Ministry of Health. JHPIEGO funds the program through APROFAM, the private family planning organization.

The main campus of the University of San Carlos is located in Guatemala City, and there are four branches in Coban, Quezaltenango, Antigua, and Escuintla. The course for medical students is offered in all five cities at the same time as the students take a course in gynecologic problems in the university curriculum.

The course was expanded from 20 to 30 hours in fiscal 1984 to include more information on primary health care. Depending on the location, the course may be given in ten three-hour installments or ten hours a day for three days. There are roughly 50 students per class.

The course for the student instructors provides update training in reproductive health, with emphasis on IUD insertion. Another goal of the course is to standardize the training in reproductive health that the instructors give to medical students. The course is given in Guatemala City. It includes eight hours of lectures on patient management techniques, clinic organization, and contraceptive distribution. There are 15 hours of clinical practice during which each instructor must perform at least ten IUD insertions in order to be certified.

A third component of the program is a three-day evaluation workshop for representatives from the Ministry of Health, San Carlos University, and APROFAM. All 40 instructors and 25 of the 500 medical students trained will also attend.

Courses were held for 207 medical students in October and December 1983. A total of 317 medical students and 15 instructors trained in 1982 and 1983 were not reported previously because of delays in sending documentation; they are included in this year's tables. In fiscal 1985, 660 students and 40 instructors are expected to participate in the program.

Fiscal 1985

JHPIEGO plans to support a small project in reproductive health for medical students at Guatemala's private medical school, Universidad Francisco Marroquin.

HONDURAS

Reproductive Health Education Program (NCA-57)

The Honduran government considers family planning an integral part of maternal and child health. The Reproductive Health Education Program was designed to train fifth- and sixth-year medical students and final-year nursing students at the Universidad Autonoma of Honduras in reproductive health within the context of maternal and child health.

The program included lectures, clinical management seminars, and clinical practice. The lectures covered human reproduction, family planning, priorities in preventive gynecology, pediatrics, nutrition, and administration of health services. The seminars were for groups of ten students and included discussion, films, case presentations, demonstrations of equipment, and discussion of case studies. The supervised clinical practice included the application of skills related to the management and prevention of pediatric, prenatal, and postnatal reproductive health problems.

A total of 49 medical students were trained in courses held in March and May 1984.

MEXICO

Fertility Management Education: A Special Course for Mexican Medical Schools (NCA-8)

In 1975, officials at Mexican medical schools became aware of a high pregnancy rate among medical students and the spouses of medical students who had finished their fourth year and were entering their undergraduate internship. The Fertility Management Education program addresses this problem by teaching family planning to the students as users early in their medical education. The students are at the height of curiosity about sexuality and reproduction. They have also just begun a long grinding course of study, and most wish to finish unencumbered by dependents. Project staff designed the course to capitalize on the youthful curiosity of the students and to meet their immediate personal needs. The sponsors of the program, the Association of Mexican Medical Schools (AMFEM), also believe that the students who attend the course are more likely to be future promoters of family planning. The course serves as a basis for future medical training in contraceptive technology.

The course is now offered in over half of Mexico's medical schools. Project staff have been able to distribute the course widely by using a "Big Mac" theory of management; they have designed it to be convenient, appetizing, and of standardizable quality.

The program began in September 1981. During fiscal 1984, 4,090 medical students took the course. A total of 1,254 students who attended the course last year, but were not reported in last year's annual report, are included in this year's tables. In fiscal 1985, the final year that JHPIEGO will fund the program, another 6,500 medical students in 37 medical schools are expected to participate in 325 courses.

The course consists of 15 hours of lectures and demonstration sessions. Classes of at least 20 students meet for one hour a day five days a week for three weeks. Each student receives a brown bag sampler of contraceptives in the second hour of the course.

Twenty-eight course directors from 24 medical schools met in October 1983, and 56 instructors from 31 medical schools met in November to review the medical education program. They concluded that (1) the course should be kept short, simple, and practical to maintain student interest; (2) second-year students seem to be the most receptive to the course; (3) the brown bag sampler is very effective; (4) students should have hands-on practice with models and, if possible, some exposure to a local family planning clinic; (5) students should learn where and to whom family planning services are offered in Mexico; and (6) the doctor/patient relationship should continue to be emphasized during the final two or three hours of the course.

Three coordination meetings are scheduled for fiscal 1985 to ensure continued support from the medical schools when JHPIEGO funding ends and to promote the inclusion of the family planning course in the curricula of the medical schools.

Fiscal 1985

JHPIEGO plans to support national and international seminars in Mexico on the promotion and dissemination of the reproductive risk concept for key technical and administrative personnel from Mexico and the Latin America region.

PERU

The Peruvian Reproductive Health Training Program (NCA-66)

JHPIEGO's program in Peru emphasizes the health rationale for family planning through the concept of reproductive risk. The initial step in this three-year project was a four-day conference held at the Johns Hopkins Educational Center in

Baltimore in November 1983. The Director-General of Health Services from the Peruvian Ministry of Health was part of the teaching faculty and 20 Peruvian physicians from the Ministry of Health and the Social Security Institute attended. They listened to a presentation by Colombia's Chief of Maternal and Child Health on his country's use of the reproductive risk concept. Other presentations emphasized the health benefits of family planning and the concept of reproductive risk. The Peruvian officials discussed a strategy based on reproductive risk to integrate family planning into the Peruvian health care system. After the seminar the officials visited Mexico and Colombia to observe integrated programs of maternal and child health and family planning.

With funding from AID/Peru, a national reproductive risk seminar was convened in Lima in March of 1984. The Vice-Minister of Health of Peru attended, as well as 16 of the officials who participated in the conference in Baltimore. The purpose of the seminar was to discuss the potential benefits of the reproductive risk program and to develop plans for implementing the program.

There are four other components of this program. The first component comprised six five-day regional seminars in reproductive health supported by AID/Peru. Officials who attended the seminar in Baltimore assisted MOH personnel in their districts to define and design strategies for health services based on the concept of reproductive risk.

The second component of the project calls for the training of 160 obstetrician-gynecologists and 300 general practitioners in reproductive health and techniques of contraception during ten-day tutorial/clinical training sessions. The tutorials will cover the concept of reproductive risk, clinical and nonclinical methods of contraception, including natural family planning and breastfeeding, and a review of maternal and child health services. Clinical practice for the obstetrician-gynecologists will include training in minilaparotomy and IUD insertion.

The third component of the program is a pilot project in reproductive risk in the Ica health region south of Lima. The Ica region is an agricultural area with a relatively well-developed health care system. It also includes urban, periurban, and rural areas. For these reasons, and because there is already an AID-funded pilot project integrating maternal and child health and family planning services in the region, Ica was chosen for the JHPIEGO reproductive risk pilot project. The pilot project will develop and test a risk classification and referral system. The Peruvian Ministry of Health plans to apply the tested system throughout Peru.

The fourth component will be a contraceptive update symposium for health professionals from the public and private sector.

The regional seminars were conducted during fiscal 1984. Because of bureaucratic delays, however, training will not begin until fiscal 1985.

Two members of the Peruvian MOH staff will attend the two-day reproductive risk workshop in Rio de Janeiro in early fiscal 1985. This workshop was part of the reproductive risk pilot project in the state of Pernambuco in Brazil, which is similar to this project in the Ica region.

U. S. Training

One Peruvian physician, the project coordinator of the Reproductive Health Training Program attended the clinician course offered at the Johns Hopkins Educational Center in Baltimore. He was trained in laparoscopy in Colombia.

THE CARIBBEAN

DOMINICA

One health professional from Dominica attended the STD course offered at the Johns Hopkins Educational Center in Baltimore.

HAITI

Repair and Maintenance Center

Over the past few years, the demand for voluntary surgical contraception has increased in Haiti. The Division of Family Hygiene and Nutrition (DHFN) has requested that JHPIEGO train physicians in laparoscopy, equip them with Laproscators, establish a Repair and Maintenance center, and train a technician.

A Repair and Maintenance Center has been set up in the headquarters of the DHFN in Port-au-Prince, and a technician has been trained. The technician will train clinical and paramedical personnel in the care and handling of laparoscopic equipment. JHPIEGO donated 14 of the 16 laparoscopic systems that are in Haiti (the other two were donated by the International Programs Division of the Association for Voluntary Sterilization). JHPIEGO will furnish adequate supplies, spare parts, and replacement parts for the laparoscopic equipment in Haiti. In fiscal 1985, training programs will be under way for physicians and nurses in laparoscopy and contraceptive techniques.

U.S. Training

Two health professionals from Haiti attended the STD course offered at the Johns Hopkins Educational Center in Baltimore.

JAMAICA

JHPIEGO supported three programs in Jamaica in fiscal 1984: a clinical family planning training program, a pilot satellite education program, and a clinical practice center.

Jamaican Clinical Family Planning Training Program (NCA-39)

This program, coordinated by the National Family Planning Board, updates ministry of health and nursing primary health care personnel in clinical and organizational aspects of family planning. The course consists of weekend seminars for physicians, three-day seminars for the nursing personnel, and clinical practice for both that includes training in IUD insertion. During fiscal 1984, 28 physicians and 65 nurses were trained in courses held in October 1983 and February 1984. An additional 15 nurses attended a course in January 1984. Sixteen physicians and 19 nurses trained in fiscal 1983 were not included in last year's annual report; they are counted in this year's tables. The program will continue in fiscal 1985 with an emphasis on the training of nurses.

Pilot Satellite Education Program in Reproductive Health for the Caribbean (NCA-63)

A satellite-based, teleconferencing system has been installed at the University of the West Indies (UWI) as the result of an agreement signed in May 1982 between UWI and the Bureau of Science and Technology of AID.

The system links UWI's three main campuses--Mona (Kingston), Jamaica; Cape Hill, Barbados; and St. Augustine, Trinidad, with university extension centers in Santa Lucia and Dominica. Each location has a teleconferencing room equipped with an interactive voice circuit. During 1984 the system included slow scan

television equipment for the transmission of still pictures and a telewriter for the transmission of graphics. The teleconferencing rooms seat 10 to 20 people.

The pilot program included 12 two-hour sessions in reproductive health for physicians (general medical officers), a similar course for nurses, and three one-hour sessions of case presentations for about 20 physicians per session.

The physician course was scheduled once a week for 12 weeks. Each session included approximately one hour and 45 minutes of formal presentation, including brief lectures, panel discussion, group projects, and question and answer periods. In the final 15 minutes of each session, participants were able to use the network to consult with colleagues on case problems or patient management. The students received printed materials before the course began. The lectures covered reproductive health and family planning, including recent advances in fertility control, population dynamics, voluntary sterilization, pregnancy testing, management of high-risk pregnancy, gynecological cancer, sexually transmitted diseases, and clinic management.

The format and content of the course for nurses was similar to that of the physician course, but included more detail on clinic management, recordkeeping management of inventory, and referral procedures. The case presentation sessions were held once a month for one hour over three months.

Fifty-nine physicians and 66 nurses participated in the pilot project in fiscal 1984. In fiscal 1985, there will be a new course for medical students and postdoctoral fellows, and Antigua is expected to be added to the network. Fifty physicians, 110 nurses, 50 medical students, and 50 postdoctoral fellows are expected to participate in the satellite courses next year.

Clinical Practice Center (NTA-24)

JHPIEGO supports a clinical practice center for participants in courses at the Johns Hopkins Educational Center who request training in laparoscopy. It is administered by the Department of Obstetrics and Gynecology (Division of Advanced Training and Research in Fertility Management) of the University of the West Indies--Mona Campus.

U.S. Training

One health professional from Jamaica attended the STD course at the Johns Hopkins Educational Center in Baltimore.

ST. KITTS

One physician from St. Kitts attended the infertility course offered at the Johns Hopkins Educational Center in Baltimore. He received laparoscopy training at the clinical practice center in Jamaica.

NEAR EAST

JHPIEGO's programs in the Near East emphasize the clinical training of physicians and nurses in reproductive health. Three-quarters of the Near Eastern health professionals who participated in JHPIEGO-supported programs during fiscal 1984 attended clinical courses in reproductive health that included instruction in laparoscopy, minilaparotomy, IUD insertion, or local anesthesia. JHPIEGO is active in three countries in North Africa -- Egypt, Morocco, and Tunisia -- as well as in Turkey.

Clinical training for health professionals from sub-Saharan African countries is an important component of the programs in North Africa. Clinical training programs are difficult to establish in sub-Saharan African countries because the number of women requesting clinical forms of contraception is generally not sufficient to reach the minimum number of procedures required for certification. The clinical program in Tunisia has been successful because of the Tunisian government's long-standing commitment to and promotion of reproductive health and family planning.

The Tunisian reproductive health program was established in 1978 and is the oldest in the Near East. Its courses include training in endoscopy, local anesthesia, and IUD insertion for, respectively, obstetrician-gynecologists, anesthetist-technicians, and general practitioners and nurses. The program is administered by the Tunisian National Office for Family Planning and Reproductive Health, which was reorganized in fiscal 1984 and moved from the Ministry of Health to the Ministry of Family Planning and Promotion of Women.

The program in Morocco is similar to the Tunisian program, with two exceptions. The Moroccan program does not include training in IUD insertion, but it does offer courses in reproductive health, including endoscopy, for operating theatre nurses. A course for operating theatre nurses was dropped from the Tunisian program after fiscal 1983 because sufficient numbers of nurses have been trained.

In Egypt, JHPIEGO supports two reproductive health programs at Al Azhar University in Cairo and Shatby University in Alexandria. Both include training in the diagnostic and therapeutic use of the laparoscope. The program in Alexandria also includes training in IUD insertion, and a microsurgery course will be added to the program in Cairo in fiscal 1985.

In Turkey, JHPIEGO has supported reproductive health training, including instruction in endoscopy, for physicians and nurses since 1979. With the liberalization of Turkey's family planning laws in June 1983, enrollment in the program increased from 17 in fiscal 1983 to 47 in fiscal 1984. JHPIEGO is considering the support of reproductive health programs in Turkey that include

instruction in microsurgery and tubal ligation. The JHPIEGO International Council met in Izmir in April 1984.

Since 1974, 2,014 health professionals from the Near East have participated in JHPIEGO-supported programs. Eighty-eight percent were trained in-country or in regional programs. Of the 271 professionals trained in fiscal 1984, 94 percent were trained in-country or in regional programs.

Thirteen health professionals from the Near East attended courses at the Johns Hopkins Educational Center in Baltimore. Jordan, Morocco, Tunisia, Turkey, the United Arab Emirates, and Yemen were represented.

JHPIEGO staff or consultants made 11 trips to the Near East for the purpose of program development: five to Tunisia, three to Morocco, two to Egypt, and one to Turkey.

EGYPT

JHPIEGO is working with Egyptian authorities (1) to provide postgraduate training in reproductive health, (2) to improve the teaching of reproductive health and contraception in medical schools, and (3) to make laparoscopy available for diagnosis and treatment throughout Egypt. A total of 236 Egyptian physicians and 195 nurses have participated in JHPIEGO-supported reproductive health programs in Egypt. In fiscal 1984, JHPIEGO conducted two reproductive health training programs in Cairo and Alexandria.

Reproductive Health Training Center, Al Azhar University (NCA-46)

The Reproductive Health Training Center at Al Azhar University in Cairo was set up in January 1980 to train gynecologists in reproductive health and the diagnostic and therapeutic use of the laparoscope. Endoscopy courses are conducted for physicians and operating room nurses.

The physician course is three weeks long. The first two weeks are devoted to lectures on modern aspects of reproductive health, including clinical and nonclinical contraceptive methods, recent advances in fertility control, the health benefits of child spacing, high-risk pregnancy, perinatal health, diagnosis and treatment of infertility, and early detection of gynecological malignancy. The third week is spent in clinical training: six days of laparoscope or Laprocator experience and equipment maintenance. Each physician performs a minimum of 15 procedures under supervision. The institutions of physicians who have been certified as competent in laparoscopy receive laparoscopic systems. Project staff and consultants train physicians and support staff at their institutions to set up and use the equipment. The physicians perform additional laparoscopic procedures under local anesthesia during these field visits.

Physician courses were held in September and December 1983 and a total of 19 physicians were trained, 18 from Egypt and one from the Sudan. Since the beginning of the program, 121 physicians have been trained, 114 from Egypt and seven regional physicians: one from Lesotho, one from Liberia, one from Somalia, and four from the Sudan.

The endoscopy course for nurses combines didactic and clinical training in a one-week course (six training days). The course emphasizes the role of nurses and other paramedical personnel in the provision of family planning services and the use and care of laparoscopic equipment. The training covers preparation of operating rooms for endoscopy procedures, malignancies of the female reproductive tract, high-risk pregnancies, and care of the newborn. The nurse endoscopy course was held in December 1983; eight Egyptian and four regional nurses from sub-Saharan Africa participated.

The demand for microsurgical procedures in Egypt is growing. There is currently a six-month wait to have microsurgery performed at the Al Azhar University Hospitals. Consequently, a course in microsurgery will be added to the curriculum of the Reproductive Health Training Center in fiscal 1985. The course will include lectures and discussions concerning the diagnosis of the tubal factor in infertility, the causes of tubal obstruction, pelvic inflammatory disease, anatomy and physiology of the human fallopian tube, techniques of salpingostomy and salpingotomy, and microsurgery versus *in vitro* fertilization as treatment for infertility. Each participant will perform at least four reanastomoses on animals and will attend six clinical practice training sessions and assist at or perform at least six microsurgery procedures.

Human Reproduction Training Center, Shatby University Hospital (NCA-45)

The Human Reproduction Training Center at Shatby University in Alexandria conducts courses similar to those at the Reproductive Health Training Center at Al Azhar University. The program comprises three courses in reproductive health for physicians and nurses. The physician course includes training in laparoscopy, and two courses for nurses include training in laparoscopy and IUD insertion, respectively. The IUD course was initiated in 1982 after the Egyptian Government expanded the national IUD program and permitted nurses to insert IUDs.

The training of physicians in reproductive health and laparoscopy is much the same as that given at Al Azhar University in Cairo. Laparoscopy under local anesthesia is emphasized. Clinical sessions also include training in IUD insertion.

The nurse endoscopy course is also similar to that given in Cairo. It includes one clinical session and two lectures daily. The course emphasizes procedures to support physicians performing laparoscopies, laparoscopy equipment maintenance, and IUD management.

The course in reproductive health, including IUD insertion, was conducted for nurses and midwives in two-week sessions during fiscal 1984. The participants attended 24 lectures on family planning and reproductive health. During nine clinical sessions, they performed at least 15 IUD insertions under supervision and received instruction in pelvic examination. In fiscal 1985, the course will be expanded to three weeks to allow the participants enough time to perform the 15 procedures required for certification.

A JHPIEGO consultant makes field visits to the institutions of nurses who have participated in the IUD and endoscopy courses to evaluate their skill in IUD insertion and equipment maintenance. This is done at the same time as field visits to the physicians who participated in the laparoscopy training.

Special six-day courses in local anesthesia are planned for fiscal 1985. Each physician will perform six laparoscopy procedures and observe at least 30 laparoscopies done under local anesthesia. After 1985, laparoscopy under local anesthesia will be taught in the physician endoscopy course.

Ten Egyptian physicians attended a course in November 1983. Nine Egyptian physicians and one Nigerian physician attended a course in late fiscal 1983 and are included in this year's tables. Since the beginning of the program, 132 physicians have been trained, 122 from Egypt and ten from other countries.

Two nurse endoscopy courses were held in October and December 1983 and included 18 Egyptian nurses and six regional nurses from sub-Saharan Africa. A total of 157 nurses have been trained since the beginning of the program, 133 Egyptians and 24 regionals.

Two courses in IUD insertion were held in October and December 1983. The participants included 18 Egyptian and six regional nurses.

Clinical Practice Centers

The hospitals associated with the University of Alexandria, Assiut University, and Al Azhar University serve as clinical practice centers for physicians who have attended a course at the Johns Hopkins Educational Center in Baltimore. The physicians receive six days of training in laparoscopy and instruction in maintenance of the Laproscator. Each physician must perform a minimum of 15 procedures under supervision to be certified as competent. The Shatby University Hospital at the University of Alexandria also provides training in minilaparotomy.

Fiscal 1985

JHPIEGO will support a curriculum standardization program to formulate a coherent program of MCH/FP in Egyptian medical schools. A two-day workshop will be convened in early fiscal 1985 at the University of Assiut for medical school administrators, officials from the Ministry, and representatives from the Obstetrics and Gynecologic Society, the Pediatrics Society, the Public Health Society, and the World Health Organization regional office in Egypt.

JORDAN

In Jordan, JHPIEGO is considering an endoscopy course for ten physicians and ten nurses in cooperation with the Jordanian Ministry of Health.

MOROCCO

National Educational Program in Reproductive Health and Endoscopy (NCA-20)

The Moroccan National Educational Program in Reproductive Health and Endoscopy, established in 1980, is patterned after the older program that JHPIEGO supports in Tunisia. It provides training in reproductive health and endoscopy for obstetrician-gynecologists, anesthetist-technicians, and nurses and nurse-midwives from Morocco, the Near East, and Francophone African and Caribbean countries. Training for anesthetists was added in fiscal 1984; it emphasizes the use of local anesthesia for endoscopic procedures. Fiscal 1984 was the last year of the nurse family planning course. Nurses are now being trained at the regional level with funding from AID.

Since the spring of 1983, the program has been conducted at the new National Training Center in Rabat. At no cost to JHPIEGO, lectures and clinical training in reproductive health are also provided for medical students from the University Mohammed V in Rabat who rotate through the National Training Center.

The physician courses are for a maximum of ten trainees. The course consists of 12 days of didactic and clinical training in reproductive health, with emphasis on endoscopy and laparoscopy. Each obstetrician-gynecologist must perform a minimum of 15 laparoscopic procedures under supervision to be certified. The Moroccan physicians who successfully complete the course receive three days of field training when a laparoscopic system is installed in their home institution.

A nine-day course for operating theatre nurses is held at the same time as the course for the physicians. Through lectures and clinical training, they learn the skills necessary to assist the physicians during laparoscopy and minilaparotomy procedures.

The anesthetist course covers endoscopy, the different types of anesthesia for endoscopy, the Moroccan experience with analgesia for tubal ligations, and techniques of conscious sedation. The course comprises one week of lectures and one week of clinical practice. Each anesthetist assists at a minimum of ten endoscopic procedures. Since it is important that surgeons be familiar with the advantages of local anesthesia for endoscopic procedures, obstetrician-gynecologists who are practicing laparoscopy observe the anesthetist course for five days.

As a result of this program, laparoscopic services have been extended to 15 institutions in Morocco. These 15 institutions provide voluntary surgical contraceptive services to an average of 40 to 50 women per month. JHPIEGO will continue to expand these services throughout the 31 health regions in Morocco.

Ten Moroccan physicians and ten regionals were trained in reproductive health/endoscopy in courses held in March and May 1984. Ten Moroccan and ten regional operating room nurses were also trained at the same time. Twelve Moroccan and three regional anesthetist-technicians attended an anesthesia course given in March 1984, and five Moroccan physicians observed the course. The program will be continued in fiscal 1985.

Fiscal 1985/86

In fiscal 1985, JHPIEGO is planning to (1) assume support of the Repair and Maintenance Center that is currently run by the National Training Center for Human Reproduction and (2) expand the in-country program to include a family planning didactic and clinical course for Moroccan and regional nurses and doctors.

TUNISIA

National Education Program in Reproductive Health, Endoscopy, and Laparoscopy (NCA-6)

The Tunisia program began in 1978. It supports training of obstetrician-gynecologists in endoscopy, local anesthesia training for anesthetist-technicians, and observation of the anesthesia course by obstetrician-gynecologists. Training of operating theatre nurses was discontinued this year because a sufficient number has been trained; course graduates serve as trainers for nurses who need instruction. Unlike the course in Morocco, the Tunisian course includes the training of general practitioners and nurses in family planning, especially IUD insertion and patient counseling.

The physician and nurse courses in family planning support the policies of the National Office for Family Planning and Reproductive Health (ONPFP) of the Ministry of Health. The ONPFP would like to emphasize training for health professionals, the expansion of service outlets particularly in the southern and eastern regions of the country, and continued information/education programs. Physicians and nurses are required to provide family planning services to outreach areas particularly, and they are often assigned to mobile clinics and rural health centers.

The family planning course for general practitioners and nurses is for 15 participants and includes one week of lectures and discussions and two weeks of clinical training. The length of the clinical training is one week longer than in last year's program to permit certification in IUD insertion and to better train the participants to dispense other contraceptives. Each physician performs at least ten IUD insertions, and each nurse assists with a minimum of five IUD insertions.

Five Tunisian and five regional physicians attended the endoscopy course in March 1984. Nine Tunisian and seven regional nurses attended the course in family planning in May 1984. Thirteen Tunisian and 14 regional anesthetist-technicians took anesthesia courses in October 1983 and April 1984. Three Tunisian physicians observed the anesthesia course.

In August of 1984, the ONPFP was dissolved under the Ministry of Health and a new organization, the ONFP, was created under the Ministry of Family Planning and Promotion of Women. The ONFP will have the same responsibilities as the ONPFP. Training programs under the new organization are being delayed until mid-1985 to allow the ONFP to formulate its training needs over the next five years.

Other In-Country Activities

A special course on the administration of family planning programs was held in Tunisia in November 1983 for 12 members of the Zaire Urban Family Planning Project Team.

JHPIEGO continued to support the Tunisian Repair and Maintenance center in Tunis.

JHPIEGO funds a clinical practice center in Tunisia for physicians who have taken courses at the Johns Hopkins Educational Center in Baltimore and wish to be trained in laparoscopy.

TURKEY

Turkish National Endoscopy Program for Obstetricians, Gynecologists, and Nurses (NCA-22)

JHPIEGO has sponsored a reproductive health program in Turkey that includes training in endoscopic procedures since 1980. The program was initiated by a special course in March 1980 for Turkish administrators, conducted in Turkish, at the Johns Hopkins Educational Center in Baltimore. Its purpose was to establish a cadre of health officials to administer the endoscopy program. JHPIEGO has funded the training of Turkish health professionals since the mid-1970s. This JHPIEGO-supported training contributed to the recent liberalization of Turkey's family planning laws in June 1983.

The endoscopy program is administered by the General Directorate of Population and Planning of the Ministry of Health (MOH). It comprises three-week courses for physicians and one-week courses for nurses.

The physician course includes one week of lectures on issues in reproductive health, surgical contraception, and therapeutic and diagnostic laparoscopy. The lectures are given in Ankara and Istanbul. Two weeks of clinical training are given at training centers in Ankara, Istanbul, Izmir, and Eskeshir. Priority in selection for the course was given to physicians from areas that were not reached during the last two years, especially to physicians from the eastern provinces.

The nurse endoscopy course is a one-week clinical session in which the nurses learn to assist the physicians during the endoscopic procedures and to care for the laparoscopic equipment.

An endoscopy course was conducted in October 1983 for 15 physicians and 19 nurses. Thirteen nurses attended a second endoscopy course in February 1984. Since the beginning of the program, 99 physicians and 194 nurses have been trained.

A two-day evaluation workshop for 66 graduates of the endoscopy course and five MOH officials was held in June 1984 in Izmir. The workshop included demonstrations of equipment maintenance and techniques of laparoscopy, and the participants discussed methods of improving the utilization of endoscopy services.

Other Activities

The JHPIEGO International Council met in Izmir, Turkey, in early April 1984, (see under "Management of the Corporation" for a discussion of the meeting).

JHPIEGO funds a Repair and Maintenance Center in Ankara that is managed by the General Directorate of Family Planning and Maternal and Child Health. There are 64 laparoscopic systems in 36 institutions in Turkey.

Fiscal 1985/86

A deans' conference to standardize the curriculum in reproductive health in Turkish medical schools is planned for 1985. Three other projects are being

considered, a microsurgery course, training in postpartum tubal ligation, and the establishment of a program in reproductive health in Turkish universities based on the recommendations of the deans' conference.

YEMEN

The government of Yemen supports integrated maternal and child health and family planning (MCH/FP) services. JHPIEGO has trained 14 health personnel from Yemen and has provided Laproscopos to its four leading hospitals. JHPIEGO is considering a program in reproductive health training for Yemen general practitioners in fiscal 1985/86.

U.S. TRAINING: THE JOHNS HOPKINS EDUCATIONAL CENTER

Courses conducted at the Johns Hopkins Educational Center in Baltimore assist JHPIEGO in identifying the leaders in reproductive health in developing countries. Virtually all project directors and a large portion of project staff in overseas programs supported by JHPIEGO have attended courses in the United States. These JHPIEGO "fellows" form a cadre of teachers and administrators for in-country programs.

During fiscal 1984, the Center conducted nine courses for 155 physicians and administrators:

- Academic Skills for Medical School Faculty in Reproductive Health, 7 May to 1 June and 9 July to 3 August 1984 (both in English) -- 23 participants.
- Advances in Reproductive Health for Clinicians, 26 March to 6 April 1984 (in French) -- 15 participants.
- Diagnosis and Treatment of Sexually Transmitted Diseases, 3 to 14 October 1983 (in French), 6 to 27 April 1984 (in English) -- 45 participants.
- Management of the Infertile Couple, 10 to 21 September 1984 (in English) -- 23 participants.
- Microsurgery for Tubal Reanastomosis, 28 November to 9 December 1983 (in English) -- 5 participants.
- Reproductive Health for Administrators of Family Health and Family Planning Programs, 14 October to 11 November 1983 (in English), 11 to 29 June 1984 (in French) -- 44 participants.

The total number of participants trained in the Educational Center declined by 25 percent from fiscal 1983 to 1984. JHPIEGO's policy in the 1980s has been to decrease training in the United States and increase the number of trainees in overseas programs. Figure 5 shows the shifting distribution of the trainees by region. While total training has decreased, the proportion of African health professionals has increased from about one-quarter in fiscal 1978 to two-thirds in fiscal 1984. The training of Latin American health professionals has declined from a high of 116 in fiscal 1978 to seven in fiscal 1984 because AID requested that JHPIEGO emphasize in-country and regional training in Latin America. The number of trainees from Asia and the Near East was roughly the same in fiscal 1983 and 1984. Roughly two-thirds of the participants attended courses given in English and one-third attended courses given in French. Two of the participants were funded by the Noyes Foundation and one was funded privately.

The Educational Center functions under a tuition agreement between JHPIEGO and the Department of Gynecology and Obstetrics of the Johns Hopkins University School of Medicine. Physicians in the Department of Gynecology and Obstetrics and faculty from the Johns Hopkins School of Hygiene and Public Health deliver most of the lectures in these courses. Each course includes a core group of lectures on reproductive health, the health benefits of

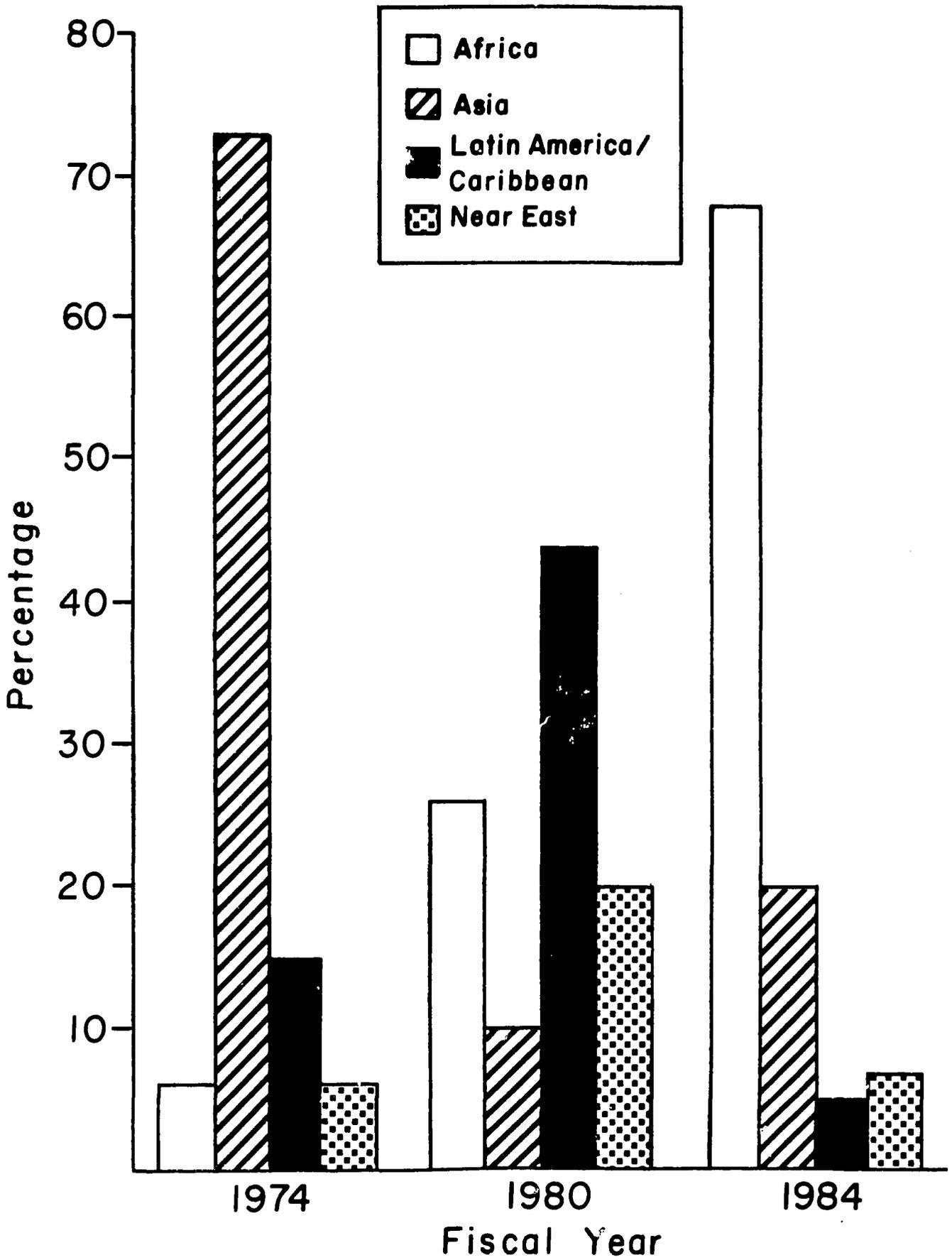


FIGURE 5 Percentage distribution of U.S. trainees by region, fiscal 1974, 1980, and 1984

contraceptives, oral contraception, the sequelae of IUD use, traditional methods of contraception, contraceptive use and sexually transmitted disease, diagnostic laparoscopy, advances in reproductive endocrinology, the future of fertility management, and the organization of family planning programs. Additional material depends on the topic of the course. For example, the academic skills course includes one week of lectures on teaching and research that cover curriculum development and evaluation, preparation of audiovisual materials, working with small groups, practical exercises in obstetrics/gynecological research, and writing a research proposal.

All trainees are given pretests and post-tests. The results show that the courses are effective in transmitting knowledge, improving the trainees' grasp of problems in reproductive health, and stimulating interest in reproductive health. The trainees' evaluations of the courses are reviewed and the courses are modified in response to the suggestions.

The trainees are also asked about their teaching responsibilities and needs: how many lectures they give per year, the subjects on which they lecture, the length of their lectures, and to whom they are speaking. The trainees have indicated a pressing need for slides and up-to-date information on a wide variety of topics in reproductive health. To meet this need, JHPIEGO is preparing a collection of illustrated core lectures.

Physicians who have attended a course at the Johns Hopkins Educational Center may be trained in laparoscopy at any of a number of JHPIEGO's overseas clinical practice centers. Four participants took advantage of this opportunity.

During fiscal 1984, Dr. Giraud V. Foster was hired to direct the activities of the training center after the previous training officer, Dr. Ronald Magarick, resigned to take a new position. A researcher/writer, Robert Lande, joined the staff to prepare the collection of core lectures and other educational materials, as well as the annual report.

MANAGEMENT AND SUPPORT

MANAGEMENT OF THE CORPORATION

BOARD OF TRUSTEES AND OFFICERS OF THE CORPORATION

During the reporting period, members of the JHPIEGO Board of Trustees continued to contribute their talents and expertise to guiding and managing the affairs of the corporation. For both the Trustees and the Officers of the corporation (Figure 6), the reporting year presented unprecedented challenges. Among the major challenges was the task of maintaining the momentum for the ever-increasing demand from third world countries for collaborative in-country programs within the funding limits imposed by a sharply curtailed allocation of funds by AID for overseas activities.

At the end of calendar year 1983, JHPIEGO and AID had completed negotiations for the extension of the Cooperative Agreement (AID/DSPE-CA-0083) through 30 September 1986. Funds allocated in the financial plan for national and regional programs averaged \$2 million a year for demonstrated requirements mounting to \$4 million annually. To accommodate this funding limitation, JHPIEGO found it necessary to delay the obligation of funds for a number of renewals and new educational programs. Although JHPIEGO has managed to maintain a delicate financial balance for keeping overseas programs alive, the impact of the shortage of available funds will become manifest in mid-1985 and 1986 and could result in a reduction in the growth of training programs and outputs, unless additional funds are infused.

In spite of the funding problems, the Trustees and key JHPIEGO officials began to systematically address programmatic and managerial initiatives to meet the evolving and changing needs of the developing countries, as these countries move from the last half of the decade into the 1990s.

The staffing reorganization of JHPIEGO approved by the trustees at the end of the last reporting period was implemented to reinforce evolving functional imperatives. The designation of a deputy director with prime responsibility for the educational and evaluation components within JHPIEGO demonstrated JHPIEGO's preoccupation with new educational models and an evaluation of existing activities. The staff of the Regional Development Office for Africa was increased by the equivalent of two full-time professionals to accommodate the priority attention given to this region and to the numerous national and regional African programs coming to fruition after having been so carefully seeded and nurtured during the previous years.

In the late fall of 1983, JHPIEGO's trustees hosted two meetings for national delegations. The concept of reproductive risk became the keynote of a four-day seminar held in Baltimore for a Peruvian delegation, which included the Director-General of Health Services from the Ministry of Health and directors from 20 health districts. Support for Nigeria's initiative in reproductive health training was demonstrated by the sponsorship in Baltimore of a workshop that helped in the

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The Johns Hopkins University

Dr. Robert E. Reynolds
Associate Dean for
Administration
The Johns Hopkins University
School of Medicine

Dr. Harry Woolf
Director
Institute for Advanced Study
Princeton, New Jersey

Dr. Richard Zdanis
Vice Provost
The Johns Hopkins University

Other Officers of the JHPIEGO Corporation

W. Thomas Barnes
Treasurer
Treasurer and Secretary
The Johns Hopkins Hospital

Ms. Charlotte G. Ellis
Assistant to the President
Secretary of the Board of
Trustees

Dr. Ronald T. Burkman
Director
Associate Professor
Department of Gynecology
and Obstetrics
The Johns Hopkins University

* Resigned late in the fiscal year to take a position overseas.

**FIGURE 6 Board of Trustees and officers of the
JHPIEGO Corporation**

development and design of proposals for the creation of reproductive health education programs in priority states designated by the Federal Government of Nigeria.

OFFICES OF THE PRESIDENT AND THE DIRECTOR

Sensitive to JHPIEGO's international leadership role in advancing reproductive health, the president and director of the corporation set in motion several mechanisms to make certain that JHPIEGO's policies and strategies, programmatically and technologically, were in the forefront of the state of the art to respond appropriately to the particulars of national and regional needs in third world countries. In January 1984 the president and the director conducted a two-day retreat for senior staff to deliberate on current practices and programs, future goals, technology and the role of surgical training, curricula content, and educational materials. A follow-up meeting was convened in September 1984 to review and modify the conclusions arising from these deliberations. For example: In Africa major unmet training needs include specialized training programs, and courses on sexually transmitted diseases and infertility, in addition to courses dealing with contraception. Also, during the next few years, because of the scarcity of physicians, there will be less emphasis on high technology training, while nurse training will receive increased attention. Conversely, in Latin America, training emphasis will be on high-technology skills. The main strategy in this region is the use of the reproductive risk concept to provide a health rationale for family planning. This concept has already been adopted in Brazil and Peru, and now Mexican officials have made it a part of the focus of their social security program.

There was consensus that continuous programmatic success is based on innovation and maximizing potentials. There are no limitations on training models. Distant teaching programs (satellite education) where appropriate, will be pursued; specialized courses on STDs, administration, and academic skills may be extended to regional sites; the incorporation of reproductive health subjects into medical school curricula will be stressed; a collection of lectures based on U.S. course lectures will be developed for use at overseas training centers; and JHPIEGO will try to link in-country and regional resources to meet educational and training needs.

JHPIEGO will continue its pre-eminent role in surgical training to make certain that technology and training are available when timely and appropriate. In Africa, for example, surgical training is being gradually introduced. It appears appropriate to train personnel in postpartum minilaparotomy techniques at maternity hospitals and in laparoscopy techniques at major centers.

The evaluation of maturing programs will be ongoing to obtain programmatic insights and determine whether costs are appropriate for the benefits gained. Site visits, participant survey results, and special in-country evaluation studies like those to be undertaken in Brazil on the reproductive health education programs (REHEPs) will be employed. Means to obtain more accurate measures of knowledge gained will also be sought. To strengthen JHPIEGO's evaluation capabilities, Dr. DeWitt Clark, an evaluation specialist with a Ph.D. in educational psychology, was hired to manage JHPIEGO's Information and Evaluation Services division.

Another major thrust during the reporting year was the JHPIEGO directive to conduct in-depth site visits to evaluate JHPIEGO-supported Repair and Maintenance (RAM) centers, to document the experience of these centers and sites where equipment has been distributed, and to obtain insights into accountability, utilization, care, and the cost of maintaining the donated equipment in the countries visited. Visits were made to Brazil, Colombia, Malaysia, the Philippines, Thailand, Turkey, and the Sudan. JHPIEGO has reduced the number of spare parts shipped to

<p>Dr. Helio Aguinaga President CPAIME Rio de Janeiro, R.J., Brazil</p>	<p>Dr. Oladapo Alabi Ladipo Professor, Department of Obstetrics and Gynecology University College Hospital Ibadan, Nigeria</p>
<p>Dr. Tahar Alaoui Professor Of Obstetrics and Gynecology University of Mohamed V Director of Technical Services Ministry of Health Rabat, Morocco</p>	<p>Dr. Jorge Martinez-Manautou Chief of Family Planning Services Instituto Mexicano Del Seguro Social Mexico, D.F., Mexico</p>
<p>Dr. Esther Sophia Boohene Program Coordinator Child Spacing and Fertility Association Harare, Zimbabwe</p>	<p>Dr. Carlos Munoz President of the National Council of Population Lima, Peru</p>
<p>Mme. Souad Chater President/Secretary General ONPPF (Office of Family Planning and Population) Tunis, Tunisia</p>	<p>Dr. Boniface T. Nasah Associate Professor and Chief of Obstetrics and Gynecology University Center for Health Sciences University of Yaounde Cameroon</p>
<p>Professor Paul Correa Chief Department of Obstetrics and Gynecology University of Dakar Dakar, Senegal</p>	<p>Dr. Virgilio Oblepias Director, Fertility Care Center Mary Johnston Hospital Manila, Philippines</p>
<p>Dr. Ziya Durmus Chief Doctor of Ankara Maternity Hospital Ankara, Turkey</p>	<p>Dr. Walter Rodrigues* Executive Secretary BEMFAM Rio de Janeiro, Brazil</p>
<p>Dr. Samir El Sahwi Professor of Obstetrics and Gynecology Director, Shatby International Center of Reproductive Biology Shatby University Hospital Alexandria University Egypt</p>	<p>Dr. Ruqiya Mohamed Seif Director Family Health Programs Ministry of Health Mogadishu, Somalia</p>
<p>Mrs. Laurice V. Hunter-Scott Principal Nursing Officer Ministry of Health and Social Security Kingston, Jamaica</p>	<p>Dr. Fernando Tamayo President Profamilia Bogota, Colombia</p>
<p>Dr. Kobchitt Limpaphayom Department of Obstetrics and Gynecology Faculty of Medicine Chulalongkorn Hospital Bangkok, Thailand</p>	<p>Dr. Emile Tillawah Woods Director JFK Maternity Center Assistant Professor University of Liberia Medical School Monrovia, Liberia</p>
<p>* Dr. Rodrigues died in December 1984.</p>	<p>ADVISOR</p> <p>Dr. Leo Dunn Professor and Chairman Department of Obstetrics and Gynecology Acting Dean Medical College of Virginia Richmond, Virginia, U.S.A.</p>

FIGURE 7 THE INTERNATIONAL COUNCIL

a new RAM center from 240 in 1980 to only 40 today; the reduction in spare parts shipped has led to substantial savings.

New models for maintenance centers can be designed and the number of preventive field visits reduced. Maintenance of equipment does not have to rely entirely on the expertise of a maintenance technician; instead, more emphasis can now be placed on training operating room nurses and the technicians to train these nurses. Future centers may serve only as spare parts depots for distribution of parts. Another possibility would be to include spare parts in the country training agreements. This would provide continuous feedback between trainer and user and would facilitate attainment of utilization results.

INTERNATIONAL COUNCIL

The offices of the president and director worked together to organize a meeting of the International Council (Figure 7) in Izmir, Turkey, during the first week of April 1984. The membership of the Council was expanded to include four new members from Africa. Sixteen council members attended the meeting along with the trustees and officers of the corporation. Council members stressed the importance of keeping family planning within the broader reproductive health context and avoiding programs that are too focused towards one modality. Other recommendations included: holding a special national family planning conference addressing the problem of adolescent fertility, continuing to support IUD training for nurses and other appropriate personnel, promoting use of barrier contraception in countries with high rates of STDs, and considering the possibility of conducting STD and/or administration courses overseas.

OFFICE OF RESOURCE MANAGEMENT

The Office of Resource Management is responsible for the fiscal and administrative management of the JHPIEGO Corporation. In order to ensure the integrity of corporate fiscal activities, this office reports directly to the president of JHPIEGO.

CONTRACTS

The Office of Resource Management coordinated the renewal of four major agreements with the following organizations:

- Johns Hopkins University, for administrative management services (NP-1).
- Johns Hopkins University School of Medicine, for training provided by the Department of Obstetrics and Gynecology in courses held at the Johns Hopkins Educational Center (NJ-1).
- Brethren Services Center, for warehousing and shipping of equipment and educational materials (NP-2).
- Peat, Marwick, Mitchell and Company, for auditing of in-country programs (NP-3).

The Office initiated or renewed other smaller contracts as well, such as the agreement with the Information Services Division of The Johns Hopkins Hospital for computer-related services.

MONITORING

A major part of the support provided by Resource Management is financial reporting to each JHPIEGO office of subordinate agreement activities. Budget and Fiscal Status Reports are issued monthly. They were improved during fiscal 1984 and now include anticipated expenditures and availability of funds. The Training and Education Schedule, issued quarterly, is used to report and adjust the funding needs of JHPIEGO's subgrantees and to adjust JHPIEGO's prime grant funding requirements.

Resource Management monitored the finances of over 150 subordinate agreements during fiscal 1984. Over 100 active programs are sponsored under the current AID grant DSPE-CA-0083. The remainder were sponsored under AID grant pha-G-1064 and are being closed out.

Resource Management has begun to automate its internal monitoring and reporting activities. This automation process will improve maintenance of records and offer timely reporting of subordinate agreement activities.

GENERAL SUPPORT

In addition to monitoring subordinate agreements, Resource Management reviewed and monitored special one-time projects. The Office verified costs in all proposals and participated in the review meetings. The Office also prepares the budget and justification of agreements and reviews agreements before they are signed.

AUDITING

During fiscal 1984, Peat, Marwick, Mitchell and Company completed the auditing of subgrant agreements sponsored by AID grant pha-G-1064. Resource Management received audit reports and reviewed them for follow-up or processing. The auditing of the first group of subagreements funded under the current cooperative agreement, DSPE-CA-0083, will be initiated during fiscal 1985.

FINANCIAL MANAGEMENT

In the first quarter of calendar 1984, JHPIEGO's Federal Reserve Letter of Credit was closed and reissued to provide for electronic transfer of funds from the Federal Government. Resource Management made an extensive review of the regulations in the new Letter of Credit and made major adjustments to JHPIEGO's banking procedures and internal financial management systems. Several meetings with the Office of Financial Management of AID/Washington smoothed the transition from the old Letter of Credit to the new one.

To comply with the Federal Government's financial constraints in the new Letter of Credit, Resource Management developed methods to limit the amount of funds drawn from the U.S. Government to short-term use and at the same time meet the financial needs of in-country programs. Cables and certified checks are the two primary methods used to send funds overseas.

GENERAL ADMINISTRATION

Resource Management is the administrative link between JHPIEGO and the Johns Hopkins University. The Office monitors the financial services that the University performs for JHPIEGO and it acts as JHPIEGO's personnel office. Since all JHPIEGO staff are employees of the University, Resource Management must keep staff informed of changes in University regulations.

HANDBOOK 10

During fiscal 1984, AID amended its cooperative agreement with JHPIEGO to include compliance with Handbook 10, an AID participant training document that provides guidance for training done with AID funds. Resource Management took part in meetings with JHPIEGO's project monitor and the AID Office of International Training at which JHPIEGO's responsibilities with regard to the Handbook were discussed. Considerable progress has been made in delineating compliance requirements. Handbook 10 will be revised by AID in fiscal 1985, which may prove helpful in clarifying JHPIEGO's responsibilities.

INFORMATION AND EVALUATION SERVICES

JHPIEGO monitors over 100 programs in 22 countries. Monitoring includes keeping track of the number of trainees in U.S. and overseas courses, their professional backgrounds, the courses they take, where they are from, what they learned, and the equipment they have been given. Information and Evaluation Services (IES) is responsible for collecting, maintaining, and analyzing this information.

INFORMATION SYSTEM

The JHPIEGO information system consists of a collection of computerized data files and computer application programs. IES uses this system to issue monthly or quarterly internal reports, such as the Participant and Equipment Directory, Equipment Status Report, and the Program Documentation Checklist. In fiscal 1984, IES prepared special external reports for the Program Evaluation Unit of the Centers for Disease Control, AID missions, and AID/Washington. IES also maintains JHPIEGO's directory of medical schools in developing countries.

Much of this year's information system development activity involved the creation of error-checking programs to detect and report logical errors in the computer data files. Such errors can be introduced from any number of sources. Once in the system, they can be extremely difficult to detect and can threaten the utility of the information system. The error-checking programs detect suspicious data being entered into the data files, prevent them from entering the information system, and report them to the operator for verification.

IES is also responsible for another kind of data processing--word processing. JHPIEGO's word processing center consists of two Xerox 860 stand-alone word processing machines, which are in use approximately 95 percent of the time. IES trains JHPIEGO secretaries in word processing and provides support in word processing for each of JHPIEGO's offices.

EVALUATION

With the information system installed and functioning smoothly, IES began to expand its role in the evaluation of JHPIEGO activities. The function of the Office was upgraded in fiscal 1984 in order to improve the evaluation of JHPIEGO training. A new head of the department was hired with a Ph.D. in educational psychology and a background in medical education.

IES assists the regional development officers (RDOs) in the evaluation process by providing them with specific information about their programs. The Office is developing a questionnaire to measure attitudes of trainees toward family planning concepts, it is assisting the RDOs in incorporating evaluation plans into their program proposals, and it is expanding the use of the Annual Participant Survey (APS) in JHPIEGO programs. The APS is a survey sent out to participants in JHPIEGO in-country programs approximately one year after they complete a course. It is one of the few serious attempts made by any organization to establish long-term contact with trainees in developing countries. The distribution and collection of the APS in developing countries requires a complex logistical system that must

account for poor or nonexistent national postal systems. IES is working with the regional development officers to develop strategies to reach all JHPIEGO trainees.

The office is planning to prepare evaluations of several JHPIEGO programs, for example, the reproductive health education programs, satellite courses, correspondence courses, and physician postgraduate clinical training courses.

PROGRAM SUPPORT OFFICE

The Program Support Office consists of the Admissions/Travel Unit, the Equipment Unit, and the Grants Unit.

ADMISSIONS/TRAVEL UNIT

The Admissions/Travel Unit assists the regional development offices in recruiting, selecting, and scheduling candidates for courses at the Johns Hopkins Educational Center in the United States and at regional training centers. (Candidates for in-country courses are selected by the project directors.) The Unit is also responsible for planning and processing travel arrangements for all U.S. and regional trainees, as well as for JHPIEGO staff and consultants. It maintains curricula vitae and the JHPIEGO consultant roster for both U.S. and international consultants.

Admissions

The Admissions Unit processed the applications of candidates for 18 courses at regional training centers and nine courses at the Johns Hopkins Educational Center in Baltimore. Course participants were chosen by the Selection Committee. Candidates from African medical schools and teaching hospitals were given priority. With the lifting of restrictions on development activities in Ghana, the Unit resumed recruitment of Ghanaian candidates for U.S. and regional courses. One Ghanaian physician attended the academic skills course given at the Johns Hopkins Educational Center. Two Ethiopian physicians were able to attend U.S. courses with the support of funds from the Noyes Foundation. Overall, there were 40 percent more applications received than there were training spaces available. The Admissions Unit also schedules clinical practice for trainees who have taken courses at the Johns Hopkins Educational Center.

Travel

During fiscal 1984, the Travel Office processed approximately 300 trips to 49 countries for trainees, consultants, and staff. Three-quarters of the trips were made by trainees traveling to U.S. and regional training centers. The rest were made by staff and consultants for program development, monitoring, or field visits to install equipment or provide training additional to that received in a course. Of these trips, more than 80 percent were made for program development, compared with 70 percent last year. Fifteen field visits were made in fiscal 1984. The increase in trips made for program development is a result of the increased activities in the regional development offices, especially the Africa Office. Half of the trips made for program development, site visits, or field visits were made to Africa. The others were equally divided between the Asia/Near East region and the Latin America/Caribbean region. Trips were made most frequently to countries with the largest programs: six visits were made to Nigeria, five to Tunisia, and five to Brazil. Malawi was visited for the first time in fiscal 1984.

EQUIPMENT UNIT

The Equipment Unit is responsible for procurement, shipment, maintenance, and repair of laparoscopic systems and other medical equipment used in JHPIEGO programs, and for procurement and shipment of educational materials.

Equipment

The equipment that JHPIEGO ships in support of its overseas programs includes laparoscopic systems (mostly Laprocaters), microsurgery kits, minilaparotomy kits, and IUD kits. JHPIEGO also ships spare parts for repair and maintenance of the laparoscopic equipment. About 100 countries in the developing world are now using almost 1,750 laparoscopic systems donated by JHPIEGO. During fiscal 1984, 124 systems were shipped to 24 countries (Table 6). Laparoscopic systems were sent for the first time to the Central African Republic and the Solomon Islands. Major equipment and spare parts are procured through the General Services Administration. Table 7 gives a summary of the equipment ordered by JHPIEGO during fiscal 1984 and its cost.

During fiscal 1984, JHPIEGO shipped a total of almost \$168,000 worth of spare parts. Forty percent of this total was for Fallope rings for the laparoscopic systems. The cost of spare parts for maintaining equipment was only about \$100,000. Because the minilight sources on the Laprocator systems have proved to be too weak, especially for physicians who have had recent training in laparoscopy, JHPIEGO decided last year to make the stronger compact light source the standard light source for these systems. JHPIEGO did not supply laparoscopic systems to other AID-supported agencies in fiscal 1984, but it continued to support the maintenance of laparoscopic systems that it had provided to these organizations in the past.

Overall, JHPIEGO has reduced the cost of spare parts shipped by 60 percent since fiscal 1980, despite the increasing number of systems in the field. Advances in three areas are responsible for this reduction in cost: (1) Since 1979, the emphasis has been on the shipment of Laprocaters rather than laparoscopes. The Laprocator is easier to use than the laparoscope and it does not need repair as often. For example, in Turkey from 1981 to 1984, JHPIEGO spent approximately \$15 per system per month to maintain laparoscopes but only about \$4.50 per Laprocator per month. (2) JHPIEGO has improved the training of nurses and operating room technicians in equipment maintenance. Films and maintenance manuals produced by JHPIEGO have enhanced the equipment maintenance components of the nurse endoscopy courses and allowed on-site review of procedures after equipment has been installed. (3) JHPIEGO has streamlined the composition of the inventories maintained by the Repair and Maintenance (RAM) centers overseas. Instead of providing quantities of each of the approximately 200 spare parts, quantities of only the 40 parts most likely to be needed are included in the initial shipment establishing a RAM center. For example, the cost of setting up the RAM center in Nigeria in January 1981 was about \$21,000, while the cost of establishing the RAM center in Haiti in October 1984 was \$5,700.

At the equipment meeting component of the retreat for JHPIEGO senior staff in Annapolis in January 1984, it was decided that the Repair and Maintenance centers should be evaluated in an intensive fashion in order to identify ways to improve their efficiency. Accordingly, Equipment Unit personnel evaluated the RAM centers in the Sudan, Malaysia, the Philippines, Thailand, Turkey, Brazil, and Colombia in fiscal 1984. The remaining centers in Costa Rica, Nigeria, and Tunisia will be evaluated in fiscal 1985.

As a result of these evaluations, changes were made in several of the RAM

TABLE 6 Laparoscopic systems shipped, by region, fiscal 1984 and inception through fiscal 1984

Region	Fiscal 1984	Inception - Fiscal 1984
Africa	39	223
Asia	10	403
Latin America/ Caribbean	17	700
Near East	58	419
TOTAL	124	1,745

TABLE 7 Purchase orders placed for equipment, fiscal 1984

Equipment	Cost (US\$)
Major equipment	\$ 844,781
Laprocator systems	670,945
CO ₂ supply systems	44,151
Compact light source	129,685
Spare parts	41,017
Medical kits	70,351
IUD backup kit	15,799
IUD insertion kit	29,504
Microsurgery kit	25,048
TOTAL	\$ 956,149

TABLE 8 Educational materials shipped, by region, fiscal 1984

Region	Standard Educational Packages		Other Educational Materials	Films		Anatomical Models	
	No.	Value	Value	No.	Value	No.	Value
Africa	883	\$59,442	\$7,301	69	\$7,156	51	\$8,365
Asia	70	8,625	1,957	1	94	0	0
Latin America/ Caribbean	122	9,896	13,686	37	5,079	40	16,179
Near East	174	12,126	765	6	639	0	0
United States	176 ^a	6,420	0	0	0	0	0
TOTAL	1,425	\$96,509	\$23,709	113	\$12,968	91	\$24,544

^aHandouts at the Johns Hopkins Educational Center in Baltimore.

centers. For example, the center in Brazil was restructured. The number of technicians employed by the center was reduced from three to two, and in order to decrease maintenance calls, spare parts are now mailed and physicians install the laparoscopic equipment themselves. Technicians in the RAM center in Malaysia are also making fewer maintenance trips. These changes have led to cost savings.

In countries that do not have a good network of roads or a reliable postal system, periodic workshops conducted by technicians are just as effective as a RAM center, but less expensive. JHPIEGO discontinued the RAM center in the Sudan in fiscal 1984 and the Equipment Unit conducted maintenance workshops there for physicians and operating room nurses in August 1984. Workshops were also conducted in Kenya in November 1983 and in Pakistan (funded by UNFPA) in May 1984.

Educational Materials

In support of its training program, JHPIEGO provides educational materials to the trainees and their institutions. These materials include books, films, filmstrips, and anatomical models. The materials are extremely valuable to the trainees because it is difficult for them to obtain recent publications in reproductive health.

The Equipment Unit purchased almost \$250,000 worth of educational materials in fiscal 1984, including \$200,000 for books, \$19,000 for films, and \$19,000 for anatomical models. JHPIEGO also solicits donations of educational materials from other organizations in the field of reproductive health. In December 1983, the Centers for Disease Control donated 1,500 copies of Family Planning Methods and Practices: Africa. JHPIEGO shipped almost \$160,000 worth of educational materials to trainees and institutions in over 40 developing countries. Over \$80,000 worth of educational materials were shipped to Africa. The details of the educational material shipped by region are given in Table 8.

GRANTS UNIT

The Grants Unit writes the subordinate agreements between JHPIEGO and overseas institutions, and it monitors compliance with the agreements. The agreement is a contract between JHPIEGO and the overseas institution that conducts a reproductive health program or manages a maintenance center with JHPIEGO funding. The Grants Unit must keep abreast of changes made by the Agency for International Development in the provisions and language required in these agreements. During fiscal 1984, the Unit wrote 23 new agreements, 21 major program continuation amendments, and 102 simple amendments to current agreements, and it participated in the proposal review meetings.

Over 100 active agreements with overseas institutions were monitored during fiscal 1984. Monitoring includes issuing monthly updated status reports on the number of courses held, the number of trainees in each course, and the documentation that has been received by the Grants Office. The documentation includes, for example, expense forms, participant lists, course evaluation forms, and voluntary participation forms.

During fiscal 1984, the Grants Unit assumed responsibility for the resolution of in-country program audits and for the closing of overseas agreements for programs that have ended. To date the unit has closed four audits and is involved in the resolution of eight more.

OTHER ACTIVITIES

EDUCATIONAL MATERIALS

JHPIEGO supplies much needed books, films, filmstrips, and anatomical models to institutions and trainees in developing countries. There are educational packages in English, French, and Spanish designed for physicians, nurses, medical and nursing students, and their institutions. For example, the educational package in English for institutions includes books on maternal health care and family planning services, diagnosis and treatment in obstetrics and gynecology, epidemiology, infertility, injectable hormonal contraceptives, preventive care and maintenance of the Laprocator, minilaparotomy techniques, and sexually transmitted diseases. It also includes filmstrips that show how to do a breast self-exam and a pelvic exam, and how to insert an IUD and a diaphragm.

The Educational Materials Committee streamlined the distribution of educational materials in fiscal 1984 with the elimination of separate packages for each course given at the Johns Hopkins Educational Center in Baltimore. All trainees in the U.S. courses now receive the same package that is sent to physicians in overseas courses. Breastfeeding: Fertility and Contraception, a publication of the International Planned Parenthood Federation, was added to all the educational packages.

In order to satisfy the pressing need of doctors and nurses in developing countries for current information on reproductive health, JHPIEGO is putting together a collection of illustrated lectures based on those delivered at the Educational Center.

Library

JHPIEGO maintains a library of over 1,200 books and journals for use by the staff and participants in courses at the Johns Hopkins Educational Center. During fiscal 1984, the library received a donation of a complete set of the journal Studies in Family Planning.

CONFERENCE PARTICIPATION

Three members of the JHPIEGO staff presented papers at conferences during fiscal 1984:

Ronald T. Burkman, M.D., Director

"Oral contraceptive risk: An update," JHPIEGO International Council Meeting, Izmir, Turkey, April 1984.

"Current status of the IUD," American Fertility Society, Chicago, Illinois, April 1984.

"Actinomyces and the IUD," Program for Applied Research on Fertility Regulation, Chicago, Illinois, June 1984.

Robert G. Castadot, M.D., M.P.H., Deputy Director

"Training for reproductive health programs," First Annual Meeting of the Society for the Advancement of Contraception, Cairo, Egypt, November 1983.

"Practical expectations for the reversibility of female voluntary surgical contraception," and "Notes on international training for female sterilization," (abstracted in Contraceptive Delivery Systems 4, No. 4 (September 1983)). Fifth International Conference on Voluntary Surgical Contraception, Santo Domingo, Dominican Republic, December 1983.

"A review of ten years' experience with surgical equipment in international health programs," NCIH International Health Conference, Washington, D.C., June 1984.

Bruce Carlson, Regional Development Officer, Latin America/Caribbean

"Reproductive risk: Health rationale for family planning," National Seminar on Reproductive Health, Lima, Peru, March 1984.

VISITORS

On 30 August 1984, JHPIEGO hosted two representatives from the People's Republic of China. Madam Li Xiu Zhen, Vice President of the China Family Planning Association, and Miss Qiao Xin Jian, a member of the Association, met with JHPIEGO's president, director, and deputy director.

FISCAL REPORT

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Recap A through Recap E report AID grants pha-G-1064 and DSPE CA-0083 through the combined authorized periods of both grants.

Recap F through Recap I report AID Grant pha-G-1064. A final report was submitted to the AID Office of Financial Management as of 30 September 1984.

Recap J through Recap N report the current AID Cooperative Agreement, DSPE CA-0083.

RECAP A
AID/pha-G-1064 and DSPE CA-0083

	Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 09-30-84	Proj. Disbursements & Unliquidated Obligations 10-01-84/12-31-84	TOTAL
Central Costs	10,873,427	1,796,407	726,405	13,396,239
Planning/Development	788,354	240,835	637,690	1,666,879
Equipment Cost	9,805,621	973,748	2,889,835	13,669,204
Training Cost	17,600,907	3,119,433	6,232,733	26,953,073
TOTAL	\$39,068,309	\$6,130,423	\$10,486,663	\$55,685,395

RECAP B
AID/pha-G-1064 and DSPE CA-0083
CENTRAL COSTS

	Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations 10-1-84/12-31-84	TOTAL
Salaries	5,552,352	983,827	432,219	6,968,398
Fringe Benefits	984,526	218,189	93,340	1,296,055
Consultants	113,582			113,582
Supplies	344,628	39,391	31,010	415,029
Travel	717,800	5,681	3,650	727,131
Office Equipment	85,080	20,770	3,191	109,041
Telecommunications	716,882	111,762	31,869	860,513
Space Cost	433,979	104,680	41,906	580,565
Audit Fees	5,518			5,518
Conference Cost	64,271			64,271
Other Direct	398,561	92,832	(1,324)	490,069
Indirect Cost	1,456,248	219,275	90,544	1,766,067
TOTAL	\$10,873,427	\$1,796,407	\$726,405	\$13,396,239

RECAP C
 AID/pha-G-1064 and DSPE CA-0083
PLANNING AND DEVELOPMENT

	Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations 10-1-84/12-31-84	TOTAL	
66	Consultants	28,670	4,993	13,657	47,320
	Travel	510,483	131,192	159,044	800,719
	Audit Fees	19,500	41,500	344,000	405,000
	Conference Cost	27,090	7,373	10,294	44,757
	Publications	105,795	26,194	32,389	164,378
	Indirect Cost	96,816	29,583	78,306	204,705
	TOTAL	\$788,354	\$240,835	\$637,690	\$1,666,879

RECAP D
 AID/pha-G-1064 and DSPE CA-0083
EQUIPMENT COSTS

		Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations 10-01-84/12-31-84	TOTAL
100	Procurement	\$8,741,872	\$866,246	\$2,691,627	\$12,299,745
	Repairs	229,268		23,000	252,268
	Freight	428,471	58,846	44,155	531,472
	Warehousing	298,817	40,219	121,849	460,885
	Indirect Cost	107,193	8,437	9,204	124,834
TOTAL		\$9,805,621	\$973,748	\$2,889,835	\$13,669,204

RECAP E
 AID,pha-G-1064 and DSPE CA-0083
TRAINING COSTS

	Disbursements 07-01-74 thru 09-01-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations 10-01-84/12-31-84	TOTAL
Participants Cost	4,063,269	549,651	345,797	4,958,717
Field Training	832,882	48,873	142,055	1,023,810
Educational Materials	868,269	231,358	208,627	1,308,254
Maintenance Agreements	197,990	89,904	116,044	403,938
National/Regional Progs.	4,261,695	1,580,189	3,974,478	9,816,362
Clinical Practice	451,031	23,251	70,889	545,171
U.S. Training Centers	5,975,244	225,209	214,500	6,414,953
Direct Support	771,902	274,082	987,981	2,033,965
Special Projects	178,625	96,916	172,362	447,903
TOTAL	\$17,600,907	\$3,119,433	\$6,232,733	\$26,953,073

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RECAP F
AID GRANT pha-G-1064

	Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-39-84	Unliquidated Obligations	TOTALS
102	Central Cost	6,166,374		6,166,374
	Equipment Cost	9,151,955		9,151,955
	Training Cost	9,860,437	(3,743)	9,856,694
	TOTAL	\$25,178,766	(3,743)	\$25,175,023

RECAP G
AID Grant pha-G-1064
CENTRAL COSTS

	Disbursement 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Unliquidated Obligations	TOTAL
Salaries	2,869,236			2,869,236
Fringe Benefits	463,691			463,691
Consultants	113,582			113,582
Supplies	224,155			224,155
Travel	702,703			702,703
Office Equipment	70,407			70,407
Telecommunications	369,604			369,604
Space Cost	162,543			162,543
Audit Fees	5,518			5,518
Conference Cost	64,271			64,271
Other Direct	242,146			242,146
Indirect Cost	878,518			878,518
TOTAL	\$6,166,374			\$6,166,374

RECAP H
 AID GRANT pha-G-1064
EQUIPMENT COSTS

	Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Unliquidated Obligations	TOTAL
104	Procurement	8,372,434		8,372,434
	Repairs	213,924		213,924
	Freight	292,432		292,432
	Warehousing	187,165		187,165
	Indirect Cost	86,000		86,000
	TOTAL	\$9,151,955		\$9,151,955

RECAP I
 AID GRANT pha-G-1064
TRAINING COSTS

	Disbursements 07-01-74 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Unliquidated Obligations	TOTAL
Participant Cost	1,805,917			1,805,917
Field Training	581,997			581,997
Educational Matls.	337,954			337,954
Maintenance Agreements	26,493			26,493
National/Regional Pgms.	1,271,505			1,271,505
Clinical Practice	213,171			213,171
U.S. Training Centers	5,294,769			5,294,769
Direct Support	328,631	(3,743)		324,888
TOTAL	\$9,860,437	(3,743)		\$9,856,694

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RECAP J
AID GRANT DSPE CA-0083

	Disbursement 09-01-80 thru 09-30-83	Disbursement 10-10-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations 10-1-84 thru 12-31-84	TOTAL
Central Cost	4,707,053	1,796,407	726,405	7,229,865
Planning and Development	788,354	240,835	637,690	1,666,879
Equipment Cost	653,666	973,748	2,889,835	4,517,249
Training Costs	7,740,470	3,123,176	6,232,733	17,096,379
TOTAL	\$13,889,543	\$6,134,166	\$10,486,663	\$30,510,372

RECAP K
 AID GRANT DSPE CA-0083
CENTRAL COSTS

	Disbursements 09-01-80 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations as of 10-01-84 thru 12-31-84	TOTAL
Salaries	2,683,116	983,827	432,219	4,099,162
Fringe Benefits	520,835	218,189	93,340	832,364
Supplies	120,473	39,391	31,010	190,874
Travel	15,097	5,681	3,650	24,428
Office Equipment	14,673	20,770	3,191	38,634
Telecommunications	347,278	111,762	31,869	490,909
Space Costs	271,436	104,680	41,906	418,022
Other Direct	156,415	92,832	(1,324)	247,923
Indirect Cost	577,730	219,275	90,544	887,549
TOTAL	\$4,707,053	\$1,796,407	\$726,405	\$7,229,865

RECAP L
 AID GRANT DSPE CA-0083
PLANNING AND DEVELOPMENT

	Disbursements 09-01-80 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations as of 10-01-84 thru 12-31-84	TOTAL
Consultants	28,670	4,993	13,657	47,320
Travel	510,483	131,192	159,044	800,719
Audit Fees	19,500	41,500	344,000	405,000
Conference Cost	27,090	7,373	10,294	44,757
Publications	105,795	26,194	32,389	164,378
Indirect Cost	96,816	29,583	78,306	204,705
TOTAL	\$788,354	\$240,835	\$637,690	\$1,666,879

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RECAP M
AID GRANT DSPE CA-0083
EQUIPMENT COSTS

	Disbursements 09-01-80 thru 09-30-83	Disbursements 10-01-83 thru 09-30-84	Proj. Disbursements and Unliquidated Obligations as of 10-1-84 thru 12-31-84	TOTAL	
109	Procurement	369,438	866,246	2,691,627	3,927,311
	Repairs	15,344		23,000	38,344
	Freight	136,039	58,846	44,155	239,040
	Warehousing	111,652	40,219	121,849	273,720
	Indirect Cost	21,193	8,437	9,204	38,834
	TOTAL	\$653,666	\$973,748	\$2,889,835	\$4,517,249

RECAP N
AID GRANT DSPE CA-0083
TRAINING COSTS

	Disbursements 09-01-80 thru 09-30-83	Disbursements 10-10-83 thru 09-30-84	Proj. Disbursement and Unliquidated Obligations 10-01-84 thru 12-31-84	TOTAL
Participant Cost	2,257,352	549,651	345,797	3,152,800
Field Training	250,885	48,873	142,055	441,813
Educational Materials	530,315	231,358	208,627	970,300
Maintenance Agreements	171,497	89,904	116,044	377,445
Natl./Regional Programs	2,990,190	1,580,189	3,974,478	8,544,857
Clinical Practice	237,860	23,251	70,889	332,000
U.S. Training Centers	680,475	225,209	214,500	1,120,184
Direct Support	443,271	277,825	987,981	1,709,077
Special Projects	178,625	96,916	172,362	447,903
TOTAL	\$7,740,470	\$3,123,176	\$6,232,733	\$17,096,379

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APPENDIX

EVALUATION OF TRAINING

The central question of evaluation is "Did I achieve what I intended?" The question can be examined on a very broad level on which the impact of a program on a country is assessed, or it can be examined on a very narrow level to determine if specific actions occurred. This evaluation focuses on the achievement of the intended outcomes of a program. The use of a relatively simple evaluation design provides some insight into JHPIEGO's impacts. However, the restricted scope of the design means that the causality of the outcomes is difficult to determine. This is particularly true regarding the effects of the program on the behavior of the participants.

Conclusions regarding participant behavior are valid if two assumptions hold: (a) knowledge was transmitted to the course participants; and (b) the knowledge came primarily from the JHPIEGO course. The first assumption seems to be valid, particularly in light of the evaluation of the specific courses. The second assumption cannot be directly tested. However, it does not seem likely that all the course participants systematically received training from another source at virtually the same time that they were trained in programs supported by JHPIEGO. As a result, it appears safe to make the tentative assumption that the noted effects are related to the JHPIEGO courses.

The three evaluation questions examined in this discussion are:

1. Were the participants appropriately selected?
2. What were the effects of the courses?
3. Were the courses useful?

The data used to address these questions were obtained via self-report survey from participants in courses conducted prior to fiscal 1984. Limitations of these data include: (1) bias caused by self-selection of respondents, (2) the inability to determine causal relationships; and (3) the descriptive nature of survey data. These limitations of the data restrict interpretation, particularly in regard to the determination of causality, but the data do provide one basis by which to examine some aspects of JHPIEGO's programs. Details of JHPIEGO's evaluation activities are described in the second volume of the annual report.

U.S. PROGRAM

The U.S. educational program has been in operation since JHPIEGO's inception. It offers courses to physicians and administrators from developing countries. These courses currently include Academic Skills for Medical School Faculty in Reproductive Health, Advances in Reproductive Health for Clinicians, Diagnosis and Treatment of Sexually Transmitted Diseases, Management of the Infertile Couple, Microsurgery for Tubal Reanastomosis, and Reproductive Health for Administrators of Family Health and Family Planning Programs.

The courses are intended to enable physicians and administrators to upgrade the

level of reproductive health care in their countries. Participants in these courses are selected based on their potential to influence the development of national health policy and services. In this analysis, participants in the administrators' course are separated from other course participants, who were predominantly clinicians.

Selection of Participants

The data used to examine the appropriateness of participant selection were provided to JHPIEGO by the candidates at the time of application. Candidates supplied the information regarding professional responsibilities, institutional affiliations and professional activities that was used for these analyses.

Administrators' Courses

The U.S. courses for administrators are intended for professionals responsible for the coordination of reproductive health services at the ministerial, departmental, or institutional level. Over 92 percent of the respondents were from the Ministry of Health, hospitals or academic institutions. Two-thirds of these participants were classified as department heads, medical directors, chiefs of service or regional directors. All were sponsored by institutions in developing countries.

These participants spent the bulk of their time (42 percent) performing administrative duties; however, they also reported spending considerable time in patient care and teaching. This paralleled the finding that 60 percent of the participants (or over 90 percent of the survey respondents) possessed an M.D. Additionally, one-third of the administrators reported being on the faculty of a medical or nursing school. Eighty-nine percent of the administrators indicated that they received their training in the third world. Of the 11 percent trained in developed countries, most received their training in France or the Soviet Union.

Clinician Courses

The U.S.-based clinician courses offered by JHPIEGO are intended for practicing third world physicians in positions that enable them to disseminate or use the techniques learned through the course. Approximately 80 percent of these participants worked in hospitals, academic institutions or ministries of health. Over 75 percent were classified as medical officers, professors/instructors, specialists/consultants, chiefs of service or department heads. All were sponsored by institutions in developing countries.

In contrast to the administrators these clinicians reported spending the bulk of their time (58 percent) in patient care and 21 percent in teaching activities. The remaining time was split between research and administration. Over 90 percent of the clinician course participants were known to possess an M.D. and had an average obstetrics and gynecology residency of 39.1 months. In addition, over 53 percent indicated that they were on the faculty of a medical or nursing school. The proportion of clinicians who received their training in the third world was approximately the same as the proportion of administrators (88 vs. 89 percent). The 12 percent trained in developed countries received their degrees mainly in Britain or France.

Effects and Value of Courses

The effects and value of the courses can be examined in a limited fashion with the data on hand. Estimates regarding professional activities that were obtained from the participants upon application and one year after the course were compared. These estimates addressed the percentage of time in professional activities and the number of specific clinical procedures performed. In addition, data were obtained regarding the extent to which trainees used or disseminated information obtained through the course.

Administrators' Courses

A total of 161 administrators supplied both precourse and postcourse estimates of their time spent in professional activities. Comparisons between these estimates revealed insignificant changes for the reported percentages of time spent in teaching and research. Slight but significant decreases in the time devoted to administration and other activities nearly paralleled the significant increase in time devoted to patient care.

These data indicate that the course participants maintained their roles as administrators upon their return home. Thus, JHPIEGO was not selecting participants in this course who were seeking to make career changes. Another interpretation of these findings is that the course helped participants become more efficient managers. This enabled them to spend less time in administrative and unspecified other duties and devote more time to patient care, teaching, and research. This interpretation was supported by the finding that 78 percent of the respondents stated that the course helped them in their administrative duties.

In addition to helping the participants become more proficient in administration, the course is intended to promote the use and dissemination of knowledge. All of the materials distributed through the course were used on the job. Seventy percent of the respondents also indicated that knowledge was shared with colleagues or students. Approximately 50 percent of the respondents reported that they transmitted knowledge obtained in the courses through lectures and reports.

The utility of the course can be inferred from the ratings that the respondents gave to course topics one year after completion of the course. This was a good time to obtain such ratings because the participants had time to integrate their new knowledge into their work. Virtually all of the topics related to management or reproductive health policy received a rating of better than 4.0 on a five-point scale.

Perhaps the most salient evidence regarding the utility of the course is the extent to which participants recommend the course to others. Over 96 percent of the respondents would recommend the course; about 84 percent already had. In general, the course was seen as most useful for government administrators.

Clinician Courses

One year later, approximately 650 clinician course participants reported some changes in the level of effort devoted to various professional duties. After the course, clinicians spent slightly more time in administrative and unspecified other duties, and slightly less time in patient care. The reason for this change is not clear. It may reflect an increased emphasis on documentation related to patient records and equipment operation. In any event, it does not seem to indicate a major role change for this group.

Estimates of the frequencies for two clinical procedures were obtained before and after the course. Unfortunately, these were the only clinical procedures on which precourse and postcourse information was available. The participants indicated an increased use of laparoscopy for diagnostic purposes and a decrease in the number of cesarean deliveries. This suggests that the techniques learned in the courses were incorporated into the practices of the participants. However, to determine whether these changes have major public health significance will require further study.

The evidence also suggested that the information and techniques taught in the U.S. clinician courses were disseminated. Approximately 70 percent of all respondents reported that they trained medical school graduates, and 61 percent reported that they trained both postgraduate physicians and medical students. Over 80 percent of the respondents passed on the information related to patient management. In addition, 60 percent taught students the Fallope ring method of sterilization, 69 percent taught diagnostic laparoscopy, and 77 percent taught

postpartum minilaparotomy. The responses indicated that course participants taught laparoscopy to an average of 12 physicians per year.

In addition to dissemination of knowledge to small groups or classes, the responses indicated that the course participants were quite productive in the area of publication. Over one-half reported using materials supplied by JHPIEGO in professional presentations in the previous year.

Concluding Remarks

JHPIEGO's educational program in the United States appears to have been successful. The selection of participants was appropriate, the topics were perceived as useful, and the participants used or disseminated what they learned.

The participants in the administrators' courses came from hospitals and ministries of health in developing countries. They were directly involved in the administration of reproductive health programs. Many were affiliated with more than one institution. Therefore it appears that the intended audience was reached. The course itself appeared to be effective. The participants rated the topics as relevant and useful. Further, there was some evidence that upon their return to their sponsoring institution, the participants were more efficient managers. Finally, the participants were motivated by the course. Over 95 percent reported that their countries should develop reproductive health programs. One-half stated that such programs were being initiated. Additionally, the participants shared the knowledge acquired in the course and recommended the course to their colleagues.

The U.S.-based program for clinicians comprised several courses. The general effects of this program were presented here, while the specific courses are examined in the second volume of this report.

In general, the clinician program was also quite successful. These participants from the developing countries were active physicians who specialized in obstetrics and gynecology. They were chosen because of their professional stature and ability to disseminate new knowledge. Some evidence suggested that these physicians incorporated their new skills into their practices. This was noted most strongly in their use of laparoscopy. The clinicians disseminated knowledge through training other physicians and residents. The physician/educators passed on the knowledge to students. Many of the participants incorporated material provided by JHPIEGO into professional presentations and publications.

In addition, many AID in-country population programs are directed by graduates of JHPIEGO's U.S. courses. In all, 141 current project directors were identified from the Population Projects Database of the Population Information Program as graduates of JHPIEGO's U.S. courses. Three or more projects are directed by former JHPIEGO trainees in Bangladesh, Brazil, Egypt, El Salvador, Guatemala, Indonesia, Liberia, Malaysia, Mexico, Nigeria, the Philippines, the Sudan, Tanzania, Thailand, and Zaire.

Perhaps the clearest evidence of the success of JHPIEGO's U.S. program is the existence of JHPIEGO in-country programs. These programs could only be initiated after a certain "critical mass" of concerned and knowledgeable health professionals was achieved. By training administrators and clinicians, the U.S. program helped to achieve that critical mass.

IN-COUNTRY PROGRAMS

JHPIEGO-supported in-country programs provide physicians and nurses with current knowledge and skills in reproductive health, and they upgrade reproductive health courses in national medical educational institutions.

Most in-country programs have direct ties with national medical schools or other

major professional training institutions. This link serves as a means by which relevant concepts of reproductive health can be integrated into the training institutions. Additionally, this association serves to enhance the quality of training provided to participants and increases the prestige associated with participants in the program.

The in-country programs are efficient mechanisms for the selection and training of medical professionals. The project director can select participants based on his/her knowledge of local needs. In addition, the in-country programs avoid many of the difficulties related to international travel associated with the U.S. courses.

The JHPIEGO Annual Participant Survey (APS) is one mechanism by which the in-country programs are monitored. While the APS has limitations, as pointed out elsewhere in this report, it can be a useful tool in program evaluation. The major issues that can be addressed with the APS are: (a) appropriateness of participant selection; (b) monitoring of course content; (c) perceived utility of instruction; and (d) perceived quality of instruction.

The APS responses for in-country programs in Tunisia and the Philippines are highlighted in this report. As will be seen, the results derived from the APS attest to the robustness of JHPIEGO's approach to continuing medical education.

Tunisia: National Education Program in Reproductive Health, Endoscopy, and Laparoscopy

The Tunisian in-country program is an ambitious attempt to provide training to medical personnel in many aspects of maternal and child health. Courses are offered in endoscopy, local anesthesia, and clinic-based family planning services (clinician courses) to physicians and nurses who can put this knowledge into practice.

The survey results indicated that the program participants were appropriately selected. About 80 percent of the respondents reported that they were using the newly acquired skills in the position held prior to the course. The operating room support staff, nurses and anesthetists indicated they worked with fellow JHPIEGO trainees and that the courses helped to increase their effectiveness in working with other professionals. Thus, it appears the courses were effective in stimulating the formation of endoscopy teams at local institutions throughout Tunisia.

Further evidence of appropriate participant selection was derived from the data regarding the frequencies of various obstetrical, gynecological, and family planning procedures. The participants in the endoscopy courses were very involved with surgical, obstetrical, and gynecological procedures, while the participants in the clinician courses were heavily involved in providing clinic-based family planning services. Almost all participants reported that the course enhanced their appreciation of patient counseling; patient counseling was the single most frequently reported procedure.

For the most part, the participants were very pleased with the quality of the training and the topics covered in the courses. The physicians and nurses who attended the endoscopy courses reported that the courses adequately prepared them to perform or assist in laparoscopic procedures. These respondents also reported that they were adequately prepared to care for their equipment.

The participants in the clinician courses reported that they were pleased with the topics included in the areas of family planning and reproductive health.

The participants in the local anesthesia course provided some conflicting data. Although 78 percent of the respondents reported that they changed their anesthesia practices, 67 percent reported that they used only general anesthesia during laparoscopic procedures. The reasons for this are unclear. It may be that the anesthetists are called in to sedate patients who refuse local anesthesia. Or, the

anesthetists may be resistant to changes in their anesthesia practices. Further investigation is needed in order to pinpoint the reasons for the use of general anesthesia.

In summary, the Tunisia program appears to be meeting the educational needs of local medical professionals. With the possible exception of the anesthetists, the course participants actively apply their newly acquired knowledge in their medical practices. All respondent groups gave high ratings to the course content and to the quality of training. In addition, the courses seemed to be effective in promoting the concept of the operating room team. Finally, the responses to the follow-up survey suggest that participants pass on the information and skills that they learn in the courses. For example, nurse endoscopy trainees now train others in diverse subjects, such as high-risk pregnancy, infertility, and IUD management.

Philippines Endoscopy Training Program

Participants in the Philippines Endoscopy Program are selected according to three major criteria: (1) Ability to apply the skills acquired in the course at the institution that sponsored their attendance; (2) Ability to form doctor-nurse operating theatre teams at the sponsoring institution; and (3) Experience in surgical procedures for reproductive health.

The results of the APS indicate that the selection of participants seems to have been appropriate. Indeed, the responses indicated that participants applied the newly acquired skills in their sponsoring institutions. Virtually all of the respondents reported that they worked with other course participants and that the course helped to improve their effectiveness in working with other professionals. Finally, the data indicated that both the physician and nurse participants were heavily involved in the surgical aspects of reproductive health services.

The respondents also provided data related to course content and the effectiveness of the instruction. Areas of particular interest included: (a) local anesthesia; (b) use and care of laparoscopic equipment; and (c) patient counseling. The respondents reported that these topics were included in the courses that they attended. Further, the respondents gave high ratings to the quality of instruction and they reported that the instruction prepared them to integrate their new skills into their professional responsibilities.

Not only did these participants use the skills acquired through the course, they actively disseminated their new knowledge to others. More than 70 percent of the reporting physicians and nurses stated that they taught others how to perform or assist with laparoscopy. This is an indication of their confidence in their ability to perform their new skills.

These findings validated the ranking of the Philippines program as one of JHPIEGO's model programs. It appears that the quality of instruction and student support were very high. The effects, in terms of participant ability and enthusiasm, are quite remarkable. This program demonstrates what can be achieved by a skilled and enthusiastic project director in a country that possesses an adequate infrastructure and a policy that supports the expansion of maternal and child health services.

Concluding Remarks

The outcomes of two in-country programs in the Philippines and Tunisia were presented. In general, it appears that the participants in these courses were quite satisfied with the topics of instruction and the quality of the training. The available evidence suggests that the participants were in the position to apply the skills learned through the courses.

Although difficult to assess, it is likely that the successful outcomes in the two diverse cultures can be attributed to JHPIEGO's approach to the development of in-country programs. This process must be initiated by a potential program director from the country in which the program will take place. The program is then developed in conjunction with JHPIEGO, the program director, the Ministry of Health and/or Ministry of Education, and individual institutions. This process ensures that the final program will reflect local needs and values.