JHPIEGO

ANNUAL REPORT

The Johns Hopkins Program for International Education in Gynecology and Obstetrics

FISCAL YEAR 1985

During the last 20 years of the twentieth century, there will be approximately three billion births. The World Health Organization estimates that two billion of these births will take place without the attention of a medical professional. At least two million women will die as the result of pregnancy and childbirth. It has been estimated that, during these 20 years, 40 million children will die at birth or during their first month of life. Infant mortality and child deaths between the ages of one and five years bring the total number of deaths to 250 million. Ninety-five percent of these deaths will occur in developing countries, and the majority are preventable. Decreasing these mortality rates is the goal of reproductive health care.

The problem is amenable to correction, as has been demonstrated in developed countries. Many preventive and some curative interventions can sustain life at an affordable price. Unwanted pregnancies, too many children, having children at too young or too old an age, or bearing them at too short an interval all endanger the health and well-being of mothers and children. Similarly, malnutrition, poor sanitation, and infectious or parasitic disease constitute a triad responsible for a large proportion of child and maternal deaths. The interaction of excessive mortality, excessive fertility, and poverty creates a self-perpetuating spiral of despair. JHPIEGO assists medical schools, nursing/midwifery schools, and ministries of health, as well as trainers of community health workers, in disseminating new knowledge, teaching new skills, catalyzing changes in the delivery of reproductive health care, and evaluating the impact of these interventions, toward the ultimate goal of improving the health of women and children in developing countries.

ANNUAL REPORT OF THE JHPIEGO CORPORATION

FISCAL YEAR 1985

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PREFACE

Personnel in the field of reproductive health assist women in having healthy children, having the number of children they desire, and in completing the reproductive phase of their lives as healthy mothers able to care for their families. Reproductive health includes the management of pregnancy, delivery, and the post-delivery period, as well as care of the newborn. It also includes child spacing (family planning) to provide adequate periods of nutrition (breast feeding) for the baby before another pregnancy and to provide adequate periods for the mother to regain her health between pregnancies. Reproductive health care offers voluntary sterilization to couples who have completed their families. For couples unable to have children, reproductive health care includes infertility studies to diagnose and treat the problem so that they too may complete their families. Reproductive health care also attempts to protect children against childhood diseases, parasitic and diarrheal diseases, and to provide adequate nutrition. Health care professionals who specialize in reproductive health must also be familiar with genetics, cancer detection, diagnosis and treatment of sexually transmitted diseases, endocrinology, management of high-risk pregnancy, and perinatology.

This report, through the number of participants in JHPIEGO programs, indicates that there is a great deal of interest throughout the world in reproductive health education. However, there is still a great unmet need, particularly in underserved areas, such as sub-Sahara Africa. For example, a recent attitudinal survey of 845 graduate physicians throughout Nigeria on the provision of family services indicated that 60 percent desired refresher training.* Unfortunately, JHPIEGO and other U.S.-based organizations lack sufficient funds to address all of these needs. Support for training by JHPIEGO usually lasts no more than three to five years. Institutionalizing training, however, through many of the approaches described in this report, ensures that a proportion of training will continue when outside support ends. JHPIEGO's evaluation activities, which are described in the second section of this report, indicate that the training programs that it supports are effective in improving the skills and knowledge of participants. A large proportion of participants, in turn, pass on the their new knowledge and skills

*Otolorin, E.O. 1985. "Physician attitudes and the provision of family planning services in Nigeria," Family Health International, Research Triangle Park, North Carolina, U.S.A.

to their colleagues when they return to their clinics, hospitals, or medical and nursing schools. This informal training begins the process of institutionalization. Ultimately, JHPIEGO works toward upgrading the reproductive health curriculum at the undergraduate or pre-service level. Training in reproductive health care for all medical and nursing students is a significant step toward meeting the needs of developing countries.

EXECUTIVE SUMMARY

JHPIEGO is devoted to improving the health of women and children in developing countries. It works specifically in the field of reproductive health to:

- -- Develop and support short-term educational programs for physicians, nurses, paramedical personnel, administrators, and medical and nursing students.
- -- Facilitate the upgrading of reproductive health education in the curricula of medical and nursing schools and other teaching institutions.
- -- Advocate the incorporation of reproductive health services into health care.
- -- Supply the hospitals and clinics of its graduates with appropriate modern surgical equipment and support repair and maintenance centers.
- -- Provide up-to-date educational materials for health personnel and their institutions.

Education is JHPIEGO's primary activity. Training programs are supported overseas in national and regional training centers and at the Johns Hopkins Educational Center in Baltimore. Most programs include core material covering

- -- The use of contraception to space births
- -- High-risk obstetrical care
- -- Diagnosis and treatment of sexually transmitted diseases and infertility
- -- Fundamentals of community medicine
- -- Teaching methodology for reproductive health

The focus of in-country programs depends on national needs and resources. Individual programs may emphasize infertility and sexually transmitted disease, microsurgery, administration, endoscopy, minilaparotomy, IUD insertion, anesthesia, or the standardization of the reproductive health curricula in medical and nursing schools.

JHPIEGO offers a small number of courses in Baltimore at the Johns Hopkins Educational Center. The purpose of the Center is to develop and evaluate new courses before they are offered overseas, promote courses that best meet the needs of developing countries, and identify leaders and institutions to assist in the establishment of regional and national programs. During fiscal 1985, the Center's courses focused on administration, microsurgery, the management of sexually transmitted diseases and infertility, and academic skills for medical school faculty.

By the end of JHPIEGO educational programs, participants, depending on their particular course, should be able to

-- Enumerate major contributors to maternal and infant morbidity and mortality in their countries
-- Manage patients using one of the common child spacing methods
-- Initiate a basic infertility workup and make referrals
-- Diagnose and treat common vaginal infections and sexually transmitted diseases

Since its inception in 1973, JHPIEGO has supported the training of over 35,500 health personnel from 3,843 institutions in 121 countries. A total of 7,825 were physicians or medical school faculty, 3,365 were nurses or paramedical personnel, 1,065 were administrators, and 23,302 were medical or nursing students. A total of 33,216 participated in programs at national or regional training centers, and 2,341 attended courses in the United States.

INSTITUTIONAL OUTREACH

JHPIEGO encourages course participants to return to their institutions and pass along their updated skills and knowledge to their co-workers. Many programs include training in teaching methods and communication skills to help course participants instruct their colleagues. All programs provide educational materials to the trainees and their home institutions. In this way, several professionals or an entire institution (medical or nursing school, hospital, or maternal and child health center) can benefit from the training that JHPIEGO has provided for an individual. Instruction for one health care provider improves the medical care of his clients during his working life; institutional change can improve the health care of a nation for generations. Although it is difficult to quantify the effect of JHPIEGO-supported programs on health services, the vast majority of JHPIEGO graduates hav indicated on questionnaires mailed to them at least six months after their course that they use their new medical skills and teach them to their colleagues. For example, 85 percent of all trainees who attended clinician courses at the Johns Hopkins Educational Center in Baltimore reported that they teach others about reproductive health. Through this institutionalization of reproductive health knowledge, skills, and techniques, a demand is created for further institutionalization through education in traditional centers of learning, such as medical or nursing schools.

Of the 3,843 institutions that JHPIEGO has reached since fiscal 1974 (Table 1), 605 were reached for the first time in fiscal 1985: 367 in Africa, 13 in Asia, 208 in Latin America

TABLE 1 Number of medical institutions represented by course participants at in-country, regional, and U.S. training centers, by region, inception through fiscal 1985

Region	Total Institutions[a]	Medical Schools		
		In Region[b]	Represented by Course Participants	%
Africa	1,093	56	43	77
Asia[c]	778	189	112	59
Latin America/ Caribbean	1,506	228	144	63
Near East	466	45	34	76
Total	3,843	518	333	64

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

[a]Includes all types of medical institutions providing reproductive health care, for example, medical schools, hospitals, or maternal and child health centers.

[b]Only current AID-designated countries are included.

[c]Excluding China.

and the Caribbean, and 17 in the Near East. The largest number of institutions, 1,506, has been reached in Latin America and the Caribbean.

JHPIEGO's strategy in a country is aimed at upgrading the reproductive health training provided in medical and nursing schools. Medical schools also provide essential support for many of the overseas programs that JHPIEGO sponsors. Courses are often taught by medical school faculty and they are conducted in medical school facilities, clinics, or affiliated hospitals. JHPIEGO has supported the training of health care professionals from 333 of the 518 medical schools in countries in which AID authorizes training (Table 1). Although 82 new medical schools were reached in fiscal 1985, the percentage dropped from 70 to 64 between fiscal 1984 and 1985 because the total number of medical schools was corrected from 360 to 518, based on information obtained from the World Health Organization. Three-quarters of the medical schools have been reached in Africa and Asia, 63 percent in Latin America and the Caribbean, and 59 percent in the Near East. JHPIEGO has reached 73 percent of the medical schools in countries with ten or fewer schools.

To effect changes in the training programs offered by professional health schools in developing countries, JHPIEGO uses three strategies:

1. Efforts to incorporate relevant, practical, and current reproductive health information into the basic training of those who become trainers or service providers. Figure 1 shows the location of overseas undergraduate and training-of-trainer programs during the reporting period.
2. Advocacy to generate support for changes in policy in the delivery of reproductive health care among policymakers; for example, conferences, workshops, and U.S. and regional training create an awareness among participants of reproductive health issues and generate an interest in resolving these issues. Figure 2 indicates the location of programs for administrators, policymakers, and key educators from leading health institutions that were conducted during the reporting period.
3. Demonstration to policymakers and teaching institutions of the feasibility and effectiveness of in-service training programs that introduce new reproductive health modalities, so that eventually there will be more widespread incorporation of these modalities into educational and service programs. When needed, JHPIEGO supports in-service training programs at major institutions. Figure 3 indicates the location of endoscopy courses for physicians, one example of in-service training.

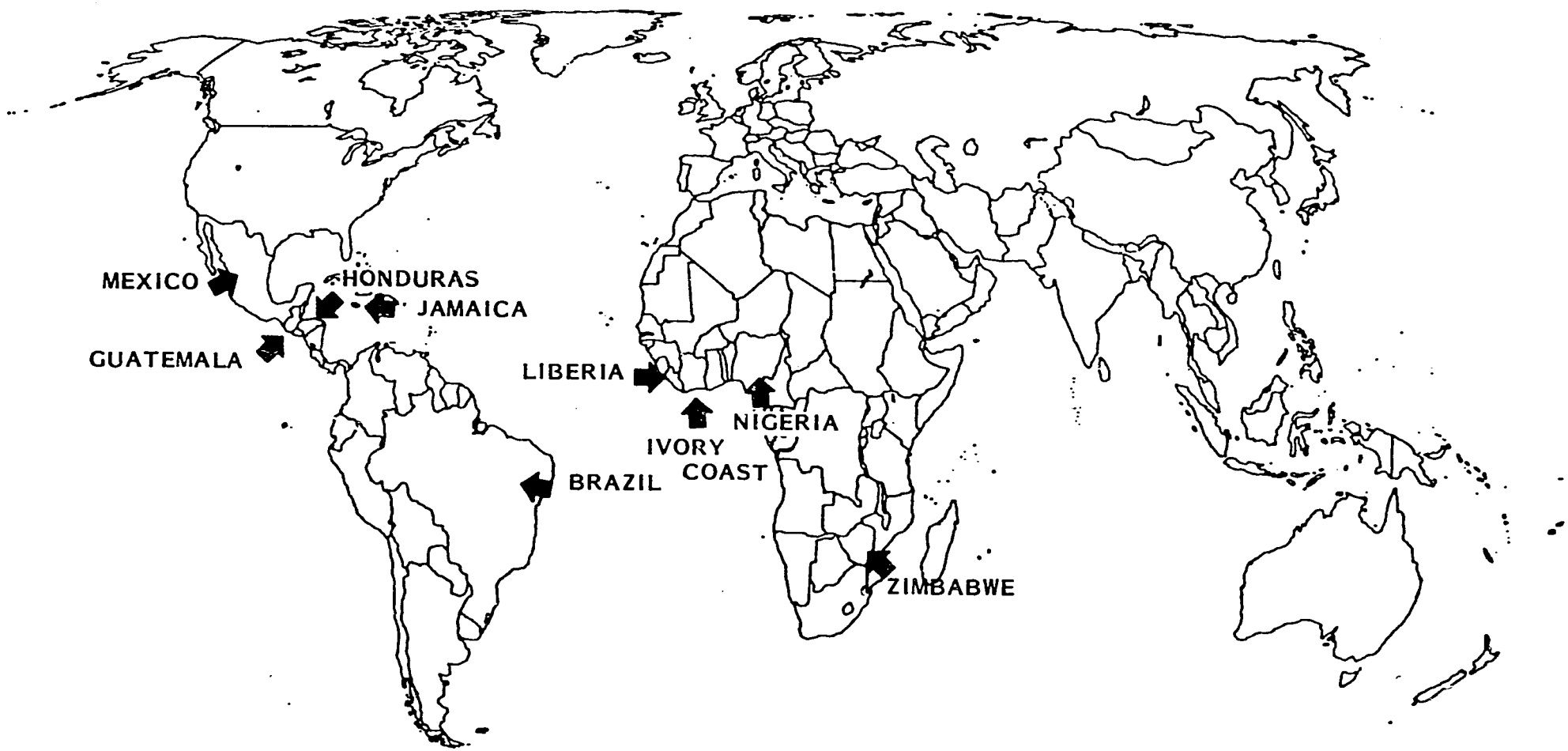

FIGURE 1 Institutionalization: Location of JHPIEGO-supported overseas undergraduate and training-of-trainer programs during the reporting period

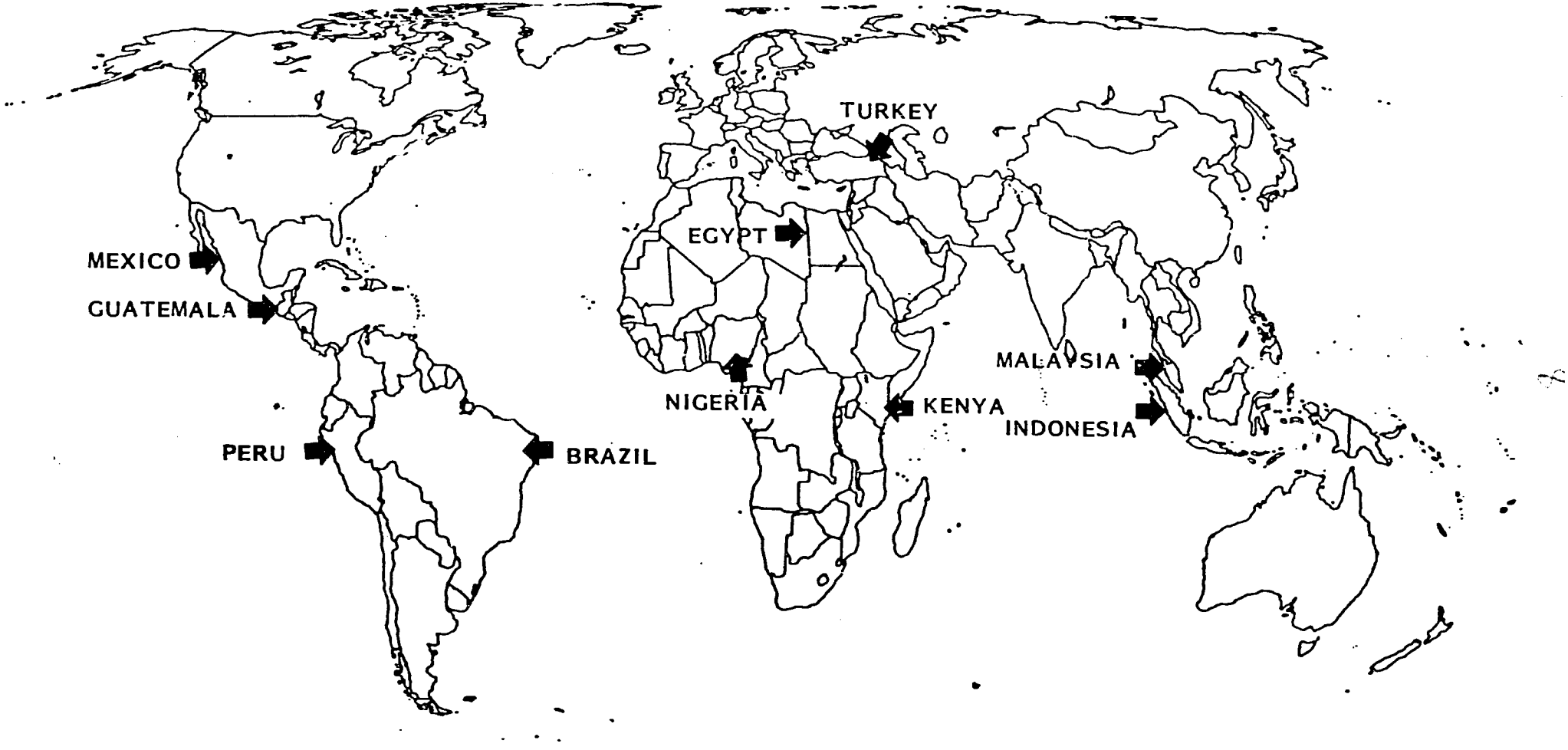

FIGURE 2 Advocacy: Location of JHPIEGO-supported programs for administrators, policymakers, and key educators from leading health institutions during the reporting period

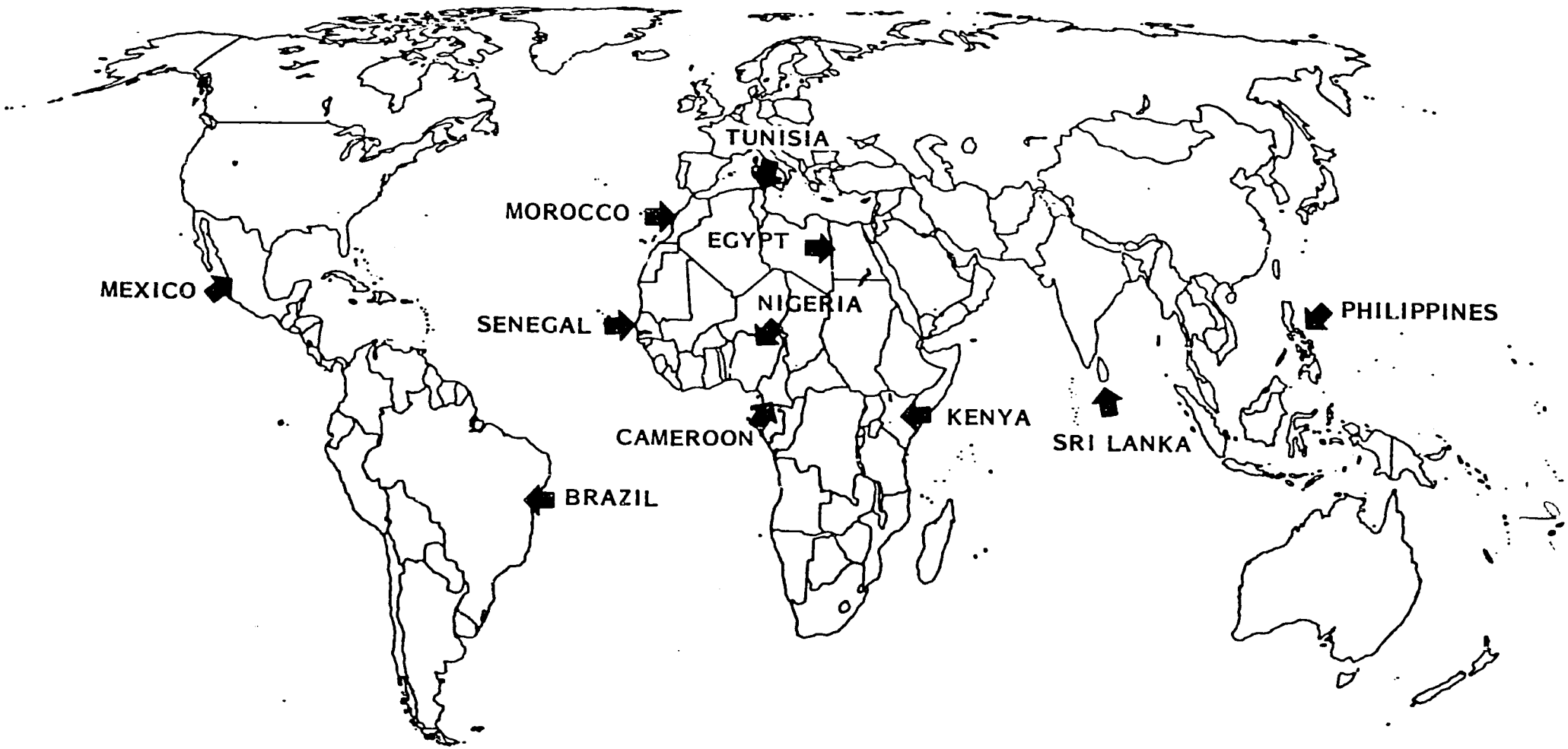

FIGURE 3 Demonstration: Location of JHPIEGO-supported endoscopy courses for physicians during the reporting period

TABLE 2A Location of institutionalization and advocacy programs supported by JHPIEGO during the reporting period

Institutionalization		Advocacy			
Undergraduate Training	Training of Trainers	Programs for Policymakers[a]		U.S. Training of Administrators[b]	
Ivory Coast	Liberia	Kenya	Guatemala	Benin	Somalia
Nigeria	Nigeria	Nigeria	Mexico	Chad	Uganda
Brazil	Zimbabwe	Indonesia	Peru	Ghana	Botswana
Guatemala	Brazil	Malaysia	Egypt	Guinea	Lesotho
Honduras		Brazil	Turkey	Nigeria	Madagascar
Jamaica				Senegal	Zimbabwe
Mexico				Sierra Leone	Fiji
				Togo	Indonesia
				Cameroon	Philippines
				Central African Rep.	Thailand
				Zaire	Haiti
				Rwanda	Montserrat
					Jordan

[a]Administrators, policymakers, and key educators from leading health institutions.

[b]Home country of participants.

To enhance the curriculum in medical and nursing schools in developing countries, JHPIEGO supports programs for students, faculty, and administrators. During the reporting period, JHPIEGO supported undergraduate training in the Ivory Coast, Nigeria, Brazil, Guatemala, Honduras, Jamaica, and Mexico (Table 2A). JHPIEGO support ended in fiscal 1985 for the Mexican program and two of the three programs in Brazil. JHPIEGO expects that the content of these reproductive health education programs (REHEPs) will be absorbed into the curricula of most of the participating institutions.

Medical student training increased by 30 percent between fiscal 1984 and 1985 as a result of training in Latin America. The number of nursing students trained increased six-fold primarily as a result of the new programs in the Ivory Coast and Nigeria.

JHPIEGO supported several programs for faculty during fiscal 1985. They included academic skills courses for young medical school faculty that are conducted at the Johns Hopkins Educational Center in Baltimore; the participants in the course represented medical schools in seven countries. A workshop designed to improve the research skills in epidemiology of physicians and medical school faculty in Kenya was convened in August of 1985. Teachers of nurses and midwives also received training in Nigeria and Zimbabwe.

The training of administrators, policymakers and key health educators increased sharply between fiscal 1984 and 1985 from 90 to 388. Most attended workshops in Egypt, Mexico, Nigeria, and Turkey. Two courses for administrators of family health and family planning programs were conducted at the Johns Hopkins Educational Center in Baltimore; the trainees represented 25 countries (Table 2A).

Postgraduate "in-service" training in reproductive health is described in 25 countries in this report. Courses emphasized endoscopy, minilaparotomy, IUD insertion, anesthesia, and microsurgery (Table 2B). Programs without "hands-on" clinical training were conducted in seven countries.

TRAINING STATISTICS

During the reporting period, 11,340 professionals and undergraduates were trained with JHPIEGO support, a 37 percent increase over the 1984 figure of 8,271 (Table 3A). The table displays enrollment in clinical, didactic update, and undergraduate training programs; "Reproductive Health for Administrators" and "Academic Skills" are conducted at the Johns Hopkins Educational Center in Baltimore.

Physician training increased by 22 percent from 1,029 to 1,254. Programs in Latin America--Brazil, Colombia,

TABLE 2B Location of demonstration programs supported by JHPIEGO during the reporting period

Physician

Endoscopy	Minilap	Clinical	Anesthesia	Nonclinical	Microsurgery
Cameroon	Kenya	Nigeria	Brazil	Mauritius	Thailand
Kenya	Sierra Leone	Senegal	Colombia	Nigeria	
Nigeria	Brazil	Somalia	Mexico	Sudan	
Senegal		Uganda	Egypt	Zaire	
Philippines		Zaire	Morocco	Jamaica	
Sri Lanka		Colombia			
Brazil		Morocco			
Mexico		Tunisia			
Egypt					
Morocco					
Tunisia					

Nurse

Endoscopy	IUD	Anesthesia	Clinical	Nonclinical
Nigeria	Kenya	Colombia	Nigeria	Mauritius
Senegal	Nigeria	Morocco		Nigeria
Philippines	Senegal			Zaire
Sri Lanka	Sierra Leone			Brazil
Brazil	Egypt			Colombia
Colombia				Jamaica
Mexico				
Egypt				
Morocco				

TABLE 3A Number of participants at in-country, regional, and U.S. training centers, fiscal 1985

Region	Clinical Courses		Reproductive Health for Administrators	Academic Skills	Didactic Update			Undergraduate Training		Total		
	Physicians	Nurses			Admin.	Physicians	Nurses	Medical Students	Nursing Students	FY 85	FY 84	% change
Africa	220	239	30	3	36	140	211	0	423	1,302	832	+56
Asia	67	46	4	5	24	52	49	0	0	247	358	-31
Lat. Amer./ Caribbean	292	44	2	0	154	296	216	8,099	226	9,329	6,810	+37
Near East	187	134	1	3	137	0	0	0	0	462	271	+70
TOTAL	766	463	37	11	351	488	476	8,099	649	11,340	8,271	+37

TABLE 3B Number of participants at in-country, regional, and U.S. training centers, inception through fiscal 1985

Region	Clinical Courses		Reproductive Health for Administrators	Academic Skills	Didactic Update			Undergraduate Training		Total
	Physicians	Nurses			Admin.	Physicians	Nurses	Medical Students	Nursing Students	
Africa	1,044	526	249	37	57	457	544	34	423	3,371
Asia	1,210	499	77	47	62	224	169	223	0	2,511
Lat. Amer./ Caribbean	1,927	652	235	16	174	1,291	282	22,031	591	27,199
Near East	1,033	693	74	14	137	525	0	0	0	2,476
TOTAL	5,214	2,370	635	114	430	2,497	995	22,288	1,014	35,557

Mexico, and Peru--accounted for most of the increase. Clinical training of Near Eastern physicians also contributed an 82 percent increase from 103 to 187. Nurse training increased by 4 percent from 904 to 939.

The annual enrollment of physicians in JHPIEGO-supported programs has always exceeded that of nurses, paramedical personnel, and administrators since JHPIEGO's inception (Figure 4). The proportion of physicians trained was 87 percent in the 1970s, 66 percent in 1980, and 49 percent in fiscal 1985. The proportion of nurses and paramedical personnel has increased from 4 percent in the 1970s to 36 percent in fiscal 1985. This increase will most likely continue 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.

By region, the numbers trained increased by 56 percent in Africa, 37 percent in Latin America and the Caribbean, and 70 percent in the Near East. Undergraduate training accounts for most of the difference in Africa and Latin America, and clinical training of physicians and didactic courses for administrators explain the increase in the Near East. Training in Asia decreased by 31 percent mainly because the medical student program ended in the Philippines in fiscal 1984.

JHPIEGO has now trained a total of 35,557 physicians, nurses, paramedical workers, and undergraduates since its inception in 1974 (Table 3B). Undergraduates make up 65 percent of the total. The remaining 12,255 health professionals comprise 7,825 physicians, 3,365 nurses, and 1,065 administrators.

National and Regional Training

In fiscal 1985, 11,234 of the 11,340 total course participants attended in-country or regional programs (Table 4A). In the early years of JHPIEGO, health personnel trained in the United States outnumbered those trained overseas (Figure 5). Cumulative numbers of overseas trainees did not exceed the number of U.S. trainees until 1980. Since 1980, overseas training has accelerated. Roughly, 33,200 of the 35,500 health personnel who have participated in JHPIEGO-supported programs since 1974 attended national or regional programs (Table 4B). Two-thirds of the 33,200 health personnel were medical and nursing students. Of the 12,255 health professionals trained by JHPIEGO, 9,914 (80 percent) attended national or regional programs.

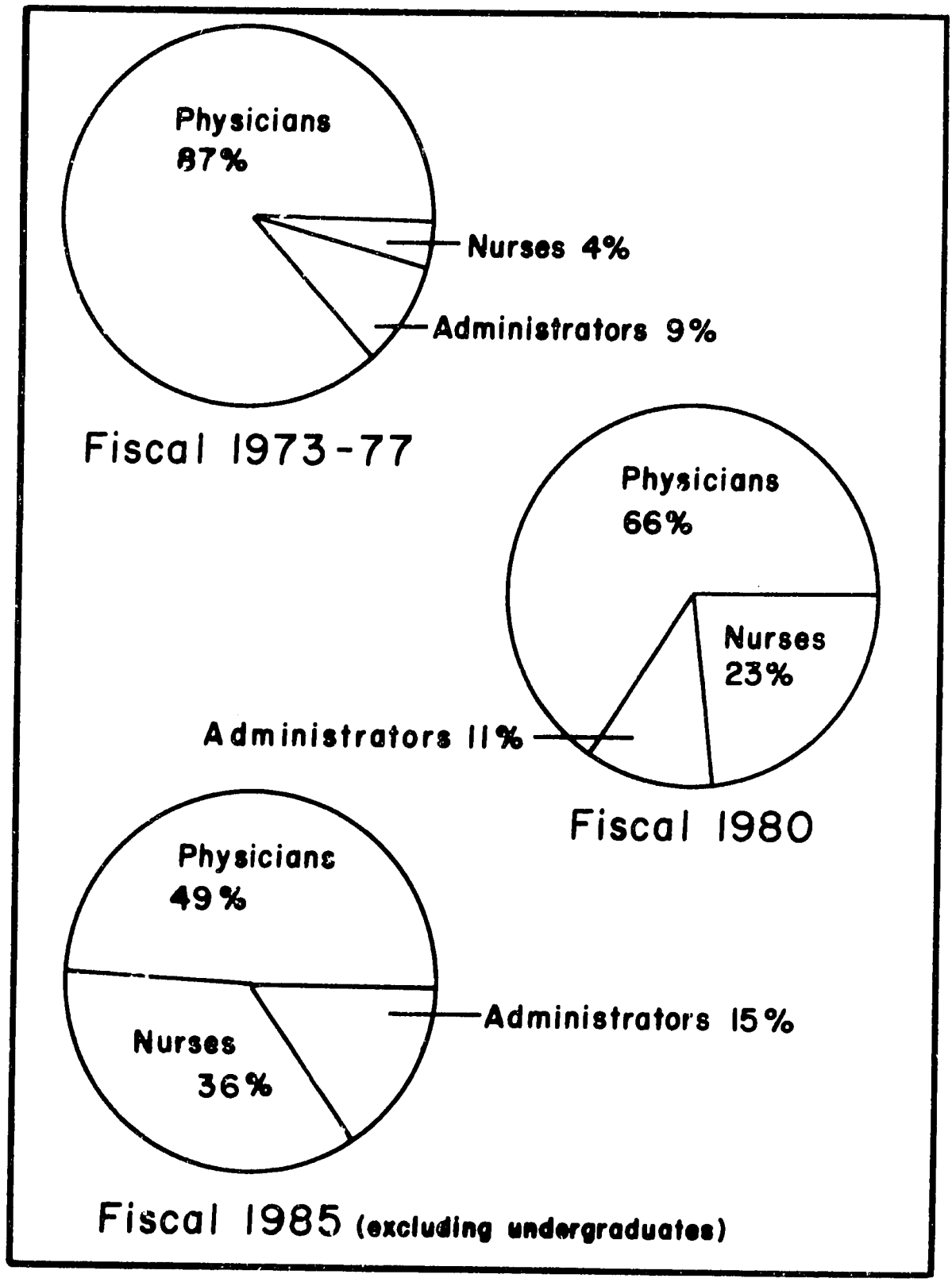

FIGURE 4 Proportions of physicians, nurses/paramedical personnel, and administrators in JHPIEGO-supported programs, fiscal 1973-77, 1980, and 1985

TABLE 4A Number of participants at in-country and regional training centers, fiscal 1985

Region[a]	Clinical Courses: Physicians: Advances in Reproductive Health	Clinical Courses: Physicians: Micro-surgery	Clinical Courses: Physicians: Anesthesiology	Clinical Courses: Nurses	Didactic Update: Admin.	Didactic Update: Physicians	Didactic Update: Nurses	Undergraduate Training: Medical Students	Undergraduate Training: Nursing Students	Total
Africa	171	0	8	239	36	140	211	0	423	1,228
Asia	52	7	0	46	24	52	49	0	0	230
Lat. Amer./ Caribbean	274	0	11	44	154	296	216	8,099	226	9,323
Near East	110	0	72	134	137	0	0	0	0	453
TOTAL	607	7	94	463	351	488	476	8,099	649	11,234

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. [a]Participant's region of institutional affiliation.

TABLE 4B Number of participants at in-country and regional training centers, inception through fiscal 1985

Region[a]	Clinical Courses: Physicians: Advances in Reproductive Health	Clinical Courses: Physicians: Micro-surgery	Clinical Courses: Physicians: Anesthesiology	Clinical Courses: Nurses	Didactic Update: Admin.	Didactic Update: Physicians	Didactic Update: Nurses	Undergraduate Training: Medical Students	Undergraduate Training: Nursing Students	Total
Africa	628	0	62	492	57	457	544	34	423	2,697
Asia	860	20	0	448	62	224	169	223	0	2,006
Lat. Amer./ Caribbean	1,124	36	123	642	174	1,291	282	22,031	591	26,294
Near East	724	0	143	690	137	525	0	0	0	2,219
TOTAL	3,336	56	328	2,272	430	2,497	995	22,288	1,014	33,216

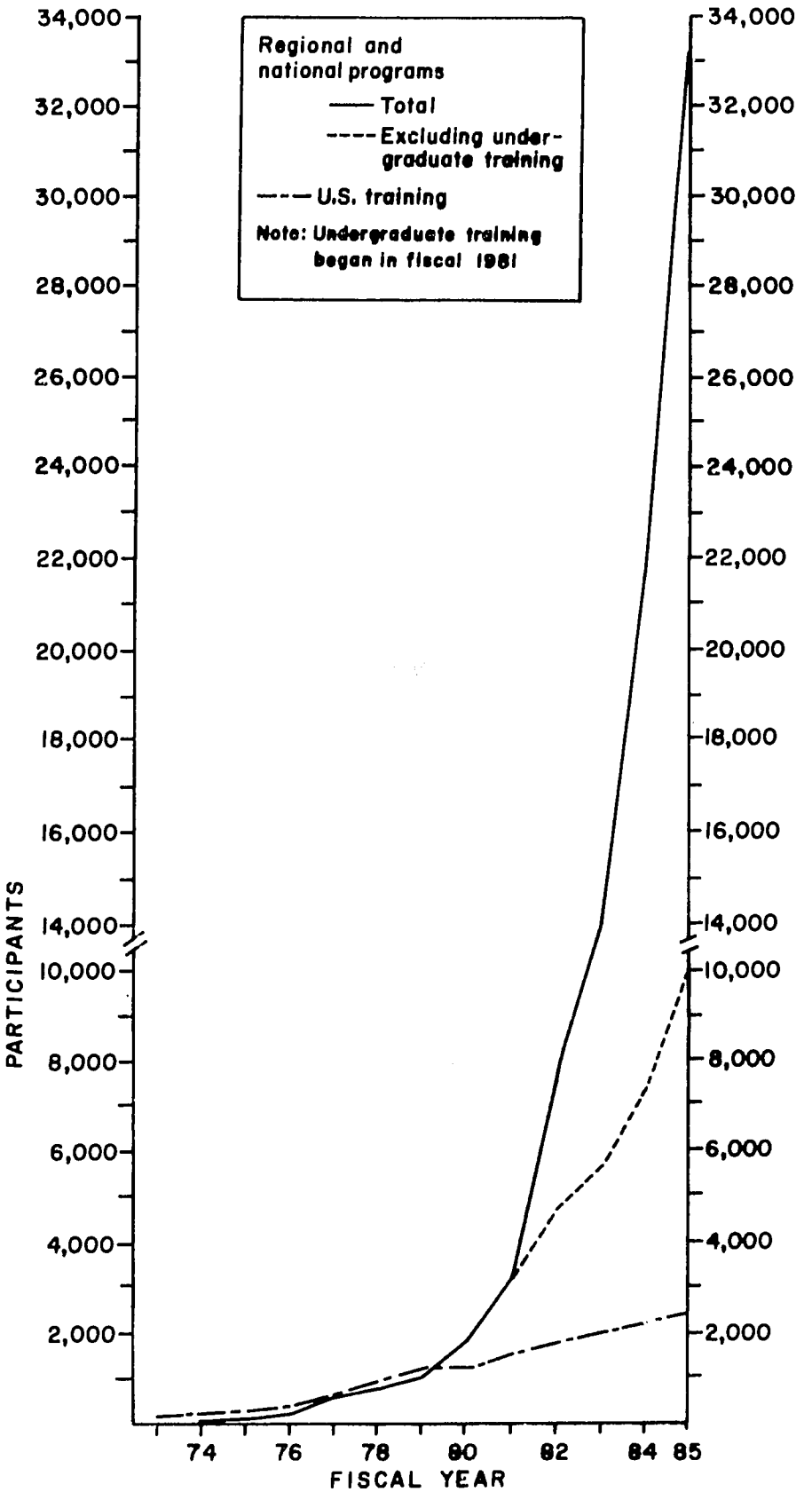

FIGURE 5 Cumulative totals of participants in JHPIEGO-supported programs by fiscal year

U.S. Training

As JHPIEGO has devoted more of its resources to overseas training, it has placed less emphasis on U.S. training. In the early years, JHPIEGO supported training at three centers in the United States in Baltimore, Pittsburgh, and St. Louis. Since 1980, training has been conducted only in Baltimore at the Johns Hopkins Educational Center. In fiscal 1985, 106 health care professionals attended seven courses at the Center (Table 5a), down from an enrollment of 155 in nine courses in fiscal 1984. "Advances in Reproductive Health" was not offered in fiscal 1985, and the courses on sexually transmitted disease and infertility were combined. Seventy percent of the fiscal 1985 participants were from sub-Saharan Africa, up from 67 percent in fiscal 1984. Since JHPIEGO's inception, 2,341 health care professionals, 19 percent of the total number of professionals trained, have attended courses in the United States (Table 5B). The most heavily enrolled courses have been "Advances in Reproductive Health" (43 percent of the participants) and the administrator course (27 percent). By region, the greatest proportion of participants have been from Latin America (39 percent) and Africa (29 percent).

Clinical Training

JHPIEGO includes clinical training in its programs wherever there are adequate facilities and enough patients to meet its certification requirements in laparoscopy, minilaparotomy, IUD insertion, or local anesthesia/conscious sedation. Table 6 shows countries in which clinical training was offered during fiscal 1985 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. The percentage of clinical training conducted in Latin America and the Caribbean increased from 21 to 31 percent between fiscal 1984 and 1985 because of increases in the numbers trained in Brazil and a new endoscopy program in Mexico. The Asian proportion declined from 19 to 9 percent; no endoscopy training was conducted in Thailand in fiscal 1985.

TABLE 5A Number of participants at the Johns Hopkins Educational Center, fiscal 1985

Region	Clinical Courses for Physicians: Sexually Transmitted Diseases/Infertility	Micro-surgery	Reproductive Health for Administrators	Academic Skills	Total
Africa	34[a]	7	30	3a	74
Asia	7	1	4	5	17
Latin America/ Caribbean	2	2	2	C	6
Near East	3a	2	1	3	9
TOTAL	46	12	37	11	106

[a]Includes trainees not funded by JHPIEGO.

TABLE 5B Number of participants at U.S. training centers, inception through fiscal 1985

Region	Clinical Courses for Physicians: Advances in Reproductive Health	Sexually Transmitted Diseases	Infertility	Sexually Transmitted Diseases/ Infertility	Microsurgery	Reproductive Health for Administrators	Academic Skills	INEP[a]	Total
Africa	115	68	116	34	21	249	37	34	674
Asia	281	9	26	7	7	77	47	51	505
Latin America/ Caribbean	594	11	111	2	16	235	16	10	905
Near East	189	4	41	3	9	74	14	3	257
TOTAL	1,009	92	294	46	53	635	114	98	2,341

[a]International Nurse Education Program conducted from fiscal 1977 to 1979.

TABLE 6 Clinical training in fiscal 1985: Percentages trained by region and countries in which clinical training was conducted

Region/country	Percentage[a]
Africa	24
Cameroon	
Kenya	
Nigeria	
Senegal	
Sierra Leone	
Somalia	
Tanzania	
Uganda	
Zaire	
Asia	9
Philippines	
Sri Lanka	
Thailand	
Latin America/Caribbean	31
Brazil	
Colombia	
Jamaica	
Mexico	
Near East	36
Egypt	
Morocco	
Tunisia	

[a]Percentages are based on 1,102 trainees with full documentation who attended in-country, regional, or U.S. courses.

EVALUATION

The best indicator of the effectiveness of JHPIEGO-supported programs in developing countries would be evidence linking the programs with improved family health. There are, however, a multitude of factors that influence family health and it would be difficult, if not impossible, to design a study in which they are controlled in order to identify JHPIEGO's contribution. Instead, JHPIEGO solicits the opinions of course participants about its programs, and about how they use the information, equipment, and educational materials. JHPIEGO uses several methods to survey its graduates. These include evaluations immediately following courses conducted at the Johns Hopkins Educational Center,site visits to graduates at their home institutions, and follow-up mail questionnaires. JHPIEGO has found that the surveys are the most cost-effective way to reach graduates in 121 countries.

The surveys allow JHPIEGO to keep track of graduates by reporting changes in mailing addresses, institutional affiliations, and professional positions. Equipment problems, some of which JHPIEGO can solve, are also reported on the questionnaires. The most important function of the surveys, however, is the collection of information with which JHPIEGO can evaluate its programs. Candidate selection and the content of the courses are reviewed. The questionnaires also ask the graduates to report on the procedures that they have performed, the type of anesthesia used, training that they have carried out, efforts to promote family planning among policymakers or community groups, their use of educational materials provided in the course, and their own evaluation of the course.

JHPIEGO distributes several types of questionnaires. Graduates of courses at the Johns Hopkins Educational Center in Baltimore are given evaluation forms immediately after the course, and they are sent surveys at least six months after the course. In-country course participants, with the exception of medical and nursing school students and workshop and conference participants, are sent the Annual Participant Survey (APS).

The surveys have indicated that the vast majority of graduates use the clinical skills that they have learned and that they teach them to others. For example, 70 percent of participants in the Administrator course conducted at the Johns Hopkins Educational Center use their educational materials to teach others about reproductive health. About 85 percent of participants in clinician courses at the Center (Advances in Reproductive Health for Physicians, Academic Skills for Medical School Faculty in Reproductive Health, and Management of the Infertile Couple) provide instruction in reproductive health to others. About two-thirds of physicians who participated in national programs teach

clinical skills to other health care professionals. This informal training begins the process of institutionalization. Ninety-six percent of the respondents to the six-month administrator survey felt that reproductive health training programs should be conducted in their countries. Sixty-four percent mentioned the Ministry of Health as the appropriate place to begin the training, and 61 percent mentioned medical schools. Respondents to the six-month survey of participants in clinician courses reported that they spent the largest proportion of their time (28%) in medical schools and university hospitals. Two-thirds said that they supervised medical students or graduates. In selecting course participants, JHPIEGO gives priority to professionals who have ties to medical schools and university hospitals, so that they can begin the process of integrating up-to-date information and training into the medical school curriculum.

The six-month survey of participants in clinician courses reported on the advocacy role that the graduates can play. Eighty percent of the respondents said that they were members of a medical association and 64 percent belonged to a national medical association. About three-quarters belonged to an obstetrical/gynecological society, and 42 percent belonged to a family planning organization. Through their participation in these associations, JHPIEGO trainees have the opportunity to share their knowledge and skills with health care professionals throughout their countries.

About one-half of the respondents made a presentation in the 12 months before they received the questionnaire; 60 percent delivered their paper at a national meeting. Thirty-one percent of the respondents reported that they had published a book or a journal article during the year, and there was an average of two publications per person among the respondents who had published. JHPIEGO assumes that graduates promote family planning and reproductive health in other ways, for example, by speaking to politicians and government officials about the need for changes in current health policies, and through their contact with patients, schools, and community groups.

The third facet of JHPIEGO's strategy, demonstration of the usefulness of training in reproductive health, is well documented by the evaluation surveys. In the immediate postcourse evaluation, participants in the Academic Skills, Infertility/STD, and Administrator courses reported that they had learned a great deal. In the six-month survey of participants in the Administrator course, over three-quarters of the respondents said that they applied the skills in their administrative duties. Of the respondents who described themselves primarily as administrators, 94 percent said that the course had influenced their administrative activities. Many participants in the Infertility course commented that infertility is a significant problem in their countries and that the course had given them an opportunity to acquire the

skills and information necessary to help overcome the problem. They reported that they had learned to plan by setting priorities, to evaluate their activities, and to use new approaches for medical research. Academic Skills course participants reported that the training had given them the motivation to develop and conduct research projects on reproductive health problems, for example, an examination of the factors that influence fetal survival and well being. Finally, 85 percent of the respondents to the Annual Participant Survey reported that they were using their new skills in their primary jobs. Roughly two-thirds of the respondents mentioned that they were performing IUD insertions, providing family planning counseling, or distributing oral contraceptives.

The usefulness of the information and training provided in JHPIEGO-supported programs means that there is a demand for current reproductive health information and training. JHPIEGO expects that this demand will persuade health educators and policymakers to upgrade the curriculum in medical and nursing schools, and that it will attract medical and nursing school students to the specialty of reproductive health.

THE NEXT FIVE YEARS

JHPIEGO will continue to upgrade the knowledge and skills in applied technology of physicians, nurses, midwives, and other health care professionals in developing countries by supporting short-term didactic and clinical training. This transfer of knowledge and technology will be accomplished primarily by institutionalizing training in medical schools, nursing schools, and other health institutions as well as through the support of training projects that demonstrate the effectiveness of reproductive health approaches. JHPIEGO will continue to provide educational materials and equipment to assist in the incorporation of new concepts into educational curricula and everyday medical practice. In addition, JHPIEGO will seek out and evaluate as needed new concepts, technologies, or educational approaches relevant to reproductive health care. JHPIEGO's goal remains unchanged: the reduction of maternal and infant mortality and assistance to couples in reaching their desired family size.

EDUCATION AND TRAINING

AFRICA

JHPIEGO conducted 24 programs in 14 sub-Saharan African countries during the period covered in this report, an increase from 15 programs in 11 countries in the annual report for fiscal 1984. The expansion of JHPIEGO's activities in Africa is part of a larger strategy formulated by AID to increase development activities in the region.

Compared with other regions of the world, health care systems in Africa are less sophisticated, lack trained personnel at all levels, and suffer from substantial shortages of vital materials. Despite JHPIEGO's focus on sub-Saharan Africa, progress in achieving educational goals and objectives is more difficult than in other regions. Institutional change leading to improved reproductive health training and service delivery is a time-consuming and difficult task in sub-Saharan Africa due to a lack of:

-- Political support (funds and policy) for reproductive health services
-- Trained professionals (physicians, nurses, and paramedical personnel)
-- Clinical and academic training centers to demonstrate effective service models
-- Continuing education programs to update the knowledge and skills of service providers

Nevertheless, because of the advocacy role played by many international agencies and key health professionals, the governments of many sub-Saharan African countries have recently become more receptive to initiatives in reproductive health and family planning as they recognize the harmful effects of rapid population growth on economic progress and public health, especially the health of mothers and children.

JHPIEGO uses two complementary approaches to reproductive health education in Africa: pre-service and in-service training. The ultimate goal of both approaches is the institutionalization of reproductive health training.

Pre-service training comprises advanced technical training in reproductive health modalities for faculty and clinical instructors, and didactic courses for undergraduates. JHPIEGO provides support and technical

assistance to teaching institutions in their efforts to strengthen reproductive health training and to link training to service delivery. In its advocacy role, JHPIEGO works with health care professionals and policy-makers to sensitize them to the need for continuing education. JHPIEGO works with medical schools and nursing schools to institute curriculum changes that incorporate recent advances in the field of reproductive health. In Africa, JHPIEGO has concentrated its efforts on teaching institutions in Nigeria, the Ivory Coast, Liberia, and Zimbabwe.

The goal of in-service training is the development of a cadre of key health care professionals who can demonstrate the feasibility of delivering reproductive health services and initiate clinical training programs for medical and nursing students and other health care professionals. These health care professionals are also advocates for the development, testing, and acceptance of new modalities in reproductive health that will contribute to the welfare of mothers and children. JHPIEGO-supported regional centers in Senegal, Nigeria, and Kenya provide training for health care professionals from countries in which clinical training is not yet feasible.

Both the pre-service and in-service training activities of JHPIEGO contribute to the availability of and the demand for reproductive health services. In order to achieve its overall training goal, JHPIEGO must be sensitive to the needs of individual countries and flexible in its approach to training. Each country is unique, has unique needs, and possesses unique resources on which JHPIEGO can draw in its efforts to upgrade reproductive health care.

JHPIEGO supports major programs in Nigeria, Zimbabwe, Senegal, and Kenya. The following summary of programs in these countries will clarify JHPIEGO's strategy in sub-Saharan Africa.

NIGERIA

JHPIEGO has supported an endoscopy program in Ibadan since 1979. 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. With the AID initiative, JHPIEGO activity in Nigeria expanded to five programs in fiscal 1984, and nine programs were funded during fiscal 1985. Figure 6 shows the location of JHPIEGO-supported training centers in Nigeria and those proposed for fiscal 1986. This large effort is clearly appropriate, given that Nigeria has about two-thirds the population of West Africa.

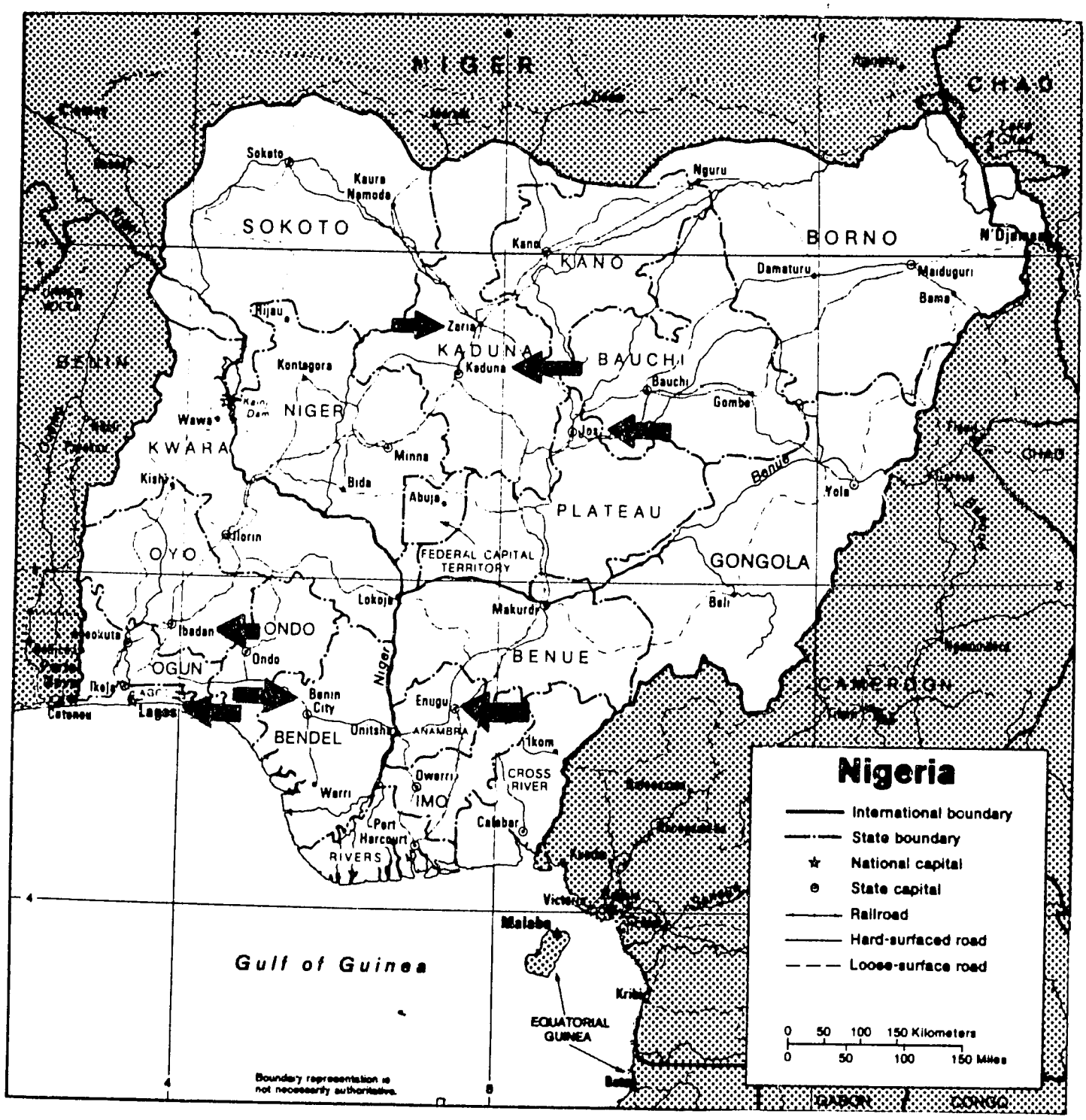

FIGURE 6 Nigeria: Arrows indicate the location of fiscal 1985 and 1986 training programs (adapted from "Nigeria," Background Notes, U.S. Dept. of State)

In Nigeria, geographical, tribal, political, and religious differences have hindered a unified approach to reproductive health training. Nigerian physicians who have been trained over the years with support from JHPIEGO are now professors, chairmen of departments, deans, and project directors. They are in a position to overcome the national differences by setting policy for training, service, and research in reproductive health. JHPIEGO has supported in-country training of physicians and nurses to develop a cadre of service providers who can also act as advocates for improved reproductive health services.

The development of reproductive health services in Nigeria has been spurred by the recent change in government policy. Government support of family planning has made it timely to encourage medical and nursing school faculty to improve and update the reproductive health component of medical and nursing school curricula. Committees to discuss medical training have been formed to provide peer review for a minimum standard of knowledge and skill in reproductive health and to provide peer pressure for the incorporation of these standards in medical and nursing schools.

As in many developing countries, nurses in Nigeria are often the main health care providers, and faculty and clinical supervisors in the field require training to update their knowledge, skills, and teaching methods. The approved curriculum of nurses is subject to more restrictions than those of physicians, however. These restrictions have been under review for nearly two years, and JHPIEGO is working to modify them through the training of educational leaders and service providers.

The improvements in the reproductive health component of medical and nursing school curricula is expected to take place over the next three to four program years. These changes will be enhanced by continuing education in the treatment of sexually transmitted diseases and infertility and the application of new contraceptive modalities.

ZIMBABWE

JHPIEGO is working with the Ministry of Health and the University of Zimbabwe to strengthen nursing and medical training in maternal and child health (MCH) and family planning. Through the Ministry of Health and the Zimbabwe National Family Planning Council, JHPIEGO supports training of nurse-tutors in didactic and clinical skills in order to integrate MCH/family planning into the nursing school curriculum. JHPIEGO also supports programs to develop skills in creative training techniques to support the integration strategies. Tutor training and curriculum development are part of the Ministry of Health strategy to develop a cadre of tutors who can train district-level personnel and

auxiliaries. Training at the district level is also supported by the World Bank.

In collaboration with the University of Zimbabwe, JHPIEGO is supporting specialized continuing education in advanced technologies for local anesthesia, laparoscopy, minilaparotomy, sexually transmitted diseases, and perinatology for physicians, nurses, and anesthetists from institutions throughout the country. JHPIEGO plans to assist faculty to integrate new reproductive health modalities into the established curricula of medical and nursing schools and to support the modification of teaching materials and methods.

SENEGAL

The Government of Senegal is currently involved in the development and expansion of family planning services through the Senegal Family Health Project, with the Ministry of Social Development and the Ministry of Health as implementing agencies. JHPIEGO supports national and regional training through the Department of Obstetrics and Gynecology of the University of Dakar, a distinguished teaching institution in Francophone Africa. Continuing education is conducted in reproductive health, family planning, and laparoscopic techniques to develop models for service delivery and training. Senegal has long been a model for other Francophone West African countries in educational development, and JHPIEGO supports this role. Through the University of Dakar, JHPIEGO will work to update the reproductive health curriculum in medical and nursing schools in Senegal and the rest of Francophone Africa. JHPIEGO expects to expand training support to midwives and nurses through the improvement of reproductive health education in the National School of Midwifery and the CESSI, the Institute of Advanced Nursing Education.

KENYA

Kenya was one of the first African countries to receive JHPIEGO's support for in-country training. Through the University of Nairobi, in-service training is primarily oriented toward update training in knowledge and skills for health care providers in rural areas. A second component is training in endoscopy for physicians in urban and district hospitals. Pre-service training in laparoscopy has also been introduced. Kenya is also a regional training center for Anglophone East Africa.

As in Nigeria, geographical, political, and tribal factors have hindered the acceptance of reproductive health services in Kenya. Recently, however, government support of family

planning, including voluntary surgical contraception, has strengthened training and service delivery. JHPIEGO expects to continue in-service training in new technology and methods, and it will initiate high-level review of medical school and nursing school curriculum and teaching methodologies in order to improve pre-service training in reproductive health.

JHPIEGO is currently supporting in-country, regional, or U.S. training for health care personnel from 33 sub-Saharan African countries. These programs consist of both pre-service and in-service training and are conducted in collaboration with ministries of health, social welfare, and education; and with national universities. Table 7 summarizes JHPIEGO programs for African personnel.

TABLE 7 Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
WEST AFRICA			
BENIN			
	Didactic/clinical regional courses in Morocco	b	Endoscopy training for physicians, nurses, and anesthetists
	Didactic/clinical courses in U.S.	c	Infertility/STD, microsurgery, administration
BURKINA FASO			
	Didactic/clinical regional courses in Morocco and Tunisia	b	Training in endoscopy and general family planning emphasizing IUD services
CHAD			
	Didactic/clinical regional courses in Morocco, Egypt, and Senegal	b	Training in reproductive health with emphasis on IUD services and endoscopy for physicians and nurses
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
GAMBIA			
	Didactic/clinical regional courses in Egypt	b	Training in reproductive health with emphasis on endoscopy and IUD services
	Didactic/clinical course in U.S.	c	Infertility/STD
GHANA			
	Didactic/clinical regional courses in Egypt	b	Training in reproductive health with emphasis on endoscopy and IUD services
	Didactic/clinical courses in U.S.	c	Infertility/STD, academic skills, microsurgery, administration
	Clinical course in Jamaica	b	Laparoscopy training for U.S. course participant

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding [a] ($US)	Synopsis
GUINEA			
	Didactic/clinical regional courses in Tunisia, Morocco, and Senegal	b	Training in reproductive health with emphasis on endoscopy
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
IVORY COAST			
NCA-67	Didactic	4,034	Reproductive health education program for medical and nursing students
	Didactic/clinical regional courses in Morocco	b	Training in reproductive health with emphasis on endoscopy
	Didactic/clinical courses in U.S.	c	Infertility/STD; microsurgery
LIBERIA			
NCA-54	Didactic/clinical observation	1,484	Training in reproductive health for professionals from the in-service training division of the Ministry of Health
MALI			
	Didactic/clinical regional courses in Morocco and Senegal	b	Training in reproductive health with emphasis on endoscopy, anesthesia, and IUD services
	Didactic/clinical course in U.S.	c	Infertility/STD
MAURITANIA			
	Didactic/clinical regional courses in Senegal	b	Training in reproductive health with emphasis on endoscopy
	Didactic/clinical course in U.S.	c	Infertility/STD
	Clinical course in Tunisia	b	Laparoscopy training for U.S. course participants
NIGER			
	Didactic/clinical regional courses in Senegal	b	Training in reproductive health with emphasis on the diagnosis and treatment of infertility
	Clinical course in Tunisia	b	Laparoscopy training for U.S. course participants

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
NIGERIA			
NCA-11	Didactic/clinical	59,029	Training for physicians and nurses in reproductive health with emphasis on endoscopy; University of Ibadan
NCA-62	Didactic/clinical observation	67,008	Training of physicians in family planning and maternal and child health care; Bendel State
NCA-65	Didactic/clinical	66,162	Training of midwives and midwifery students in childspacing and maternal and child health care; Bendel State
NCA-48	Didactic/clinical	40,569	Training in reproductive health for medical officers, senior nurse-midwives, and community health workers; Ahmadu Bello University, Kaduna State
NCA-78	Clinical	676	Training in IUD insertion for graduates of the NCA-48 program; Kaduna State
NCA-84	Didactic/clinical	18,305	Training in childspacing methods and maternal and child health care for physicians, senior nurse-midwives, and community health officers; Lagos State
NCA-70	Didactic/clinical	157,794	Reproductive health/family planning training for tutors of nurses, midwives, and community health workers; includes training in IUD services; University of Ibadan
NCA-69	Workshop	14,664	Meeting of tutors and chief nursing officers to develop a graduated curriculum of reproductive health and family planning for schools of nursing, midwifery, and health technology
NMA-18		24,321	Maintenance center for laparoscopic equipment
	Didactic/clinical courses in U.S	c	Infertility/STD, academic skills, administration

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding[d] ($US)	Synopsis
SENEGAL			
NCA-75	Didactic/clinical in-country and regional course	I:10,167 R:24,354	Two reproductive health courses emphasizing IUD insertion for physicians and nurses and an infertility course for physicians and nurses that includes training in laparoscopy
	Didactic/clinical regional courses in Tunisia and Morocco	b	Training in reproductive health, IUD services, and anesthesia for gynecological procedures
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
SIERRA LEONE			
NCA-47	Didactic/clinical	44,470	Reproductive health training for physicians and nurses emphasizing minilaparotomy and IUD services
	Didactic/clinical regional courses in Egypt	b	Training of nurses in reproductive health with emphasis on endoscopy
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
TOGO			
	Didactic/clinical regional courses in Morocco and Tunisia	b	Reproductive health training for physicians with emphasis on IUD insertion
	Didactic/clinical courses in U.S.	c	Infertility/STD (funded by UNFPA); administration
CENTRAL AFRICA			
CAMEROON			
NCA-51	Didactic/clinical	5,034	Training in reproductive health for physicians and nurse-midwives emphasizing minilaparotomy and IUD services
	Didactic/clinical regional courses in Kenya and Morocco	b	Reproductive health training with emphasis on endoscopy
	Didactic course in U.S.	c	Administration

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding [a] ($US)	Synopsis
CENTRAL AFRICAN REPUBLIC			
	Didactic/clinical regional courses in Kenya and Morocco	b	Reproductive health training for physicians with emphasis on endoscopy and IUD services
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
GABON			
	Didactic/clinical course in U.S.	c	Infertility/STD
ZAIRE			
NCA-58	Didactic/clinical	29,757	Training of physicians, nurses, and midwives with emphasis on IUD insertion and patient counseling
	Didactic/clinical regional courses in Morocco	b	Endoscopy training for physicians, nurses, and anesthetists
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
EAST AFRICA			
BURUNDI			
	Didactic/clinical regional courses in Tunisia, Morocco, and Senegal	b	Reproductive health training for physicians, nurses, and anesthetists emphasizing endoscopy and IUD services
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration; microsurgery
KENYA			
NCA-10	Didactic/clinical in-country and regional course	I:117,519 R: 17,199	Reproductive health training for physicians, nurses, and paramedical personnel that emphasizes endoscopy, minilaparotomy, and IUD insertion
NSP-18	Workshop	25,067	Update of epidemiological research skills and knowledge; participants drafted proposals for research in reproductive health
	Didactic/clinical course in U.S.	c	Infertility/STD

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding [d] ($US)	Synopsis
RWANDA			
	Didactic/clinical regional course in Senegal	b	Reproductive health training for physicians and nurses emphasizing IUD services
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration; microsurgery
	Clinical course in Tunisia	b	Laparoscopy training for U.S. course participants
SOMALIA			
NCA-29/94	Didactic/clinical	8,640	Training for primary care physicians and interns
	Didactic/clinical regional course in Kenya	b	Training of physicians emphasizing endoscopy and minilaparotomy
	Didactic/clinical course in U.S.	c	Infertility/STD; administration
SUDAN			
NCA-21	Didactic/clinical observation	12,432	Continuing education for medical officers; includes observation of laparoscopy, minilaparotomy, IUD insertion, and MCH services.
	Didactic/clinical course in U.S.	c	Academic skills (funding by WHO)
TANZANIA			
NCA-37	Didactic/clinical	14,682	Team training of medical officers and nurses in minilaparotomy and IUD services; program discontinued because of political problems
	Didactic/clinical course in U.S.	c	Infertility/STD (funded by Aga Khan Foundation)
UGANDA			
NCA-36	Didactic	9,408	Training in reproductive health for physicians and nurses
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration
	Clinical course in Egypt	b	Laparoscopy training for U.S. course participants

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
SOUTHERN AFRICA			
BOTSWANA			
	Didactic/clinical regional course in Egypt	b	Reproductive health training for nurses emphasizing endoscopy
	Didactic course in U.S.	c	Administration
LESOTHO			
	Didactic/clinical regional courses in Kenya and Egypt	b	Training of physicians in minilaparotomy and endoscopy and training of nurses in endoscopy and IUD services
MADAGASCAR			
	Didactic/clinical regional courses in Tunisia, Morocco, and Senegal	b	Reproductive health training for physicians, nurses, and anesthetists in endoscopy; training for nurses in IUD services
	Didactic course in U.S.	c	Infertility/STD; administration; microsurgery
MAURITIUS			
NCA-73	Didactic	18,278	Training of MOH physicians and nurses in family planning and maternal and child health care
	Didactic/clinical regional course in Morocco	b	Training of physicians and nurses in endoscopy
	Didactic/clinical course in U.S.	c	Infertility/STD
SWAZILAND			
	Didactic/clinical regional course in Egypt	b	Training of nurses in reproductive health and IUD services

TABLE 7 (cont.) Summary of JHPIEGO-supported programs for African personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
ZIMBABWE			
NSP-15	Workshop	3,864	Integration of child spacing information into the curriculum of schools of nursing and midwifery
NCA-87	Didactic/clinical	3,628	Reproductive health training for MOH tutors and clinical instructors teaching in schools of nursing and midwifery
	Didactic/clinical regional course in Egypt	b	Reproductive health training for nurses with emphasis on endoscopy
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration

a In-country funding during reporting period (does not include outside consultants or other direct support such as surgical equipment and educational materials)
b Funding reported in country of training
c Funding reported in budget
I Training of in-country personnel
R Training of regional personnel

ASIA

JHPIEGO has contributed to the advanced state of reproductive health in Asia by supporting the training of over 2,500 health care professionals and medical students. JHPIEGO has been active in Asia since 1975 when the first national reproductive health training program was started in South Korea. In several Asian countries that received early support from JHPIEGO, reproductive health training programs are now supported by the national government. In Pakistan, for example, the government has assumed responsibility for reproductive health training in-country that JHPIEGO first funded in fiscal 1977. In fiscal 1985, the Government of Malaysia assumed support of a correspondence course initiated by JHPIEGO.

To improve the ability of health care personnel to provide services in Asia, JHPIEGO focuses on two broad needs in the region. First, contraceptive use has not increased in recent years, despite indications of a significant unmet demand for contraception. Second, Asian populations are beginnning to demand more comprehensive reproductive health services. JHPIEGO meets these needs through initiatives aimed at educational institutions for health care personnel. The curricula of teaching/training institutions are well established and sophisticated in comparison with other regions of the world; however, their content has not been updated in most cases for several years. JHPIEGO has addressed this problem through reproductive health education programs for medical and nursing school students (for example, in the Philippines) and through the training of junior members of medical school faculty in academic skills. Asian teaching institutions generally have well-staffed departments of obstetrics and gynecology, but the faculty are primarily at the junior level and are inexperienced in teaching and research methodology. Their exposure to modern teaching and research skills in JHPIEGO-supported programs helps them to improve reproductive health education in their institutions.

Stimulating growth in contraceptive use and broadening reproductive health services is also accomplished by improving the efficiency of existing services and by broadening the array of services at each level of the health care system. The JHPIEGO-supported program in Indonesia for

administrators, physicians, and nurses attempts to upgrade the level and efficiency of reproductive health services in rural hospitals.

JHPIEGO, of course, continues to support training in reproductive health and endoscopy. JHPIEGO also recognizes the needs for administrative skills in reproductive health services. Since JHPIEGO's inception, 77 Asian health care professionals have attended the administrator course at the Johns Hopkins Educational Center in Baltimore.

The evolution of reproductive health training in Thailand provides a good example of the institutional impact of JHPIEGO's activities. JHPIEGO has played a significant role in the improvement of reproductive health services in Thailand by supporting an important center for training in reproductive health. Through this center, endoscopy and microsurgery for tubal reanastomosis were largely introduced in Thailand. The Department of Obstetrics and Gynecology of the Chulalongkorn University and the JHPIEGO-sponsored training center are recognized internationally for their achievements in reproductive health training. The training center has created an environment that is conducive to the development and promotion of new ideas in the Department of Obstetrics and Gynecology. JHPIEGO strategy calls for the use of the center to train faculty from the departments of obstetrics and gynecology in other Thai universities and eventually in universities in other Asian countries. The center is also expected to train faculty from schools of nursing and midwifery. The training will focus on updates in reproductive health and academic skills.

JHPIEGO is exploring the possibility of using a satellite education system for reproductive health education in Indonesia, and programs are being developed in Nepal, Burma, Fiji, and Papua New Guinea. These programs will be designed to develop training models that can be adopted by educational institutions.

During the period covered by this annual report, JHPIEGO supported reproductive health training for professionals from nine Asian countries. These programs are summarized in Table 8.

TABLE 8 Summary of JHPIEGO-supported programs for Asian personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
BURMA			
	Didactic/clinical courses in U.S.	c	Infertility/STD; academic skills
FIJI			
	Didactic/clinical course in U.S.	c	Microsurgery
INDONESIA			
NCA-27	Didactic/management/advocacy	43,232	Training of physician-nurse-administrator teams to provide reproductive health services in secondary hospitals
	Didactic/clinical regional course in Thailand	b	Microsurgery
	Didactic/clinical course in U.S.	c	Infertility/STD, academic skills, administration
MALAYSIA			
NCA-25	Didactic/clinical	8,316	Endoscopy training; correspondence course for general practitioners in rural areas
NMA-9		3,720	Maintenance center for laparoscopic equipment
	Didactic/clinical regional course in Thailand	b	Microsurgery
MALDIVES			
	Didactic/clinical regional course in Philippines	b	Endoscopy training for physicians
PAKISTAN			
	Didactic/clinical regional course in Thailand	b	Microsurgery
	Didactic/clinical courses in U.S.	c	Infertility/STD, administration

TABLE 8 (cont.) Summary of JHPIEGO-supported programs for Asian personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
PHILIPPINES			
NCA-15	Didactic/clinical in-country and regional course	I:64,765 R: 1,919	Training of physicians and nurses with emphasis on endoscopy
	Didactic/clinical courses in U.S.	c	Infertility/STD, academic skills, administration
NMA-4		4,641	Maintenance center for laparoscopic equipment
SRI LANKA			
NSP-13	Didactic/clinical	8,010	Training of physician-nurse teams in reproductive health with emphasis on endoscopy
THAILAND			
NCA-85	Didactic/clinical regional course	13,643	Microsurgery

a In-country funding during reporting period (does not include outside consultants or other direct support such as surgical equipment and educational materials)
b Funding reported in country of training
c Funding reported in budget
I Training of in-country personnel
R Training of regional personnel

LATIN AMERICA AND THE CARIBBEAN

Since 1974, over 27,000 health care professionals and students from Latin America and the Caribbean have participated in reproductive health training programs supported by JHPIEGO. JHPIEGO has been able to reach a large number of personnel in the region by emphasizing the health rationale for family planning.

JHPIEGO has supported major efforts in Latin America and the Caribbean in specialist training for obstetrician-gynecologists through its Baltimore-based courses, in-country programs in Brazil, Colombia, Peru, and Mexico, and regional training by Profamilia in Colombia. More than one-half of the in-country funding for Latin America and the Caribbean went to Brazil, where JHPIEGO supported five training programs during the reporting period (Figure 7). These educational efforts have made substantial headway in raising leadership awareness of the importance of reproductive health, in addressing specialist training needs throughout the region, and in establishing regional and in-country training capacity.

JHPIEGO's influence on institutions and curricula is apparent in Latin America, particularly with regard to the training of medical and nursing students in reproductive health education programs (REHEPs) and the establishment of reproductive risk classification and referral systems. The intent of the REHEPs is to instill in medical and nursing students an appreciation of reproductive health and family planning early in their careers. Almost 90 percent of the personnel trained in Latin America and the Caribbean during the period covered in this annual report were medical and nursing students. The response to the REHEPs has been positive, especially in Mexico, where thousands of medical students have been exposed to the concepts of reproductive health. A major factor in the success of the REHEP in Mexico was the support of the program by the Association of Mexican Medical Schools (AMFEM). Through AMFEM's support, the content of the REHEP has been incorporated into the medical school curriculum in three-quarters of the participating schools. JHPIEGO supported three reproductive health education programs in Brazil and expects that in two of the three institutions, the content of the REHEP will also be incorporated into the standard curriculum. These successful

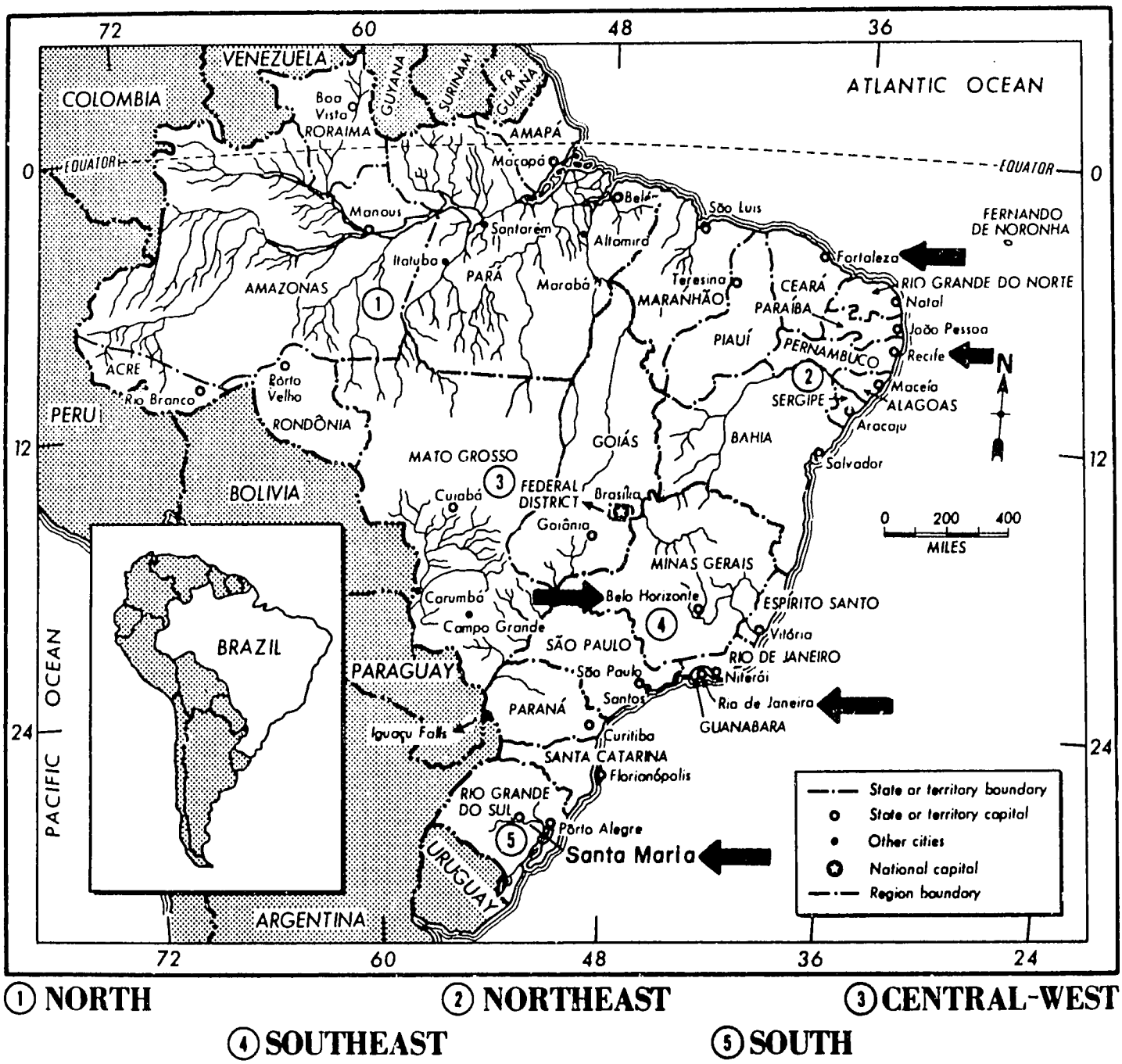

FIGURE 7 **Brazil: Heavy arrows indicate the location of fiscal 1985 training programs (adapted from Weil et al., Area Handbook for Brazil)**

programs are being used as models in other countries in Latin America and the Caribbean, as well as in Africa and Asia.

JHPIEGO supports two reproductive risk programs to link community and clinical 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 interval since their last birth. A translation of the form used by Peruvian personnel is shown in Figure 8. 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 obstetric care. With JHPIEGO support, BEMFAM in Brazil plans to develop a reproductive risk classification and referral system in the state of Rio de Janeiro.

JHPIEGO's advocacy of the reproductive risk concept among public health administrators was instrumental in setting up reproductive risk pilot projects in Brazil and Peru. JHPIEGO supported a seminar for Brazilian health officials in Rio de Janeiro and for Peruvian health officials at the educational center in Baltimore. Because they have the support of public health administrators, JHPIEGO expects that the referral systems will become a permanent addition to public health services in both countries.

JHPIEGO also supports continuing education programs for generalists, nurses, and paramedical personnel who work outside of the capital cities. These programs demonstrate new or recently introduced reproductive health technologies or new functions or norms for different categories of health care personnel. Continuing medical education programs also include refresher training in reproductive health and contraceptive technology.

During the period covered in this annual report, JHPIEGO supported reproductive health training for personnel from 11 countries in Latin America and the Caribbean. Table 9 summarizes these training activities.

REPRODUCTIVE RISK INDEX

Name of Patient: _____

Referred: Yes _____ No _____ Reference Card Number: _____

Age of Patient: _____ Number of Living Children: _____

Date of Last Menstrual Cycle: _____ Literate: Yes _____ No _____

Mark with an X all affirmative responses:

AGE OF THE MOTHER	yes	no
Less than 19 years		
More than 30 years		

NUMBER OF PREGNANCIES	yes	no
4 or more pregnancies (including present, if pregnant)		

TIME TRANSPIRED SINCE LAST PREGNANCY	
Less than 1 year	
More than 4 years	

POOR OBSTETRICAL HISTORY	yes	no
Abortion		
Premature Birth		
Stillborn Birth		
Child Died at less than 1 year		
Caesarean Section		
Toxemia		

Total the number of affirmative Xs and mark the appropriate circle:

REPRODUCTIVE RISK

○ Zero = Low Risk

○ One = Medium Risk

○ Two or more = High Risk

The current presence of any of the following illnesses classifies the patient as high reproductive risk:

1. Anemia ____
2. Mental Illness ____
3. Cardiovascular Disease ____
4. Neurological Disease ____
5. Renal Disease ____
6. Hepatitis ____
7. Pulmonary Disease ____
8. Cancer ____
9. Diabetes ____
10. More than 2 Caesarean Sections ____
11. Congenital Diseases ____
12. Other* ____

* Isoimmunization, previous perforations of the uterus, etc.

FIGURE 8 Translation of the form used by Peruvian paramedical personnel to classify women according to their reproductive risk

TABLE 9 Summary of JHPIEGO-supported programs for Latin American and Caribbean personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
LATIN AMERICA			
BRAZIL			
NCA-35	Didactic/clinical	180,412	Training of obstetrician-gynecologists, general practitioners, nurses, and anesthetists in reproductive health with emphasis on laparoscopy and minilaparotomy
NCA-61	Didactic/clinical	101,870	Training of physicians and paramedical personnel in reproductive health; participants establish a reproductive risk classification and referral system
NCA-28 NCA-31 NCA-40	Didactic/clinical observation	15,456 33,600 18,532	Reproductive health education programs for medical and nursing students in Santa Maria, Belo Horizonte, and Fortaleza
NMA-14		31,625	Maintenance center for laparoscopic equipment
	Didactic/clinical course in U.S.	c	Microsurgery
COLOMBIA			
NCA-59	Didactic/clinical	33,672	Training of general practitioners and nurses in reproductive health with emphasis on IUD and oral contraceptive services
NSP-8	Didactic/clinical regional course	R:21,069	Reproductive health training for physicians, nurses, and anesthetists with emphasis on endoscopy
GUATEMALA			
NCA-42	Didactic/clinical	15,960	Didactic reproductive health education program for medical students; training of recent graduates in reproductive health with emphasis on IUD services

TABLE 9 Summary of JHPIEGO-supported programs for Latin American and Caribbean personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
HONDURAS			
NCA-57	Didactic/clinical	2,375	Reproductive health education program for medical and nursing students
MEXICO			
NCA-8	Didactic	139,911	Reproductive health education program for medical students
NCA-74	Didactic/clinical	11,814	Training of physician-nurse-anesthetist teams in reproductive health with emphasis on endoscopy
	Didactic/clinical course in U.S.	c	Microsurgery
PERU			
NCA-66	Didactic/clinical	10,220	Training of administrators, obstetrician-gynecologists, and general practitioners in reproductive health; establishment of reproductive risk classification and referral system
	Didactic/clinical regional course in Colombia	b	Reproductive health training for physicians with emphasis on endoscopy
URUGUAY	Didactic/clinical regional course in Colombia	b	Reproductive health training for physicians with emphasis on endoscopy
CARIBBEAN			
HAITI			
NMA-19		3,400	Maintenance center for laparoscopic equipment
	Didactic/clinical courses in U.S.	c	Infertility/STD; administration

TABLE 9 Summary of JHPIEGO-supported programs for Latin American and Caribbean personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
JAMAICA			
NCA-39	Didactic/clinical	200	Training of physicians and nurses in reproductive health with emphasis on IUD services
NCA-63	Didactic	45,413	Satellite courses for physicians, nurses, and students from five countries
NTA-24	Clinical	3,000	Laparoscopy training for U.S. course participants
MONTSERRAT			
	Didactic course in U.S.	c	Reproductive health for administrators
	Clinical course in Jamaica	b	Laparoscopy training for U.S. course participants
ST. KITTS			
	Clinical course in Jamaica	b	Laparoscopy training for U.S. course participant
TRINIDAD			
	Didactic/clinical course in U.S.	c	Infertility/STD

a In-country funding during reporting period (does not include outside consultants or other direct support such as surgical equipment and educational materials)
b Funding reported in country of training
c Funding reported in budget
I Training of in-country personnel
R Training of regional personnel

NEAR EAST

JHPIEGO's programs in the Near East emphasize the clinical training of physicians and nurses in reproductive health. Seventy percent of the Near Eastern health care professionals who participated in JHPIEGO-supported programs during fiscal 1985 attended clinical courses in reproductive health that included instruction in laparoscopy, minilaparotomy, IUD insertion, or local anesthesia/conscious sedation. JHPIEGO is active in three countries in North Africa--Egypt, Morocco, and Tunisia--as well as in Turkey.

JHPIEGO's influence on undergraduate medical education is apparent in Egypt, Morocco, and Turkey. The steady clinical training in reproductive health that JHPIEGO has supported in Egypt since 1980 set the stage for the curriculum standardization workshop in October of 1984. In Morocco, the JHPIEGO-supported program takes place at the new National Training Center in Rabat. At JHPIEGO's suggestion, medical students at the University Mohammed V rotate through the center and receive clinical and didactic training in reproductive health. In Turkey, the curriculum standardization workshop that was held in June of 1985 was the culmination of several years of training activities. JHPIEGO has supported the training of Turkish health professionals since the mid-1970s. In March 1980, JHPIEGO convened a workshop for Turkish health administrators at the Johns Hopkins Educational Center in Baltimore. The workshop launched the in-country reproductive health and endoscopy training program in the same year. This JHPIEGO-supported training contributed to the passage in 1983 of a liberal family planning law in Turkey. The curriculum standardization workshop was the next step in JHPIEGO's strategy to ensure that reproductive health services become an integral part of the public health care system in Turkey.

JHPIEGO supported in-service training in three Near Eastern countries during the period covered by this report. Endoscopy training was conducted in Egypt, Morocco, and Tunisia. Reproductive health courses with emphasis on IUD insertion were held in Morocco and Tunisia for physicians and in Egypt for nurses. Instruction in local anesthesia was conducted in Egypt and Morocco.

In-service clinical training for health professionals from sub-Saharan African countries is an important component of

the programs in North Africa. A total of 46 health care professionals from Francophone African countries were trained in Morocco. Twenty-five professionals from Anglophone African countries were trained at the JHPIEGO-supported center at Shatby University in Alexandria, and one was trained at the center at Al Azhar University in Cairo.

Egypt has been a priority country for JHPIEGO in the Near East. The constraints on the provision of reproductive health services in Egypt typify those found in many Near Eastern countries. The religious community is insufficiently aware of the relationship between reproductive health services and the health of women and children. The medical establishment is extremely conservative and has impeded the attempt of universities to strengthen their teaching in reproductive health. The emigration of many bright young graduates has depleted the pool of applicants for faculty positions and, as a result, the quality of basic training has suffered.

JHPIEGO has been working with Egyptian authorities to provide postgraduate training in reproductive health, to improve the teaching of reproductive health and contraception, and to make laparoscopy available for diagnosis throughout Egypt. In fiscal 1985, JHPIEGO supported three reproductive health training programs in Alexandria, Cairo, and Assiut. The program at the Human Reproduction Training Center at Shatby University in Alexandria includes lectures on reproductive health and contraceptive methods with emphasis on endoscopy, IUD insertion, and local anesthesia. The Reproductive Health Training Center at Al Azhar University in Cairo supports endoscopy courses for physicians and nurses. Finally, in Assiut, JHPIEGO sponsored a workshop for the standardization of the curriculum in reproductive health in medical schools in Egypt.

JHPIEGO plans to emphasize nurse training in IUD insertion at the training center in Alexandria. In Egypt, as in many developing countries, nurses are the main health care personnel who provide services for women. The program will demonstrate that nurses can be trained in IUD insertion, that they can deliver IUD services safely and effectively, and that there is a demand for such services. Included in the program will be a campaign to influence key leaders in the medical community to support the training of nurses in IUD insertion and in the distribution of other family planning methods.

JHPIEGO plans to sponsor further efforts to revise the content of the medical school curriculum in reproductive health and to heighten the awareness among faculty of the urgent need for improvements in primary health care, including family planning services. JHPIEGO is also planning to support a conference for religious leaders to inform them

about reproductive health and its effect on the health and welfare of mothers and children.

During the period covered by this annual report, JHPIEGO supported reproductive health training for personnel from five Near Eastern countries. These training programs are summarized in Table 10.

TABLE 10 Summary of JHPIEGO-supported programs for Near Eastern personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
EGYPT			
NCA-45	Didactic/clinical in-country and regional course	I:186,120 R: 21,040	Training in reproductive health for physicians, nurses, and anesthetists from Egypt and sub-Saharan Africa; emphasis on endoscopy, IUD insertion, and local anesthesia; Alexandria
NCA-46	Didactic/clinical in-country and regional course	I: 41,933 R: 780	Training in reproductive health for physicians and nurses; emphasis on endoscopy; Cairo
NCA-52	Workshop	8,404	Standardization of the curriculum in reproductive health in Egyptian medical schools; Assiut
NTA-22	Clinical	2,000	Laparoscopy training for participants in U.S. courses
	Didactic/clinical courses in U.S.		Infertility/STD (funded by Mission); academic skills
JORDAN			
	Clinical course in Egypt	b	Laparoscopy training for U.S. course participants
MOROCCO			
NCA-20	Didactic/clinical in-country and regional course	I:49,454 R:49,212	Training in reproductive health for physicians, nurses, and anesthetists from Morocco and sub-Saharan Africa; emphasis on endoscopy, IUD services, and local anesthesia
NMA-20		2,644	Maintenance center for laparoscopic equipment
TUNISIA			
NCA-6	Didactic/clinical in-country and regional course	I:21,057 R:15,908	Training in reproductive health for physicians from Tunisia and sub-Saharan Africa; emphasis on endoscopy and IUD services
NTA-33	Clinical	7,000	Laparoscopy training for U.S. course participants
NMA-16		13,739	Maintenance center for laparoscopic equipment

TABLE 10 Summary of JHPIEGO-supported programs for Near Eastern personnel

Country	Type of Training	Funding[a] ($US)	Synopsis
TURKEY			
NSP-16	Workshop	15,868	Standardization of the curriculum in reproductive health in Turkish medical schools

a In-country funding during reporting period (does not include outside consultants or other direct support such as surgical equipment and educational materials)
b Funding reported in country of training
c Funding reported in budget
I Training of in-country personnel
R Training of regional personnel

THE JOHNS HOPKINS EDUCATIONAL CENTER

THE CHANGING PATTERN

During fiscal year 1985, seven courses for 106 physicians, nurses, and administrators were conducted at the Johns Hopkins Educational Center in Baltimore. Excepting five trainees who were privately funded, the number of participants was 34 percent less than in fiscal 1984, which reflects JHPIEGO's policy of reducing training in the United States while increasing the number of training programs overseas. The proportion of African health professionals increased from two-thirds to nearly three-fourths from fiscal 1984 to 1985. Figure 9 displays the proportions of U.S. trainees by region in fiscal 1974, 1980, and 1985. As in fiscal 1984, no courses were offered in Portuguese or Spanish because training priorities have shifted to Africa. The five privately funded trainees were supported by bilateral AID funds (two participants), the Aga Khan Foundation, the United Nations Fund for Population Activities, and the World Health Organization.

Despite the reduction in the number of trainees, the importance of the Educational Center remains unchanged: the Center continues to (1) develop new courses under conditions that allow adequate evaluation before they are implemented at the regional and national level, (2) promote courses that best meet the needs of developing countries, and (3) identify leaders and institutions to assist in the establishment of in-country programs.

BACKGROUND

The Educational Center is supported through a tuition agreement between JHPIEGO and the Department of Gynecology and Obstetrics of the Johns Hopkins University School of Medicine. Most of the lectures and workshops are given or directed by faculty of either the Department of Obstetrics and Gynecology or the Johns Hopkins School of Hygiene and Public Health. All courses include a set of core lectures on family planning, the health benefits of contraceptives, oral contraceptives, traditional methods of contraception, natural family planning, contraceptive use and sexually transmitted

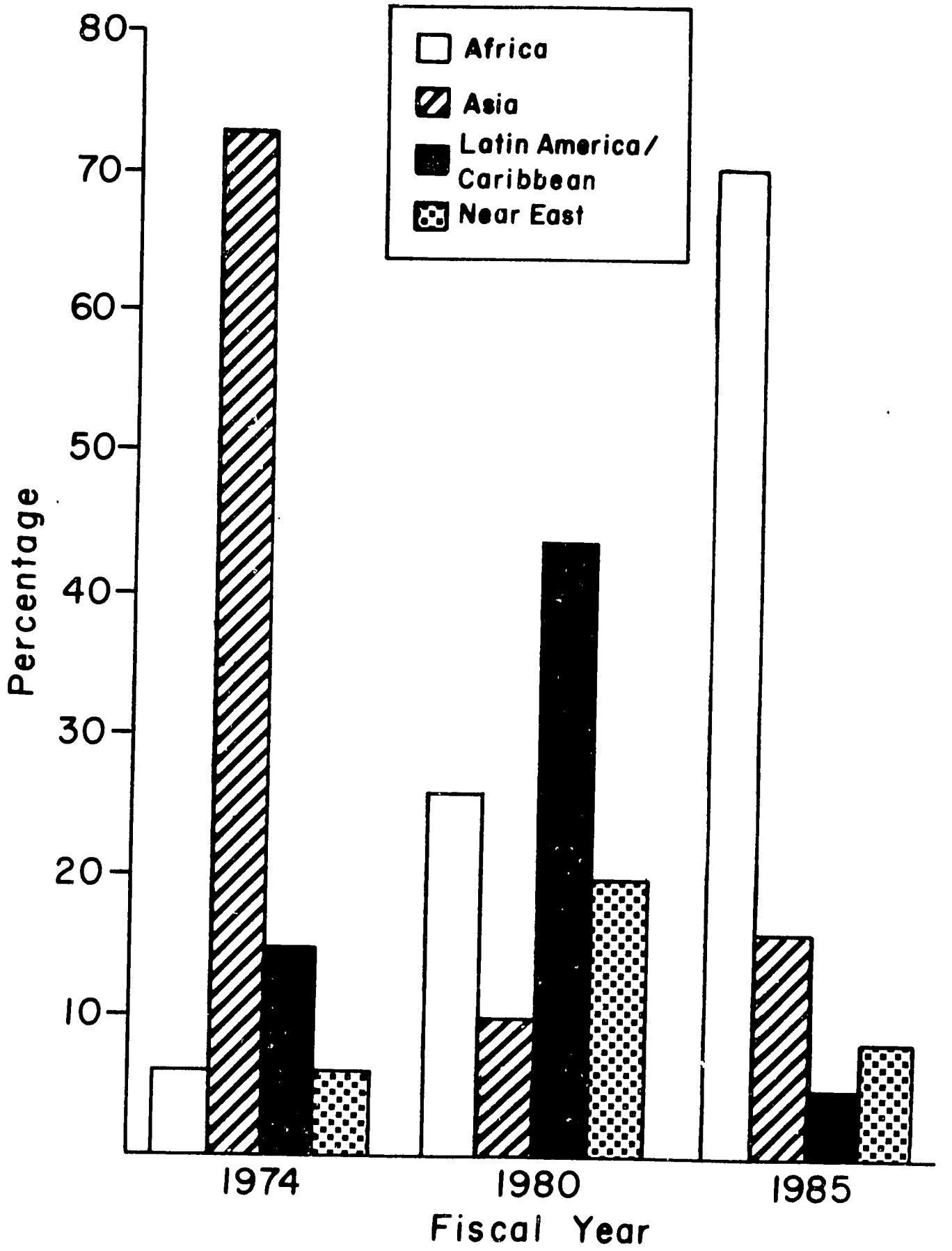

FIGURE 9 Percentage distribution of U.S. trainees by region, fiscal 1974, 1980, and 1985

diseases, diagnostic laparoscopy, recent advances in reproductive health technology, the future of fertility management, and the organization of reproductive health programs. In this way, JHPIEGO operates as a change agent to introduce and promote preventive reproductive health and its associated technologies.

COURSES GIVEN IN FISCAL 1985

The fiscal 1985 course schedule is presented in Table 11. A description of each course follows.

TABLE 11 Courses conducted at the Johns Hopkins Educational Center in fiscal 1985

Course	Languages	Dates
Reproductive Health for Administrators of Family Health and Family Planning Programs	English French	October 1-19, 1984 April 1-19, 1985
Microsurgery for Tubal Reanastomosis	French English	November 5-16, 1984 September 9-20, 1985
Promoting Reproductive Health Through Management of the Infertile Couple and Control of Sexually Transmitted Diseases	English French	March 11-22, 1985 June 17-28, 1985
Academic Skills for Medical School Faculty in Reproductive Health	English	May 6-31, 1985

Reproductive Health for Administrators of Family Health and Family Planning Programs is a three-week course for physicians, nurses, and other individuals currently serving in developing countries as administrators of national or local programs. The specific objectives of the course are: (1) To acquaint educators and administrators at the national and/or state health ministry levels with advances in contraception, reproductive biology, population dynamics, and public health. (2) To encourage the administrators to work for improvements in the delivery of reproductive health care and in the teaching of reproductive health in medical and nursing schools. (3) To promote international cooperation in programs designed to provide family planning services and ensure improved family health.

The program emphasizes modern management concepts and strategies that integrate fertility control in reproductive health care programs. The course includes lectures, seminars, and discussions on such diverse topics as reproductive biology, sociology, demography, population dynamics, management, and public health. The participants also visit an outpatient reproductive health care clinic.

Academic Skills for Medical School Faculty in Reproductive Health is a four-week course for young faculty in departments of obstetrics and gynecology of medical schools in developing countries. It is designed to give instruction in teaching and research skills to make faculty more effective in their jobs. The course consists of: (1) Update seminars in reproductive health and family planning, (2) instruction in teaching methods, medical statistics used in clinical research, and principles of epidemiology, and (3) practice in teaching in an academic environment.

The program includes seminars, didactic lectures, discussion groups, and practical exercises. The teaching skills are taught by both observation and work in small groups. Each student develops and presents a model lesson, complete with self-made audiovisual aids and instruments for evaluating learning outcomes.

Promoting Reproductive Health Through Management of the Infertile Couple and Control of Sexually Transmitted Diseases is a two-week course for physicians, nurses, and administrators who are responsible for the care and management of patients with infertility problems or sexually transmitted diseases. In previous years, the Center offered separate courses on infertility and STDs. The two subjects were combined because infertility is often a sequela of sexually transmitted disease and health care personnel should be familiar with treatments for both. This course covers the recognition, prevention, and treatment of sexually transmitted diseases and provides an update on current methods used in managing infertility. In addition, the role of contraception in preventing STDs and the role of family planning clinics in the provision of STD and infertility services are discussed. Current research and technology are emphasized, especially as they pertain to improving reproductive health in developing countries.

The course consists of formal lectures, discussions, workshops, and films. Subjects covered, in addition to those discussed in the core lectures, include management of syphilis, gonorrhea, chancroid, infectious hepatitis, chlamydia, herpes, granuloma inguinale, lymphogranuloma, acquired immunodeficiency syndrome, vaginitis, cervicitis, and pelvic inflammatory disease, evaluation and treatment of the infertile couple, management of infertility in the male, oral contraceptives and their relationship to infertility,

IUDs and pelvic infection, endometriosis, advances in voluntary sterilization, immunology of infertility, in vitro fertilization, induction of ovulation, techniques of laparoscopy, genetic implications of infertility, and prolactin in infertility.

Microsurgery for Tubal Reanastomosis is a two-week course for gynecologists who are interested in reversal of tubal sterilization when indicated, and in infertility due to tubal causes. The sponsoring institutions are medical schools and teaching hospitals with demonstrated needs for personnel with tubal surgery skills. The program includes didactic and laboratory instruction. During the first week, lectures are given on the pathology of the fallopian tubes, medical and surgical management of infertility, selection of patients for tubal reconstruction techniques, preoperative and postoperative care of patients, endometriosis, and reimplantation of the fallopian tubes. Surgery is performed on laboratory animals; simple technology is stressed and simple magnification systems are used for reanastomosis. At the conclusion of the course, each participant is given his own loupe and surgical instruments.

EVALUATION

Evaluation is an integral part of the Educational Center program. An entry skills test is given at the beginning of every course to determine the effectiveness of our admissions committee and to identify trainees in need of remedial help; pretests and post-tests are administered to assess learning, and an attitudinal questionnaire surveys preferences and group attitudes. These tests are updated as courses or speakers change to provide current information on the effectiveness of individual lecturers, weaknesses and strengths of individual components of each course, and the appropriateness of course content. The last item is of particular relevance to those courses originally designed for physicians that are now being adapted for nurses.

During their stay in Baltimore, the course participants are surveyed about reproductive health problems in their countries and their needs for teaching materials. The Educational Center is currently preparing a series of lectures with slides based on the presentations given by JHPIEGO staff. These are to be distributed in-country according to local needs.

Gynecologists attending courses at the Johns Hopkins Educational Center are encouraged to obtain additional training in laparoscopy, if needed, at one of the overseas clinical practice centers supported by JHPIEGO. During the reporting period, laparoscopy training was conducted at centers in Jamaica, Egypt, and Tunisia.

FISCAL 1986

In the coming year, three innovations are to be instituted. First, more nurses will be trained in reproductive health and family planning programs in Baltimore. Second, more Nigerians are to be enrolled in U.S. courses in keeping with current USAID priorities. Third, two new courses will be given: "Integrated Reproductive Health and Basic Health Services" and "Academic Skills in Reproductive Health for Nursing School Faculty." The following is a description of these new courses:

Integrated Reproductive Health and Basic Health Services will be a two-week course to provide Ministry of Health officials and district health officers with the skills necessary to provide basic primary health care and family planning services in the areas where they have responsibility for government health programs. The course will consist of: (1) Seminars designed to develop planning, training, management, supervision, and evaluation skills, (2) practical sessions to develop and implement systems that use community health workers, and (3) teaching sessions that review the appropriate technologies needed to implement logistic systems.

In order to assess needs and to plan and implement programs, the participants will learn to: (1) use existing mortality and morbidity data, perform surveys, and interview local health workers and community leaders; (2) apply the techniques of worker recruitment and selection using community input; (3) plan and implement teaching programs with the curricula focused on the job to be done; and (4) exploit teaching skills especially developed for community health workers.

Instruction in the supervision of basic health workers and day-to-day management of the primary health care system are key activities in the program. The participants will learn the principles of supportive supervision, new management techniques, maintenance of the logistic systems, methods of program evaluation, and teaching methods.

Academic Skills in Reproductive Health for Nursing School Faculty, like its counterpart for physicians, will be a four-week course. It will provide instruction in teaching and basic research skills for young nurse educators affiliated with schools of nursing and midwifery in developing countries in order to make them more effective faculty members. The course will consist of: (1) Update seminars in reproductive health and family planning, (2) development of skills and techniques used in education and service-related research

activities, and (3) practical sessions in teaching methods and curriculum and educational material development.

The seminars will include small discussion groups and practical exercises. The teaching skills component will include observation, small group work, communication skills training, and discussion groups. The central focus is on teaching the participants the requisite skills needed to (a) analyze, develop, and integrate reproductive health topics into the nursing/midwifery school curriculum, (b) develop and present a model lesson, complete with self-designed, simple audiovisual aids, and (c) evaluate learning outcomes.

MANAGEMENT AND SUPPORT

MANAGEMENT OF THE CORPORATION

For both the trustees and the officers of the JHPIEGO Corporation, the reporting year continued to present major challenges. Foremost among these challenges was the task of maintaining a viable financial position to keep priority overseas training activities funded to produce desired programmatic results.

The impact of AID's earlier funding action, which reduced by 50 percent the allocation of funds for JHPIEGO's overseas training activities, became critical in mid-1985. This negative impact was compounded by "buy-ins" of funds from several regional bureaus within AID for in-country initiatives that had not been previously programmed. These "buy-ins," which served to divert large allocations of JHPIEGO's limited resources to AID's specified initiatives, are not viewed as supplemental funding by AID, which further limits the availability of funds for overseas programs of equal priority and import.

JHPIEGO addressed this problem by reassessing priorities and delaying the obligation of funds for a number of renewals and new educational programs previously scheduled for funding during the reporting period. Although the numbers of professionals trained overseas in 1985 show a marked increase over the outputs of the previous year, the momentum of the geometric progression of trained professionals has been interrupted by these funding limitations. The vulnerability of JHPIEGO's funding position was and is a matter of serious concern for the management of JHPIEGO since the Cooperative Agreement and the Project Paper are scheduled to expire on September 30, 1986.

An evaluation of JHPIEGO was made for AID by a team of consultants under the auspices of the International Science and Technology Institute (ISTI) in April 1985. The findings of the evaluation report were to be used by AID in conjunction with preparation of and recommended action on a new Project Paper. Although the oral evaluation report made by the consultant team was favorable, the official written report still had not been received in AID by the end of the reporting period.

INTERNATIONAL COUNCIL

The trustees and officers of the Corporation (Figure 10) continued to focus on developing program strategies to meet the evolving reproductive health needs of the developing countries during the next decade. Development of program strategies became the theme of the International Council Meeting, which was held for five days in Gammarth, Tunisia, in September 1985. The major objectives of the meeting were to:

- -- review the status of reproductive health programs on a regional basis
- -- discuss reproductive health issues of potential importance in future JHPIEGO programs
- -- develop regional strategies and recommendations for future JHPIEGO activities

The Council (Figure 11) identified some of the issues to be considered in future programs:

- -- reproductive risk and child survival
- -- infertility and sexually transmitted disease
- -- adolescent pregnancy
- -- reproductive health care for migrants and refugees
- -- the lack of physicians in developing countries, especially in rural areas
- -- educational materials

Reproductive Risk and Child Survival

Between now and the end of the century, two million women will die of causes related to pregnancy and childbearing and 40 million infants will die before they reach one month of age. Although the risk factors for maternal and child mortality are well known -- for example, age, parity, birth interval, and nutritional status -- some physicians still assume that multiparous women are at low risk. Other factors contributing to infant and maternal mortality include:

- -- eclampsia
- -- illegal induced abortion
- -- adolescent pregnancy

Risk factors can be used to classify women on the basis of their reproductive risk and promote the use of contraception among the women at greatest risk. JHPIEGO is supporting programs that use the reproductive risk concept in Peru and Brazil, and these programs appear to be successful in promoting family planning referrals of high risk women through several levels of health care personnel. The need for such referral programs is indicated by data from Mexico, where an estimated 35 percent of women of reproductive age

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FIGURE 10 **Board of Trustees and officers of the JHPIEGO Corporation**

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FIGURE II The International Council

have been identified as being at high risk, but only 50 percent of these high-risk women are using contraception; this is a rate of contraceptive use that is similar to that among low-risk women. The Council suggested that it is important to teach paramedical personnel about the concept of reproductive risk and to involve governmental agencies in its use.

Infertility and Sexually Transmitted Diseases

Tubal infertility as a consequence of sexually transmitted disease is a major health problem in Africa. In some parts of Central Africa as many as 20-40 percent of women of reproductive age are infertile. The Council noted that:

-- More information on sexually transmitted disease and its relationship to infertility needs to be disseminated in all developing countries, not only in Africa.
-- Programs should be developed that attempt to prevent infertility through the early diagnosis and treatment of sexually transmitted disease, and more information should be disseminated on the preventive aspects of some forms of contraception.
-- Family planning is far less acceptable in societies where infertility is a major health problem than it is in societies where the level of infertility is low.
-- More research is needed on the male causes of infertility.
-- More research is also needed on the effectiveness of microsurgery for the treatment of infertility.
-- Because of the AIDS epidemic, there is a need for studies of the epidemiology of AIDs in particular locales.
-- Compared with the AIDS epidemic in the United States and Europe, in Africa, heterosexuals, women, and children are at greater risk. More data are needed on the risks of in utero infection in pregnant women with antibodies to the HTLV-III virus.
-- The use of sterile technique and careful instrument- and needle-cleaning methods should be stressed in most developing countries. This need is especially acute now because of the AIDS epidemic.

Adolescent Pregnancy

Adolescent pregnancy is a major public health problem throughout the world. It is a problem that is more sociological than medical, and the solutions are elusive. In Africa, unwanted pregnancy leading to induced, illegal abortion is a major problem, particularly among teenagers in school. The Council suggested that:

-- there is a need for more data on the problem of adolescent pregnancy.
-- counseling and sex education should be intensified and offered at earlier ages.
-- there is a need to evaluate the importance of special adolescent contraceptive and pregnancy services. In Zimbabwe, for example, 25 percent of pregnancies are among women 18 years of age or younger.
-- educational programs about adolescent pregnancy are needed for health care providers, teachers, parents, and the adolescents themselves.

Reproductive Health Care for Migrants and Refugees

During the next 10 to 20 years, international migration and refugees will pose major political, economic, and public health problems. Reproductive health care for refugees from war and famine is currently an emerging problem. Refugees may have no desire to use contraception because they fear that some of their children may die. A second reproductive health problem of migrants and refugees is the spread of communicable diseases and sexually transmitted diseases because of the shifting of such large populations. Many governments are ill equipped to manage migrant and refugee health, and they have not made it a priority.

The Council noted that more data are needed on the problem of reproductive health among migrants and refugees because their number is likely to grow as the result of technological change, rural-to-urban migration, and food scarcity.

Training of Paramedical Personnel and Delivery of Services in Rural Areas

Reproductive health resources in most developing countries are inadequate to deal with the demand for services. For example, in Africa, there are major shortages of physicians and other trained health personnel. If the physicians were available in some countries, the health care system of the countries could not support them, that is, there would not be enough medical equipment for them. To deal with this problem, the Council noted that:

-- delivery of services through teams is a concept that should be strengthened in all regions.
-- a greater role for paramedical personnel in many locales needs to be developed.
-- physicians need to be trained as team leaders who recognize the roles of other health care providers.
-- governments should provide training for nonphysicians and expand their role in the health care system.

Physicians are sometimes reluctant to work outside of cities, but nonphysician health care workers appear to adapt better

to working and living in rural areas. The Council suggested, therefore, that the following should be priorities:

-- strengthening primary health care systems to provide reproductive health care services.
-- strengthening the role of the community-level private health care sector.
-- allocating more resources to rural areas.
-- providing more training to health care personnel in rural areas.

Finally, the Council noted that education and training should be conducted in-country as much as possible because this results in institution building and it reduces emigration or "brain drain."

Educational Materials

Practical educational materials that can be widely utilized are of great importance in most developing countries. The Council recommended that:

-- a high priority for JHPIEGO should be the development of new materials that discuss the application of the reproductive risk concept and that include practical guides for using the concept in the field.
-- JHPIEGO should consider the use of computer-based simulation models to link economic concerns with health care needs.
-- JHPIEGO should support the development of educational materials by communities in their own language.

The organizational structure of JHPIEGO remained unchanged during the reporting year; however, a change in senior staff did occur. Dr. Clayton Ajello joined JHPIEGO as Associate Director for the Near East and Asia Region, replacing Dr. Kasturi Rajadhyaksha, who retired at the end of 1984.

Emphasis was also placed during the year on enhancing JHPIEGO's in-house word processing and computer capabilities to generate information and data at a level of sophistication needed to monitor and evaluate the increasing complexities and size of JHPIEGO's overseas activities.

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).
-- Brethern Services Center, for warehousing and shipping of equipment and educational materials (NP-2).
-- Peat, Marwick, Mitchell and Company, for auditing 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, issued monthly, include detailed financial information about each program, such as funds advanced, authorized budget, expenses reported by the grantee, and funds expended by JHPIEGO in support of the program.

The National/Regional Program Report is issued quarterly and is used to report and adjust the funding needs of JHPIEGO's subgrantees and to adjust JHPIEGO's prime grant funding requirements. This report demonstrates obligation by program already in place and forecasts obligation quarterly for three or four quarters.

Resource Management monitored the finances of subordinate agreements during fiscal 1985. Over 100 active programs are sponsored under the current AID Grant DSPE CA-0083. The fiscal report for 1985 is located at the end of this volume.

Resource Management has automated its fiscal monitoring and reporting activities. This automation process has improved record maintenance and offers timely reporting of subordinate agreement activities. Records have been transferred to an IBM Personal Computer from both a Xerox 860 Word Processor and a Xerox 820 II Computer with only limited memory.

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.

The Resource Management Office is responsible for purchasing, stocking, and issuing all supplies to JHPIEGO staff, and for purchasing and maintaining office equipment.

AUDITING

During fiscal 1985, Peat, Marwick, Mitchell and Company continued the auditing of subgrant agreements. Resource Management received audit reports and reviewed them for follow-up or processing. The first subagreements funded under the current cooperative agreement, DPSE CA-0083, have been audited and are now in a draft audit report stage, although a few have been accepted by JHPIEGO as final reports.

FINANCIAL MANAGEMENT

During fiscal year 1985, Resource Management has directed attention to identifying problems with the transfer of funds to grantees. Options that work well in most countries are cable transfers through the international banking system and certified checks issued directly to the grantee. JHPIEGO-funded programs in Nigeria have been experiencing difficulty getting funds transferred through international banks and

into the Nigerian banking system. The lead time required to get funds to each grantee in Nigeria varies considerably depending on the bank used and location within Nigeria. While satisfactory financial services continue to be difficult in Nigeria, there have been relatively few problems in international fund transfers elsewhere.

GENERAL ADMINISTRATION

Resource Management is the administrative link between JHPIEGO and The Johns Hopkins University. The Office monitors the financial administrative services that the Univer ity performs for JHPIEGO and it acts as JHPIEGO's personnel office.

INFORMATION AND EVALUATION SERVICES

The Information and Evaluation Services Unit (IES) is responsible for the collection, maintenance, and analysis of JHPIEGO's data. In an effort to assist the corporation's monitoring of programs in 30 developing countries, IES has developed an information system that has a computerized data base at its core. By continuously updating the various files that make up the data base, IES is able to provide the most current information available in a timely and efficient fashion. In addition, these files can be manipulated in order to fill special requests for information.

IES continues to produce and distribute a quarterly computerized trainee directory to the Regional Development Offices. It also circulates, on a monthly basis, an equipment distribution list and a transfer of title list to the Equipment Unit. IES maintains a directory of medical schools in developing countries, and it is compiling a list of nursing and midwifery schools. Finally, IES also generates and distributes monthly training statistics.

In addition to continuing its survey of U.S. trainees, IES has expanded its survey of in-country participants. During fiscal year 1985, the Annual Participant Survey (APS) was distributed in French, Spanish, Portuguese, Turkish, and English to 1,036 trainees via in-country project directors. By the close of this fiscal year, surveys from 19 programs were received and had gone through the initial processing stages, which include being coded, keypunched onto a computer tape, and entered into a computer file. The final stage of the process is the analysis of the data, which will take place in fiscal 1986. The second part of this annual report summarizes selected findings from the surveys of U.S., regional, and in-country course participants.

Overseeing the operations of JHPIEGO's word processing center continues to be an IES responsibility. IES coordinates the use of the word processing equipment (two Xerox 860s), trains secretaries in the use of the machines, and provides word processing support for the corporation.

Aside from its regular activities, IES has also been involved in a number of special projects. Demographic descriptions and statistics were prepared for country profiles. This information was used to facilitate the planning of program activities. The unit also prepared a special equipment distribution list and multiple sets of address labels for the Equipment Unit, which used them to conduct an equipment utilization survey.

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 arranging travel for all U.S. and regional trainees, as well as for JHPIEGO staff and consultants. It maintains curricula vitae and the JHPIEGO roster of both U.S. and international consultants.

Admissions

The Admissions Unit processed the applications of candidates for 21 courses at regional training centers and seven courses at the Johns Hopkins Educational Center in Baltimore. There were 193 applicants for 100 spaces at the Educational Center, and 190 applicants for 120 spaces in regional courses. Course participants were chosen by the Selection Committee.

For the first time, the training center in Kenya offered courses on a regional basis: one for physicians in general family planning and minilaparotomy, and one for physicians in laparoscopy. A newly established center at the University/l'Dantec Hospital in Dakar, Senegal, conducted regional courses for physicians and nurses in family planning and laparoscopy.

During fiscal 1985, five participants in the U.S. training program were funded by sources other than JHPIEGO: UNFPA, WHO, the Aga Khan Foundation, and mission bilateral funds.

Travel

During fiscal 1985, the Travel Office processed more than 300 trips to 40 countries for trainees, consultants, and staff. One-third 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. Forty-three of the

81 program development/site visits were made to Africa. Eighteen field visits were made in fiscal 1985, all to Africa.

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 Laprocators), 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 1,676 laparoscopic systems donated by JHPIEGO. During fiscal 1985, 131 systems were shipped to 15 countries (Table 12). A laparoscopic system was sent for the first time to the Maldives. Major equipment and spare parts are procured through the General Services Administration. Table 13 is a summary of the equipment ordered by JHPIEGO during fiscal 1985 and its cost.

JHPIEGO shipped a total of almost $178,000 worth of spare parts during fiscal 1985. Forty percent of this total was for Falope rings for the laparoscopic systems. The cost of spare parts for maintaining equipment was only about $116,000. 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 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 1985, 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 Laprocators 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

TABLE 12 Laparoscopic systems shipped, by region, fiscal 1985 and inception through fiscal 1985

Region	Fiscal 1985	Inception - Fiscal 1985
Africa	15	238
Asia	11	414
Latin America/ Caribbean	53	753
Near East	52	471
TOTAL	131	1,876

TABLE 13 Purchase orders placed for equipment, fiscal 1985

Equipment		Cost (US$)
Major equipment		$ 20,000
Compact light source	20,000	
Spare parts		61,631
Medical kits		185,057
Minilap Kit	20,574	
IUD backup kit	71,815	
IUD insertion kit	43,176	
Microsurgery kit	49,492	
TOTAL		$ 266,688

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.

Continuing the review of all JHPIEGO-supported repair and maintenance centers, Equipment Unit personnel evaluated the centers in Tunisia, Nigeria, and Morocco in fiscal 1985. The decision to review the cost-effectiveness of the maintenance centers was made at the equipment meeting in Annapolis in January 1984. The next equipment meeting will be convened in Cairo in April 1986.

Educational Materials

JHPIEGO provides books, films, filmstrips, and anatomical models in support of its training programs. 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 $100,700 worth of educational materials in fiscal 1985, including $65,777 for books, $19,600 for films, cassettes, and slides, and $15,250 for anatomical models. JHPIEGO shipped almost $140,000 worth of educational materials to trainees and institutions in over 35 developing countries. Over $86,000 worth of educational materials were shipped to Africa alone. The details of the educational materials shipped by region are given in Table 14.

GRANTS

The Grants Unit is responsible for writing and processing subagreements with overseas institutions, participating in the review and approval process of training proposals, developing grant management systems for monitoring subgrant activity, and reviewing and analyzing subgrant documentation for compliance with program objectives and the terms and conditions of the agreements. Other responsibilities include keeping abreast of changes required by the Office of the President and AID in the provisions and language of overseas subagreements and modifying the text of the agreements, as appropriate. Further, the unit serves as a resource for all JHPIEGO units in subgrant-related matters.

TABLE 14 Educational materials shipped, by region, fiscal 1985

Region	Standard Educational Packages		Other Educational Materials	Films & Slides		Anatomical Models	
	No.	Value	Value	No.	Value	No.	Value
Africa	982	$ 66,436	$8,619	38	$5,222	48	$5,887
Asia	99	7,238	325	9	1,396	0	0
Latin America/ Caribbean	106	10,553	6,422	97	11,350	6	1,186
Near East	150	10,863	300	3	434	0	0
United States	132[a]	9,419	1,463	0	0	0	0
TOTAL	1,469	$104,509	$17,129	147	$18,402	54	$ 7,073

[a]Handouts at the Johns Hopkins Educational Center in Baltimore.

During fiscal 1985, this unit developed and processed 17 new subagreements, 24 major program continuation amendments, and 139 simple amendments to current agreements. It also participated in the review meetings for these agreements and amendments. Prior to each review meeting for the continuation of an ongoing in-country program, the unit prepares an extensive review and analysis of the subagreement.

A total of 102 active agreements with overseas institutions were monitored during the year. The Grants Unit issues monthly and quarterly reports on the status of cumulative training activities reported under each subagreement and on the status of each subagreement within the AID approval process. Customized grant management manuals are prepared for the Project Director of each in-country program and implementation meetings are conducted for the JHPIEGO program staff who will be directly responsible for monitoring the program.

The Unit resolved six in-country program audits during the year and is involved in the resolution of 13 more. It closed 14 in-country agreements which had ended but were not audited, and it is in the process of closing 14 others.

EVALUATION

INTRODUCTION

Program monitoring and evaluation are important functions of JHPIEGO. Through existing monitoring and evaluation mechanisms, the JHPIEGO staff is informed about the response of health officials to the corporation's initiatives, new institutions which are being mobilized, the use of equipment and other program resources, and problems or obstacles faced by health personnel in developing countries. Several methods exist within the organization to receive and process feedback on program operation and success. One such mechanism is the postcourse evaluation. This instrument, administered immediately following the completion of U.S.-based training, assesses the participants' reactions to the content, organization and administration of the courses. Other methods include site visits to course graduates at their home institutions in order to assess their personal situation and progress since the course, and continuous correspondence with JHPIEGO trainees and consultants. Perhaps the most systematic method of evaluation available to JHPIEGO, however, is the use of follow-up mail questionnaires designed specifically for participants in JHPIEGO's courses. Although other approaches may be sophisticated and suitable to the research setting, the surveys are the most cost-effective approach to obtaining follow-up information on graduates in over 100 countries.

The participant surveys act as an important mechanism through which JHPIEGO receives both operational and evaluative information. Operational information is obtained on the surveys about changes in mailing address, institutional affiliation, and professional position, as well as reports on equipment problems. At times, updated information on medical schools is received. The appropriateness of the selection of candidates and the adequacy of curriculum content are reviewed as this information is received on the surveys; revisions are made in these areas when appropriate. The evaluation utilizes reports on procedures performed, type of anesthesia used, second generation training activity, evaluation of the course, utilization of educational materials received, and advocacy of family planning. The comments section of the surveys invites the trainees to describe their activities and the problems they encounter, and to make suggestions for expansion and improvement of the program, and to direct requests to specific staff members. The surveys are therefore beneficial to both operational and evaluative components of the program by providing important feedback on the activities of participants several months or years after they return home.

Currently, one of several questionnaires is sent to most JHPIEGO trainees depending upon the type of course taken. Participants in U.S.-based courses are sent surveys tailored to the course they attended a minimum of six months after their course participation. In contrast, all in-country course participants, with the exception of medical and nursing students and conference attendees, are sent the Annual Participant Survey (APS). This survey has been designed to be general enough

to cover physician, nurse, and anesthetist participants trained in a variety of JHPIEGO-sponsored reproductive health courses held throughout the developing world. This report will focus on the findings from each of the surveys of participants trained in JHPIEGO U.S.-based courses, as well as results from the annual participant surveys received from regional and national programs based in the African, Asian, Latin American and Near Eastern regions.

U.S. TRAINING

POSTCOURSE EVALUATION

To assist in the continuation of training leaders in the field of reproductive health, the Department of Gynecology and Obstetrics of The Johns Hopkins University School of Medicine, under a tuition agreement with JHPIEGO, organizes courses at the Johns Hopkins Educational Center in Baltimore for physicians and other health personnel from developing countries. These individuals often formulate strategies for the development of JHPIEGO-supported programs in their own countries as a result of their U.S. training.

At the completion of each course, participants were asked to complete a post-course evaluation form. This form is designed to provide an indication of the trainees' immediate reaction to the overall course content, organization, and administration. The following sections provide a summary of the findings compiled from these evaluation forms.

Academic Skills

Academic Skills for Medical School Faculty in Reproductive Health, conducted since fiscal year 1980, provides physicians from developing countries with skills to help them function more effectively in their academic roles as researchers and teaching members of medical school faculties. Included in the course are refresher seminars on reproductive health care, and research and teaching skills. Emphasis is placed on preventive health care, epidemiological and biostatistical methods of research, and effectiveness in the classroom. This fiscal year, the Academic Skills Course was offered to 11 participants.

Participants were asked to assign a rating from poor to excellent on how well they felt individual course presentations had been handled. Topics included in this rating were reproductive health, epidemiology, biostatistics, and teaching skills. Participant ratings in this regard were favorable, with most presentations receiving a good or an excellent rating. No respondent felt that any of the topics were handled poorly, and none of the topics received an average rating. A majority of the trainees, 55%, felt the presentation of the overview of reproductive health was excellent and 36% felt it had been handled well. Epidemiology received a good or better rating by 91% of the trainees. The teaching skills portion of the course was very well received, with 91% of the participants rating this topic as excellent. Ratings for biostatistics were not as favorable. The opinions of the trainees were evenly divided when rating this portion of the course; 46% of the participants felt the presentation was either excellent or good.

To gather information which could be of use in ensuring the relevance of the course, participants were asked to specify other major teaching areas or lectures to be included. Thirty-six percent of the participants seemed content with the present

schedule while 55% suggested that either other lectures be included or existing lectures be expanded. Specific suggestions included lectures on psychiatry, methods of evaluation, infertility, and student presentation of country programs in maternal and child health care. It was also suggested that more emphasis be placed on research methodology.

Responses were mixed as to which topics should be deleted and which were most useful to participants in their teaching. Some would have deleted the lectures on population dynamics, pathology and reproductive endocrinology. Conversely, endocrinology and population dynamics were mentioned as being very useful to participants in their teaching. Of special interest were lectures given by Drs. Roebuck (teaching skills) and Matanoski (research techniques), and presentations on reproductive health and teaching skills.

In rating the workshop on using and preparing audiovisual media for medical presentations, 82% of the participants felt it was very helpful. Comments about the workshop were very enthusiastic. There were, however, a few suggestions for improvement. One respondent suggested that the time allocated for the session be increased. Another expressed a desire for exposure to companies producing audiovisual material. Finally, a respondent commented that the workshop needed more practice and application during the course.

Comments in response to what was best liked about the course were very enthusiastic, especially regarding the friendliness and eagerness of the staff to help and the interaction between participants, lecturers, and administrative staff. The organization of the course was also appreciated, with its emphasis on learning and freedom for discussion, as was the course content -- in particular the discussions on teaching skills, audiovisual aids, curriculum development and advances in reproductive endocrinology.

In response to what was least liked about the course, some participants mentioned the lectures on the silhouette of a physician, researcher, and teacher and the role of ob/gyn pathology in clinical research. Others responded that the course was too intense and did not allow enough time for absorption of all the material offered.

When rating the organization of the course, the participants were extremely positive. Eighty-two percent of those responding rated the course organization as excellent. The same was true of how much the trainees felt they learned from the course--82% of the participants felt that they had learned a great deal. The overall rating of the course was also high, with 82% of the respondents rating it as excellent.

There were additional comments on course content and administration. It was suggested that the biostatistics lectures be given during the morning sessions when the participants are fresh and better able to absorb information of this type. There was also a request for a country profile of the U.S. so as to aid the participants' understanding of the rationale for the lectures' content. It is believed that such a profile would reduce the amount of confusion experienced by the participants whose cultural orientation is different from that of the lecturers. There was also a suggestion that the course be extended to six weeks. This additional time (two weeks) should be spent at The Johns Hopkins Hospital observing ob/gyn practices and techniques. Finally, there was a suggestion that time for independent library study be included in the course.

Management of the Infertile Couple and Control of Sexually Transmitted Diseases

Management of the Infertile Couple and Control of Sexually Transmitted Diseases (INF/STD), held for the first time during fiscal year 1985, is for physicians whose special interest is the diagnosis and treatment of infertility and sexually transmitted diseases. An emphasis is placed on reproductive health care, including topics on

contraceptive use, maternal and child health, current information on factors which affect and cause infertility, current methods to prevent sexually transmitted diseases; the impact of sexually transmitted diseases on fertility, maternal and infant health, and the national economy; and the epidemiology, etiology, clinical manifestations, diagnosis, and treatment of sexually transmitted diseases. One course in INF/STD was offered March 11 through 22 to 23 participants. A second course, held from June 17 through 28, was offered to the same number of participants.

Participants were asked to assign a rating from poor to excellent on how well they felt individual course presentations had been handled. The general presentations included in this rating were the theoretical basis of INF/STD management and the practical aspects of INF/STD. Participant ratings in this regard were very favorable. Ninety-eight percent of the respondents felt that the theoretical basis of infertility had been handled very well; 89% of participants rated the handling of the STD theoretical component of the course very well. Most of the trainees (86%) felt the practical aspects of infertility management had been handled very well; the practical aspects of STD were rated by 61% of the respondents as having been handled very well. The respondents were enthusiastic in their responses to how well they thought the role of family planning services in detecting, treating and preventing STDs was presented; 71% of the participants rated this session very well. Furthermore, all of the respondents felt that the lecture topics were well selected.

To ensure the continued relevance of the course, participants were asked to identify other major teaching areas or lectures to be included in the curriculum. A majority of the respondents, 66%, suggested either the inclusion of certain lectures or the expansion of existing lectures. Lectures on various methods of induction of ovulation, population dynamics, INF/STD studies in the local community, community-based programs for developing countries, and bacteriology were mentioned as possible additions. The remaining 34% expressed their satisfaction with the existing schedule.

Participants were asked to indicate which lectures they felt would be most useful to them in their practice. A number of respondents mentioned that the lectures on reproductive endocrinology, microsurgery, family planning and contraception, and management of the infertile couple and control of sexually transmitted diseases were beneficial. Also felt to be of use were the lectures on infertility and STD given by Dr. Giraud Foster. One trainee commented that "one discovers the usefulness of a subject by the mastery of his presentation." Other respondents commented that all the topics were helpful.

Participants were also asked which topics would be least useful to them in their practice. Again, a number of respondents felt that all the topics were useful to them. Among those mentioned as being of less use were the lectures on viral hepatitis, tubal pathology, AIDS, the epidemiology of STD, microsurgery, vasectomy, in vitro fertilization and advances in reproductive endocrinology. Several topics, family planning, endocrinology and microsurgery, were mentioned as being both the most and the least useful by some respondents.

Respondents were asked to comment on the amount of knowledge acquired during the course. Ninety-eight percent of the participants felt that they had learned a great deal and 2% that they had learned a moderate amount.

In response to what was best liked about the course, a number of participants expressed approval of the course's organization and coordination. They were also grateful for the experience abroad. The most popular lectures were those dealing with infertility and STD. The respondents also praised the course content and the lecturers. They stated that the lectures were well organized and exposed them to information that would greatly enhance their practice. The lecturers, they commented, were well

informed, comfortable with their material, and they presented it in such a manner that comprehension of new concepts was not too difficult.

Responding to the question concerning what was least liked about the course, some respondents mentioned specific aspects of the STD lectures; particularly the clinical aspects of syphilis, gonorrhea and PID, and the visit to the STD clinic. Several commented that they were dissatisfied with the lectures on infectious hepatitis and genetics. A number of participants responded that there was nothing they disliked about the course.

In rating the workshop on using and preparing audiovisual media for medical presentations, 77% of the respondents felt that the presentation was acceptable and did not need to be expanded. Those that suggested expansion requested more slides on the examination of STD in male and female patients. More films on in vitro fertilization, pathology, and microsurgery were also suggested. One participant requested clinical pictures of AIDS patients. When asked if any segments of the audio-visual aids presentation should be deleted, 90% of the respondents answered no. Of the 10% of respondents who felt that material should be deleted from the presentation, the topics mentioned were care of laparoscopic equipment, pelvic examinations, microsurgery, and vasectomy.

Response to the overall organization of the course was very positive. A high percentage of respondents, 86%, felt that the course organization was excellent and the rest felt that it was good. The same was true of the overall rating for the course. Again, a high percentage of respondents, 89%, rated the course as excellent and the remaining 11% rated it as good.

There were a number of additional comments on course content and administration, some of which expressed gratitude and appreciation for the course. It was suggested, however, that more time should be allotted for the clinical and surgical aspects of the course and their discussion. There was a request to include more information on recent advances in fertility and STD. It was also suggested that practical clinical demonstrations and training, at a hospital or clinic, be included as a component of the course; so as to reinforce the theory obtained during the lectures. Several respondents commented that the course was excellent and provided extremely interesting information but was too short. They suggested that the length of the course be extended by seven to fourteen days. Other respondents stated that they could acquire a better perspective of national programs if the lectures were designed in such a way as to allow for more discussion between lecturers and participants. One respondent attending the French INF/STD course mentioned the difficulty some participants experienced during the course because of the language barrier between the lecturers (who are English speaking) and the Francophone participants. It was suggested that lecturers moderate the speed with which they speak so as to facilitate a greater understanding of the material presented to the participants. Finally, several respondents commented on the diversity of the professional composition of the course. They stated that such a population tended to have a negative impact on the course because it is difficult to design a course that would be able to meet the needs or capture the interest of all the professions represented. Therefore, it has been implied that the course, as it is currently designed, is not as useful for some participants as it is for others. It was suggested that the method of recruiting participants be reviewed for the express purpose of offering the course several times during the year to participants with similar interest and professional backgrounds.

Advances in Reproductive Health for Administrators

The JHPIEGO course, Advances in Reproductive Health for Administrators of Family Health and Family Planning Programs, is designed for physicians and nonmedical

health professionals who administer family planning and/or maternal and child health programs. Emphasis is placed on advances in reproductive health care, various systems of health care delivery, and the management of programs in family planning and maternal and child health.

Two courses for administrators were conducted during fiscal year 1985. The first course, for English administrators, offered from October 1 through 19, 1984, included 19 participants. The second, for French administrators, offered from April 1 through 19, 1985, included 18 participants, for a total enrollment of 37.

The presentation of reproductive health concepts and family planning, received very high ratings, with 63% of the respondents rating the presentation as excellent and 37% rating it as good. Lectures on family health and world population problems, were well received, with 58% of the respondents rating the presentations as excellent and 42% rating them as good. Seventy-five percent felt that the lectures on family health and family planning program organization were excellent. All the respondents felt the review of health care delivery systems was either excellently or moderately well presented.

The rationale for integrated health and family planning efforts, again, received a high rating: 97% felt the subject had been excellently presented or presented well.

Response to topic selection for lectures was also extremely favorable, with 97% of respondents agreeing that course topics had been well selected. Response to whether or not any topics should be added was mixed; 44% of the respondents suggested the addition of topics. Several participants requested the inclusion of lectures on pediatrics, nutrition and reproduction, maternal and child welfare, and the impact of low economic status on fertility. Others requested more information on health management, especially financial management and budgeting. Still others requested additional information on the problems of organization, service provision and monitoring of family planning services in developing countries. Finally, it was suggested that presentations on family planning and sexually transmitted diseases be included among the lecture topics. Almost all the respondents, 97%, agreed that no topics should be deleted. While the majority did not recommend the deletion of any topics, some trainees did suggest that the management lectures be shortened.

Participants were also asked to specify which lecture they felt would be most useful to them in their practice. Many respondents felt that the lectures on reproductive health care management and administration, particularly those on management and finances, were most useful. The lectures on advances in reproductive endocrinology, adolescent pregnancy, reproductive health, infertility and management of ovulatory failure, and vasectomy were also considered very useful. The material on integration of reproductive health care and fertility management and the update on contraceptive methods were mentioned as being helpful by several participants.

Participants were asked to specify which lectures they thought would be least useful to them in their practice. The lectures dealing with male contraception, as well as endocrinology and family planning, were considered least beneficial by some of the respondents. Several participants also commented that the lectures on nutrition, population dynamics, and teenage pregnancy were not very useful.

When asked how much the participants felt they had learned, 94% of the respondents stated that they had learned a great deal; the remaining 6% said that they had learned a moderate amount.

When asked what was best liked about the course, participants were highly enthusiastic, especially with regard to the competency of the staff and administration. Many participants commented very favorably on the expertise of the professors and on their clarity, friendliness, availability, and willingness to answer questions. Also

appreciated by many was the respect accorded participants and the caliber of the interaction between lecturers and participants. The high quality of the course content was also noted by many, as was its administration and overall organization. Topics mentioned included the presentation on the Planned Parenthood Association of Maryland and infertility. Several participants chose the lectures given by Drs. King, Foster, and Studnicki as their favorite parts of the course.

When asked what was least liked about the course, there was a consensus among the participants in the French Administrators' course that the quality of the translation was at times unsatisfactory. They also reported experiencing difficulty with the rapidity of the lecturers' speech. In terms of modes of teaching, several participants stated that they would have preferred the use of different methods rather than a strict adherence to lecturing. One respondent expressed a preference for more clinical demonstrations than were included in the course. It was also mentioned that afternoon lectures were too long. Some respondents felt that some countries were cited too frequently in the lectures.

Participants were asked if they would expand any part of the educational materials provided or the audiovisual presentation. Replies to this were mixed: 49% of respondents said no, while 51% felt that some expansion was necessary. Some respondents requested additional material on human sexuality, and audiovisual aids specifically suited to the needs of individual countries. In addition, there were requests for more films on minilaparotomy, vasectomy, laparoscopy, tubal microsurgery, and IUD insertion. Also requested were more materials on various methods to disseminate the knowledge gained through participation in the JHPIEGO course to others.

In response to which part of the audiovisual presentation should be deleted, 94% of the respondents were content with the current lecture. There were suggestions by some participants, however, to delete the film "Condom Sense" and the demonstration of the maintenance of the laparoscope.

Participants were very enthusiastic in their responses to rating the overall course organization. On a rating scale from poor to excellent, 80% of respondents felt the course organization was excellent, and 20% felt that it was good. There were many favorable comments on the course's organization, coordination, variety of resources, and the competency and availability of the staff. There were additional comments regarding further development of the course content. Specific requests included having more lectures on demography and population, anthropology, fertility and adolescent fertility management. Some respondents suggested holding regional administrative courses so as to provide participants with an insight into the health problems in their respective continents. A number of respondents suggested that the program could be better oriented towards participants in each specific course, with a greater in-depth study of their individual countries, and more time for group discussion of project profiles. Finally, there was a request for more field trips to expose participants to the realities of health care in the U.S.

In accordance with these views, 71% of the respondents gave the course an overall rating of excellent, and 29% rated it as good. Furthermore, 51% felt the course should be continued, and 49% thought that it should be continued with modifications.

In summary, the immediate reactions of the participants in the seven courses offered by JHPIEGO during fiscal year 1985 were extremely positive. They reported having a rewarding educational experience that would greatly enhance their practice. Criticisms of the courses, when offered, centered around the time of the day certain types of lectures were offered, the quality of the translations, the intensity of the courses, and a desire for more practical demonstrations of clinical procedures,

informal group discussions, and independent library study time. However, the respondents were most impressed with the quality of the instruction, the educational materials used and the organization of their individual courses. They found the lecturers to be extremely congenial, responsive to their needs, very well prepared and most informative. The participants reported being exposed to a wealth of information that would be most useful when they returned to their duties as administrators, clinicians, instructors, and researchers. Finally, they reported an eagerness to introduce others, be they other health professionals or private citizens, to the concepts of reproductive health and the benefits that can be derived from the development of such programs. A summary of the responses to the Academic Skills, Infertility/STD, and Administrator courses is displayed in Table 15.

ADMINISTRATOR SURVEY

Introduction

The administrator survey, initiated in November 1980, was designed to assess the success of the course, Reproductive Health for Administrators of Family Health and Family Planning Programs, and focused on course content, the uses to which the material learned during the course has been put, and the possible avenues future training in this field can take. The benefits derived from the course by participants were also delineated, as well as the relevance and utility of the educational materials obtained during the course. Furthermore, the information from the coded surveys was combined with data from each trainee's application form to gain a comprehensive picture of this course and its impact on the participants.

A total of 635 individuals participated in the administrator course between its inception in April 1976, and the end of FY'85. A total of 618 trainees attended courses prior to January 1, 1985, and had adequate opportunity to receive, fill out, and return the questionnaire. Since each trainee was sent a survey a minimum of six months after completing the course, this cutoff date allows the last eligible participants three months to receive and return the instrument before the close of the fiscal year. Other surveys received during FY'85 from participants trained in subsequent courses are not included in the analysis. This procedure reduced bias which may arise from the inclusion of several training cohorts in the analysis where only some participants have had adequate opportunity to return the questionnaire.

Sixty-five percent (399) of the 618 administrator course participants trained prior to the cutoff date responded to the survey. Nonrespondents received an average of 2.9 mailings apiece while respondents received an average of 1.7 mailings. The response rate to the questionnaire was 65%. Twenty-three of the 399 surveys received were added during FY'85.

The findings discussed in this section will be concerned primarily with the 399 administrator course participants who responded to the survey. However, the course application forms of the nonrespondents indicated that they were similar to respondents in demographic characteristics, levels of medical training, and how they spent their professional time. The available evidence indicates no significant difference between respondents and nonrespondents.

Selected Findings

This discussion on the findings compiled from the administrator survey will focus on four of the five main components of the instrument: (1) the professional activities of respondents; (2) the usefulness of many of the topics and general issues covered in the

Table 15

POSTCOURSE EVALUATION SUMMARY:

PERCENTAGE OF "EXCELLENT" RESPONSES

Course	Audiovisual	Organization	Learning	Overall
Academic Skills	82	82	82	82
Infertility/STD	77	86	98	89
Administrator	49	80	94	71

course; (3) the professional benefits derived from participation in the course and the educational materials received; and (4) selection of professionals for future training programs, and where such programs should be conducted. A discussion of the fifth component of this survey, individual respondents' comments about the course, is included in a later section.

The analysis revealed that just over 27% of respondents reported that their primary position changed after they participated in the JHPIEGO course. Furthermore, 45% rated themselves primarily as administrators, 34% as clinicians, 11% as teachers, and the remaining 10% could not limit their roles to only one of these categories. The average time spent by all respondents in administration was 40%, while 34% was spent in patient care, 15% in teaching, and 7% on research.

Most respondents reported they worked in two or three different types of institutions. On the average they spent 20% of their time in medical schools and teaching hospitals, 17% in other hospitals, 15% in private practice, 10% in clinics, and 11% in other institutions. As a group, they spent the largest portion of their time (30%) in nonclinical government service.

Respondents were asked to rate the usefulness of subjects and general issues discussed in the course. Usefulness ratings ranged from one (not very useful) to five (very useful). Respondents on the whole tended to rate all aspects of the course above average, i.e., above a score of three. The discussion of contraception was rated higher (4.5) than the other reproductive health topics. Lectures on high-risk pregnancy and demography and population problems also received ratings above four. Sessions on high-risk gynecology, infertility, and sterilization were rated slightly lower, but they were still considered useful (i.e., a score of about 4). Each topic which has a mean rating greater than 4 was rated as very useful (i.e., a score of 5) by at least 50% of all survey respondents. Very few respondents, 5% or less for each topic, rated any of these discussions as not very useful (i.e; a score of 1).

The lectures on general reproductive health issues were rated on the average as useful (i.e., a score of 4). Here, the issues covering the planning of community-based versus hospital-based services and the health rationale for family planning received the highest ratings of 4.3. The raw data for these general issues followed the same patterns as the data for the reproductive health topics. A majority of the respondents considered these issues to be very useful, while less than 2% of the group felt them to be not very useful. The country case studies were given a mean rating of 4.0.

Respondents were asked to rate administrative topics in the same manner. The discussions of the evaluation of the effectiveness of services, and the establishment of priorities received higher ratings (4.4) than the other topics. Over 86% of all respondents rated these topics as either very useful or useful. The lectures on motivation of employees and application of health techniques to management programs also received higher ratings than the other topics. Less than 2% of all respondents rated any of the subjects as not very useful.

Respondents were asked to indicate which of their major activities had been influenced by the course. Table 16 shows the percentage of respondents who reported professional activities in which the course was of practical value. Most respondents applied the skills learned to their administrative activities (78%) or to their teaching and training activities (66%). Nearly half the group found the course helpful in their clinical work (49%), and 25% applied the skills to their research. A further analysis of the responses (see Table 17) showed that of the individuals who rated themselves as primarily administrators, 94% found the course influenced their administrative activities, 63% found it also influenced their teaching and training, and 32% indicated that it was helpful in their clinical activities. Likewise, 91% of those participants

Table 16

ADMINISTRATOR SURVEY RESPONDENTS REPORTING PROFESSIONAL ACTIVITIES IN WHICH THE COURSE WAS OF PRACTICAL VALUE

Activity	Percentage
Administration	78%
Teaching and Training	66
Clinical Responsibilities	49
Research	25
Other	14
None	3

Table 17

PERCENTAGE OF EACH SUBGROUP OF ADMINISTRATOR SURVEY RESPONDENTS CLASSIFIED BY PRIMARY ROLE WHO REPORTED PROFESSIONAL ACTIVITIES IN WHICH THE COURSE WAS OF PRACTICAL VALUE

	Self-Classification			
Activity	Administrator (174)[1]	Teacher (44)[1]	Clinician (138)[1]	More than one role (38)[1]
Administration	94%	59%	62%	82%
Teaching and Training	63	91	62	68
Clinical Responsibilities	32	39	68	68
Research	21	41	20	39
Other	20	7	9	13
None	2	0	5	0

Notes: 1. Numbers in parentheses indicate number of respondents in each category

who rated themselves primarily as teachers felt that the course influenced their teaching and training activities, while 59% of this subgroup found the course helpful in administrative activities, and 39% in clinical work. However, those participants who rated themselves primarily as clinicians did not show this strong tendency. Only 68% of this subgroup felt the course influenced their clinical activities, and 62% felt the course influenced their administrative and teaching or training activities as well.

Participants received a variety of educational materials during the course. Included were textbooks, family planning pamphlets, Population Reports, and lecture handouts. There was some variation, by date and language of the course, as to exactly which materials are given to participants. It was anticipated that trainees would not only utilize the materials received during the course, but also refer to and share them with other reproductive health professionals upon their return home. The majority of respondents reported using the materials. Most popular were the Population Reports, with 87% of respondents reporting they had used them. Family planning pamphlets were used by 83% of respondents, lecture handouts by 74%, and the management text by 64%. Of the materials, the management text was the item most frequently cited as not received. This was due to the fact that no management text was given out in the early years of the course, and no appropriate text is available in French.

Respondents used the educational materials in a variety of ways, six of which are shown in Table 18. Teaching and training was the activity in which most respondents (69%) used the materials. Many also shared them with colleagues (67%), and consulted them for special lectures (56%) and the preparation of reports (45%). On the average, respondents reported using these materials in three of the activities listed in Table 18, and 28% of all respondents used the materials for four to six of these activities.

Over half of all respondents, 56%, felt some of the materials they received or used in the course would be more useful to them if translated in another language. Most frequently requested were a variety of items not specifically obtained in the course such as films, slide shows, and specific texts. Of the respondents who wanted materials translated, 49% requested these other resources, 38% indicated they wanted the family planning pamphlets translated, 27% the Population Reports, 26% the management text, and 18% the lecture handouts. The languages most frequently requested were Spanish, Portuguese, French, and Arabic. Others include Turkish, Indonesian, Malay, Thai, Marathi, Bengali, Urdu, Tamil, Persian, and African languages, such as Yoruba, Swahili, Kiswahili, and Shuna-Ngebele.

Respondents completed a few questions on who would benefit from the kind of training they received, and where such programs should be conducted. Respondents felt individuals in government positions would benefit more from the course than their nongovernment colleagues. Only 39% of respondents would recommend the course to nongovernment clinicians and 34% to nongovernment administrators, whereas 71% would recommend the course to government clinicians and 79% to government administrators. The majority, 62%, would also recommend the course to faculty members. About 83% of all respondents had already recommended the course to colleagues in their country, and 54% had assisted them in making an application to JHPIEGO. Only 3% said that they would not recommend the course to others.

A small proportion of respondents, 4%, felt the time was not right for training programs in family health and family planning to be initiated in their countries. Of the rest, 47% stated that training programs in family health and family planning are under way, and 49% felt they should be initiated. Looking at this data by world region, we find that higher proportions of the participants from Africa (58%) and the Near East (55%) felt training should be initiated, while the majority of respondents from Latin America (58%) replied that such a program was already under way in their countries.

Table 18

USE OF EDUCATIONAL MATERIALS BY ADMINISTRATOR SURVEY RESPONDENTS

Activity	Percentage
Teaching and Training	69%
Shared with Colleagues	67
For Special Lectures	56
Preparation of Reports	45
Placed in a Library	32
Other	8

The respondents were asked to suggest possible locations for training programs. Of the 96% of all respondents who felt the time was right for reproductive health training programs to be conducted in their countries, 64% thought it should be started in the ministry of health , 61% wanted to see it in medical schools, and 41% suggested a variety of other locations for the training. Table 19 shows how these percentages change when they are tabulated by world region. Some of the other locations most frequently suggested for training included family planning clinics and associations, nursing and paramedical schools, private clinics and hospitals, rural health centers with MCH programs, rural and urban communities, schools, and nongovernment organizations. There were also suggestions for training during the medical internship in conjunction with the training of general practitioners, in women's organizations, and in cooperation with the church. Thus, from these comments, it is apparent that the administrator course stimulates interest in identifying training needs and sites, which assists JHPIEGO in establishing in-country programs.

Thus, consistent findings lead to the conclusion that the U.S.-based administrators course was a success. The proper people were selected for participation; the course content appeared to be relevant and useful; participants used and shared their new knowledge; and this knowledge apparently had a positive effect in that evidence was found to suggest the participants became better administrators.

CLINICIAN SURVEY

Introduction

The clinician survey, instituted in its present form in February 1979, is an ongoing mechanism for long-term follow-up of participants trained in U.S.-based JHPIEGO courses for clinicians at the The Johns Hopkins Educational Center, as well as those trained in previously active centers in St. Louis, Pittsburgh, and Beirut, Lebanon. It is designed to evaluate the postcourse experiences of participants in the following courses: Advances in Reproductive Health for Physicians, Academic Skills for Medical School Faculty in Reproductive Health, and Management of the Infertile Couple. The survey solicits information on the professional activities of the trainees subsequent to the course, including how they spent their professional time, what laparoscopic equipment they used and how it was maintained, which procedures they performed, and whether or not they shared their knowledge with others. Inserts to the clinicians survey were sent to the Management of Infertile Couple and Academic Skills course participants because these courses addressed the specific needs and skills of those physicians interested in all phases of infertility, research methodology, and teaching and training techniques. The inserts are designed to evaluate specific aspects of the courses such as their practical application and usefulness in the development of research projects and refining training and teaching methods. They also attempt to assess the degree to which knowledge and skills acquired are transmitted to others.

A total of 1,555 individuals participated in at least one of the clinical courses conducted since the inception of the JHPIEGO program in 1973 to the end of FY'85. This report, however, will only be concerned with 1,488 trainees who attended at least one of the clinical courses held prior to January 1, 1985. As previously stated, this cut-off date was chosen so as to allow each participant included in the population ample opportunity to receive, complete, and return the survey. Since surveys were not sent to participants until six months after they completed the course, the most recently trained participants were given three months to respond to the survey.

Of the 1,488 participants in the population, 976 were categorized under the Advances in Reproductive Health courses, 300 were included in the Management of the

Table 19

PERCENTAGE OF ADMINISTRATOR SURVEY RESPONDENTS BY REGION WHO FELT TRAINING IN FAMILY HEALTH AND FAMILY PLANNING SHOULD BE STARTED IN THEIR COUNTRY ACCORDING TO WHERE THEY FELT SUCH PROGRAMS SHOULD BE CONDUCTED

	Region				
Where should training programs be conducted?	Africa (130)[1]	Asia (50)	Near East (46)	Latin America (154)	All Regions[2] (380)
Ministry of Health	68%	58%	67%	62%	64%
Medical Schools	50	66	56	69	61
Other Locations	45	26	37	45	41

Notes: 1. Numbers in parentheses indicate number of responses.
2. Includes respondents who now reside outside these world regions.

Infertile Couple Courses, 102 participated in the Academic Skills for Medical School Faculty in Reproductive Health courses, and 93 were included in the Promoting Reproductive Health through Management of Sexually Transmitted Diseases course. Seventeen individuals participated in more than one of the clinical courses offered before January 1, 1985, and were categorized under their most recent course, most frequently infertility and academic skills.

Of the population of 1,488 clinician course participants eligible for the survey, 849 responded to it. One hundred eleven participants were not sent questionnaires because of political difficulties in the participants' countries, changes in their status, such as death, retirement, or emigration, or a move to an unknown address. Additionally, participants in the Microsurgery or STD courses were not surveyed.

The gross response rate to this survey was 57%. Excluding individuals not surveyed, the net response rate was 62%. Nonrespondents received an average of 2.1 mailings apiece, while respondents received an average of 1.7 mailings. Fifty-six out of the total 849 surveys returned were added since the close of FY'84. Surveys with inserts were returned by 74 of the academic skills course participants and 169 of the infertility course participants. Thus, the response rates for these subgroups were 73% and 56% respectively.

The findings discussed in this section will primarily cover results of data compiled from the responses given on the returned questionnaires. Note that the findings from the clinician survey apply only to the activities of the individual physicians included in the population of JHPIEGO clinical course participants defined above. The results do not address the aggregate activities of all professionals who work at the institutions where these individuals practice. Because JHPIEGO attempts to institutionalize capabilities in reproductive health and fertility management, it would be highly desirable to analyze data on institutional activities. However, an international mail survey of individuals trained is not the appropriate tool for such data collection efforts; other evaluation tools are under consideration. Institutional capabilities cannot be directly inferred from the findings reported here.

Please note that due to the changes in the way information is gathered and maintained by JHPIEGO over time, as well as variations in the responses of participants, the numbers reported in this section are in some cases quite different from those shown in previous annual reports. The text indicates in each report how the numbers were derived and which participants were included. Comparisons of the statistics in this report with the figures shown previously should be avoided unless the differences in the methods of calculation are accounted for.

Based upon information compiled from application forms, it appears that respondents were similar to nonrespondents in demographic characteristics, levels of medical training, and how they spent their professional time. They also reported similar clinical experience. No differences were detected between respondents and nonrespondents in the number of procedures performed prior to the course. Thus there is no evidence to suggest that respondent and nonrespondent groups are substantially different.

Professional Activities

The patterns of professional responsibilities of participants reflected the opportunities they had to use the knowledge and skills learned at JHPIEGO. Examination of these activities helps to identify how trainees spend their time and the kinds of limitations that they faced. This information sheds light on further analyses of activities reported by respondents, such as the number of procedures they performed, the kinds of training they conducted, and the opportunities they took to disseminate information to their colleagues, students, patients, and communities.

Over half of all respondents (56%) reported that they had a medical or nursing school faculty appointment. Nearly all respondents (98%) reported that they served on the staff of one or more hospitals. Fifty-three percent of these physicians served on the staff of only one hospital, and the remaining served on two or more hospital staffs.

Data on the professional activities performed by all the respondents at their institutions of primary affiliation are presented in Table 20. Most physicians (93%) reported seeing inpatients, and 89% also reported seeing outpatients. Eighty-five percent reported performing female sterilization, and diagnostic laparoscopy was performed by 71%. Sixty-six percent reported clinical supervision of medical students or postgraduates, and over half also had administrative and research responsibilities at their hospital. Only 12% listed male sterilization as one of their activities at the hospital where they were primarily affiliated.

Table 21 shows the mean percentage of time spent by respondents in the different types of institutions where they were employed. This table was broken down by AID regional designation of countries because of the substantial regional variation. Overall, respondents spent more time (28%) in medical schools and university hospitals than in any of the other institutions listed. This tendency was expected since JHPIEGO participants are often selected because of their responsibilities in medical schools and university hospitals throughout the developing world. Respondents from all regions also reported spending higher percentages of their time in private practice (21%) and in government hospitals (20%) than in other types of institutions.

The regional breakdowns of these percentages revealed the same trends as the overall figures, but in each region respondents spent relatively more time in one of the types of institutions listed than in any of the others. Physicians from Africa spent most of their time in medical schools and university hospitals (35%), slightly less in government hospitals (30%), and substantially less in private practice (8%). Respondents from the Near East and Asia also spent most of their time in medical schools and university hospitals. However, they spent smaller and nearly equal proportions of their time in government hospitals and private practice. Physicians from Latin America reported spending the greatest proportion of their time in private practice (29%) followed by medical schools and university hospitals (19%), and government hospitals (17%). They also reported spending 13% of their time in social security hospitals. These data clearly indicate that participants in JHPIEGO courses, although selected primarily because of their academic or government affiliation, also spend a substantial proportion of their time in the private sector.

Clinical Procedures

The training of obstetricians and gynecologists to perfect clinical skills, including laparoscopy, is an important component of the JHPIEGO program. This subsection will review the performance of clinical procedures reported by survey respondents in order to evaluate the outcome of this training, especially as it relates to laparoscopy.

The procedures reported on the clinician survey were personally performed by respondents during the 12 months prior to the time they filled out the survey. These procedures could have been performed at any of the institutions with which the respondents were affiliated. Thus, the average numbers of procedures reported in this subsection were derived from the reports of these individual physicians across all institutions where they practice; the data do not represent the total number of procedures performed at a given institution.

There was substantial variation among the means in types of procedures performedby region. Regional differences reflected, in part, underlying differences

Table 20

PERCENTAGE OF CLINICIAN SURVEY RESPONDENTS REPORTING PROFESSIONAL ACTIVITIES AT THEIR HOSPITAL OF PRIMARY AFFILIATION

Professional Activity	Percentage of the 816 Respondents Who Reported Any Professional Activities
Seeing Inpatients	93%
Seeing Outpatients	89
Surgery, except Sterilization and Laparoscopy	87
Female Sterilization	85
Diagnostic Laparoscopy	71
Clinical Supervision of Medical Students	68
Clinical Supervision of Postgraduates	66
Research Investigations	60
Administrative Duties	54
Male Sterilization	12

Table 21

MEAN PERCENTAGE OF PROFESSIONAL TIME SPENT BY CLINICIAN SURVEY RESPONDENTS IN DIFFERENT TYPES OF INSTITUTIONS, BY REGION

Type of Institution	All Regions (821)[1]	Region: Africa (145)	Asia (211)	Near East (84)	Latin America (381)
Medical School/ University Hospital	28	35	39	37	19
Social Security Hospital	7	1	1	5	13
Government Hospital (except above)	20	30	19	19	17
Other Nonprofit Hospitals	4	6	7	3	2
Other Hospitals Operated for Profit	3	1	3	1	4
Health Center/Clinic Outside Hospital	4	6	4	3	3
Private Practice Outside Hospital	21	8	17	17	29
Private Maternity Home/Center	7	2	7	10	8
Other	4	4	3	4	5
TOTAL	98[2]	94[2]	100	99[2]	100

Notes: 1. Numbers in parentheses denote number or respondents in each world region.
2. This number does not add up to 100% due to some missing values in the surveys returned from this region.

between regions in family planning practices and the role of obstetricians and gynecologists. The mean number of vaginal deliveries reported per month for all regions (17.0) was higher than the mean for any other procedure. The overall means for cesarean sections (4.2), diagnostic laparoscopy (3.3), and postpartum sterilization (3.3) were also higher than those reported for the hysterectomy, interval minilaparotomy, and vasectomy. Respondents from Asia reported performing a higher mean number of hysterectomies, postpartum sterilizations, interval minilaparotomies, and vasectomies than did respondents from any other region. Respondents from Africa reported performing a relatively low number of procedures for all except cesarean section. For the mean number of procedures performed by survey respondents per month by world region and type of procedure see Table 22.

A review of the availability and utilization of laparoscopic equipment as reported on the survey for the respondents' institutions of primary affiliation showed that about 77% of respondents reported laparoscopic equipment at their primary institution. On the average, those respondents with equipment reported that there were 2.0 pieces at their institution, including cautery systems, System A's, System B's, and laprocators. About half of the hospitals represented had only one piece of equipment, while one quarter of the institutions had two, and the remaining had three or more pieces of equipment. Furthermore, of the respondents working at institutions with laparoscopic equipment, 95% reported they had access to these systems. They also stated that an average of 5.3 people, including themselves, were using the equipment at this institution. Most (78%) reported between one and six individuals used the equipment, and 22% claimed that between seven and fifty people used the equipment. Finally, 92% reported that the equipment was working at the time they filled out the survey, and 78% indicated that the equipment had been in good working condition 75% or more of the time since its installation. Thus, we can conclude that the equipment available to these respondents was by and large fully utilized and well maintained. Also, since more than one person utilizes most sets of equipment, it is likely that more procedures are being performed per month per institution than those reported for each individual surgeon.

Participants were asked to report whether the laparoscopic equipment at their institution of primary affiliation was used more for diagnosis or sterilization, or about equally for both. Table 23 displays the percentage distribution, by region, of the clinician survey respondents with access to laparoscopic equipment. Averaging over all regions, we find that respondents reported using the equipment more for sterilization. Within regions, this tendency was true for Latin America and Asia. Respondents from the Near East were distributed fairly evenly in their responses as to the primary use of the equipment. The greatest divergence from this pattern was found in the African region. Here, 66% of the respondents reported the equipment was used more for diagnostic purposes, 24% stated that it was used about equally for diagnosis and for sterilization, and only 10% reported it was used more for sterilization.

In summary, respondents to the clinician survey reported performing more laparoscopies than any of the other surgical procedures included on the questionnaire. There was substantial regional, as well as individual, variation in the responses. Latin American and Asian respondents favored laparoscopic sterilization. Asian participants reported performing more sterilizations than did respondents from any other region, as well as more total laparoscopies than any other subgroup. Participants from Asia also reported performing the largest number of other surgical procedures, including postpartum sterilization and interval minilaparotomy. African respondents favored using the equipment for diagnostic procedures. Respondents with equipment at their primary institution reported that it was utilized and well maintained. Consistency was

Table 22

MEAN NUMBER OF PROCEDURES PERFORMED BY CLINICIAN SURVEY RESPONDENTS PER MONTH BY REGION AND TYPE OF PROCEDURE

Region	Type of Clinical Procedure						
	Normal Delivery	Cesarean Section	Hysterectomy	Postpartum Sterilization	Diagnostic Laparoscopy	Interval Minilaparotomy	Vasectomy
Africa	13.9	4.6	2.0	1.4	2.6	0.9	0.01
Asia	20.4	4.2	4.1	7.3	2.7	3.7	2.0
Near East	22.6	3.9	3.5	0.7	5.6	1.5	0.05
Latin America	11.0	3.9	2.2	3.9	2.3	1.9	0.3
All Regions	17.0	4.2	3.0	3.3	3.3	2.0	0.6

Table 23

PERCENTAGE DISTRIBUTION OF CLINICIAN SURVEY RESPONDENTS ACCORDING TO REPORTED USE OF LAPAROSCOPIC EQUIPMENT BY REGION

Is equipment used more for diagnostic purposes or for sterilization purposes?	Region				
	Africa (98)[1]	Asia (160)	Near East (74)	Latin America (291)	All regions (623)
Used More for Diagnostic Purposes	66%	19%	39%	21%	30%
Used About Equally for Diagnosis and Sterilization	24	33	32	28	29
Used More for Sterilization	10	48	28	51	41

Notes: 1. Numbers in parentheses denote number of respondents in each region.

noted among the primary institutional use of equipment and the number of procedures performed by trainees individually, and grouped by region. There was also a tendency for respondents from the courses which emphasized specific procedures to report performing a higher average number of these procedures each month.

Training Activities

A substantial portion of the clinician survey was concerned with the teaching and training responsibilities of clinician course participants. The reports given by respondents offered the opportunity to review how JHPIEGO trainees transmitted their training following their participation in the course. In order for the knowledge and skills taught by JHPIEGO to have a significant impact in developing countries, it is essential that former trainees share their knowledge with their colleagues, students, patients and communities.

While one goal of the JHPIEGO program is to provide participants with experiences in a broad range of concepts and techniques relevant to reproductive health, the JHPIEGO courses also cover material relevant to the important health and social problems encountered by trainees in their respective countries. Participants were encouraged to broaden their perspectives, which were often limited to traditional hospital-based medicine, through course and informal group discussions, the reading of educational materials, independent library study and clinical observations. Techniques of abortion were not covered by JHPIEGO because of the constraints imposed by the Helms Amendment. The three clinician courses discussed in this section differ in their focus, as they each address specific areas of reproductive health. A comparison of respondents' training activities by type of course taken, for some of the general topics and techniques covered in all the courses, will be discussed below.

Referring back to Tables 20 and 21, note that teaching and training activities are important components of the professional responsibilities of JHPIEGO clinician course participants. As shown in Table 21, respondents reported that they spent an average of 28% of their time in medical schools and university hospitals. From Table 20, observe that at the hospital of primary affiliation, about two-thirds of all respondents are responsible for clinically supervising either medical students or postgraduates. Thus, it would appear that JHPIEGO-trained physicians had ample opportunity to pass on the information they received in this program to other health professionals. Furthermore, it can be assumed that some of these newly acquired skills were imparted to others via their observations of the respondents' clinical techniques at times not specifically designated for teaching or training.

Respondents were asked to report on whether they had teaching or training responsibilities, and if they had such responsibilities, what types of health professionals they taught or clinically supervised. Table 24 shows the percentages of all respondents reporting training responsibilities for several types of health professionals. They most frequently reported supervising medical school graduates in clinical training. The majority also reported training medical students and nurses or nurse-midwives. Thus, from the percentages in this table, we can infer that the majority of JHPIEGO-trained physicians are responsible for supervising or training more than one type of health professional.

By examining these percentages broken down by type of course participation, we find slight differences in responses which are consistent with the core content of these courses. Academic Skills respondents reported teaching the most overall, the Management of the Infertile Couple course respondents emphasized topics concerned with infertility, while Advances in Reproductive Health respondents most often reported teaching general reproductive health and contraception subjects.

Table 24

PERCENTAGE OF CLINICIAN SURVEY RESPONDENTS WHO REPORTED THEY TAUGHT OR PROVIDED SUPERVISED CLINICAL TRAINING IN OB/GYN OR FERTILITY MANAGEMENT, BY CATEGORY OF PERSONS TAUGHT OR SUPERVISED

Whom do you now teach or provide supervised clinical training for in Ob/Gyn or fertility management?	Percentage of the 712 Respondents Reporting Teaching or Training Responsibilities
Medical School Graduates in Clinical Training	82%
Medical Students	73
Nurses or Nurse-midwives	61
Other Health Personnel	28

Trainees were asked which subjects and techniques they included in their teaching and training from among those listed in Tables 25 and 26. Eighty-five percent of the respondents who participated in the Advances in Reproductive Health course reported these responsibilities, while 88% of the Management of the Infertile Couple course respondents, and 94% of the Academic Skills course respondents, reported teaching or training responsibilities. Some discussion of each of the topics listed in Table 25 was included in each type of clinician course. Note that the majority of respondents included each of the topics listed in their teaching with the exception of demography and population problems, and the organization and management of an advanced fertility clinic.

Table 26 shows selected surgical and diagnostic techniques and the percentage of respondents who included them in their training by type of course participation. Of the respondents who reported teaching or training responsibilities, 81% trained in postpartum sterilization, 73% trained in diagnostic laparoscopy, and 72% in interval minilaparotomy. Trainees with access to laparoscopic equipment reported training a mean of 1.0 persons each month to perform laparoscopic procedures. It is interesting to note that more respondents reported training in diagnostic laparoscopy than in either the cautery or falope methods of laparoscopic sterilization. Few respondents reported that they trained others to perform vasectomies.

As shown in Table 25, there were some differences in the proportion of respondents who taught each of the procedures shown in Table 26, depending upon the type of course in which they participated. For all procedures except laparoscopic sterilization, by the cautery method and vasectomy, a higher proportion of Academic Skills respondents reported including these techniques in their teaching than did participants from either of the other courses. Within this subgroup of respondents, the highest number reported training in postpartum sterilization, followed by diagnostic laparoscopy. A comparison of the Management of the Infertile Couple participants with the Advances in Reproductive Health participants showed that overall more infertility course respondents reported training in laparoscopy for both the diagnostic and falope method of laparoscopic sterilization. This finding was not unexpected since laparoscopy is one of the more useful techniques for diagnosing infertility. Furthermore, since the skills necessary to perform laparoscopy are similar for both the diagnostic and sterilization procedures, it was not surprising to find that infertility course participants reported training others to use the laparoscope for diagnostic and sterilization purposes. In contrast, slightly higher proportions of Advances in Reproductive Health respondents trained others to perform sterilization techniques, such as postpartum sterilization and vasectomy, than did the infertility course participants. Thus, Table 26 also gives evidence that differences between responses by type of course participation are consistent with the emphases of these courses.

Advocacy

There are many channels through which JHPIEGO-trained physicians can disseminate reproductive health knowledge and skills. Earlier subsections of this report examined the impact participants have had in terms of the number of procedures they perform and the number of individuals they train. These activities, especially teaching and training, allow the full depth and breadth of the up-to-date concepts and techniques learned at JHPIEGO to be imparted to health professionals and students closely associated with the participants. Another important way of spreading this knowledge is through the trainees' involvement in the professional and other associations of their countries. Data on the roles played by participants in making presentations at professional meetings and in publishing papers in professional journals can provide

Table 25

PERCENTAGE OF CLINICIAN SURVEY RESPONDENTS WITH TEACHING RESPONSIBILITIES WHO REPORTED INCLUDING SELECTED SUBJECTS IN THEIR TEACHING, BY TYPE OF COURSE PARTICIPATION

Subject	Course			
	All Courses[1] (691)	Advances in Reproductive Health (458)	Management of the Infertile Couple (157)	Academic Skills (76)
Contraceptive Techniques	88%	88%	89%	92%
Reproductive Physiology and Health	87	87	88	91
Selection of Appropriate Sterilization Procedures	86	86	85	87
High-risk Pregnancy	86	86	85	91
Management of Incomplete Abortion	84	84	84	92
Diagnosis and Treatment of Infertility	84	80	96	84
Patient Counseling in Fertility Management[3]	83	82	90	79
Demography and Population Problems	46	46	44	54
Organization and Management of Advanced Fertility Clinic	35	35	45	33

Notes:
1. Includes Sexually Transmitted Diseases participants not reported separately.
2. Numbers in parentheses indicate the number of respondents in each course type with teaching or training responsibilities.
3. This item was inadvertently omitted from the early mailings of the questionnaire. Percentages have been adjusted to the reduced number of respondents in each category.

Table 26

PERCENTAGE OF CLINICIAN SURVEY RESPONDENTS WITH TEACHING RESPONSIBILITIES WHO REPORTED INCLUDING SELECTED PROCEDURES IN THEIR TEACHING, BY TYPE OF COURSE PARTICIPATION

Techniques/Procedures	All Courses [1] (691)[2]	Course: Advances in Reproductive Health (458)	Course: Management of the Infertile Couple (157)	Course: Academic Skills (76)
Postpartum Sterilization	81%	81%	74%	95%
Diagnostic Laparoscopy	73	68	80	85
Interval Minilaparotomy	72	69	74	78
Laparoscopic Sterilization, Band Lap Falope Method	64	58	73	78
Laparoscopic Sterilization, Cautery Method	34	34	32	32
Vasectomy	16	17	11	16

Notes:
1. Includes Sexually Transmitted Diseases participants not reported separately.
2. Numbers in parentheses indicate the number of respondents in each course type with teaching or training responsibilities.

useful insights into how new developments in fertility management and reproductive health have been integrated into these communities.

Respondents reported on the existence of medical, ob/gyn, and family planning societies or associations in their countries and whether or not they were members of these associations. Very few respondents, no more than 4%, reported that there were no medical, ob/gyn, or professional organizations in their country. From Table 27 we see that 80% are members of a medical association, and that the majority, 64%, belong to a national medical association. Most respondents, 74%, also belong to an ob/gyn society, usually national. A smaller proportion, 42%, belong to a family planning organization, which in most instances is national in scope. In fact, most respondents who belong to any of these organizations are members of their national organizations. Thus, we can infer that through their participation in these associations, JHPIEGO trainees have opportunities to share their knowledge and skills with colleagues from all regions of their respective countries.

Examination of the frequency of presentations and publications was another indicator of the opportunities taken by respondents to disseminate information. Over half of the respondents, 51%, listed the topic of one or more presentations they made during the previous 12 months. Most of these respondents, 60%, made at least one national presentation, 46% made one or more local presentations, and 22% made international presentations. Furthermore, 31% of the respondents also reported the titles of books and journal articles they had published during the previous year. Of the individuals reporting publications, an average of two publications per person were listed.

One mechanism used by physicians to keep abreast of new developments and current research findings in the medical field is to read regularly one or more professional journals. Most respondents, 97%, listed the titles of several publications which they frequently read. There was space on the survey to list five journals, and 78% of the respondents who listed any publications included the names of three to five periodicals. These data show that respondents not only kept informed about current issues in reproductive health, but that they were also active in sharing their knowledge with members of their professional communities.

There are other ways in which JHPIEGO trainees may contribute to the process of disseminating reproductive health information and influencing attitudes of their fellow countrymen. They can impress upon politicians and government officials the need for changes in current health policies or the implementation of programs in reproductive health and family planning. They can also have a significant impact on the community through contact with patients, schools, and community groups, either directly or through radio and television. Interaction of this type provides the trainees with an opportunity to discuss general reproductive health issues, clarify misconceptions, and introduce health and social benefits derived from family planning. Questions about these activities were not included as part of the clinician survey, but JHPIEGO is aware that its trainees do participate in the activities mentioned above.

Conclusion

In this section we have discussed the activities of JHPIEGO trainees in terms of three outcome measures: the clinical performance of respondents, their training activities, and their roles in the diffusion of information to others. Overall, the performance of this group of respondents in each of these areas was impressive. However, the area in which they excelled was teaching and training. The respondents' reach, relative to the dissemination of information, included not only colleagues and medical students, but also nursing students, nurses and nurse-midwives, as well as other health professionals.

Table 27

PERCENTAGE OF CLINICIAN SURVEY RESPONDENTS WHO REPORTED MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Type of Membership	Percentage of Respondents	Number of Respondents
Any Medical Organization	80%	653
National Medical Organization in Own Country	64	522
Any Ob/Gyn Organization	74	593
National Ob/Gyn Organization in Own Country	60	476
Any Family Planning Organization	42	330
National Family Planning Organization in Own Country	32	251

This training was carried out in informal classroom and clinical settings and through informal discussions and observations. The educational materials obtained through their course participation were also made available for use by these groups. These activities show that the knowledge and skills covered in the JHPIEGO courses were put to use both didactically and clinically. Additionally, from the data presented in this section describing the clinician survey, we have seen that this population of physicians trained in JHPIEGO U.S.-based courses form a cadre of professionals who are actively promoting reproductive health in developing countries.

SURVEY COMMENTS

Introduction

The comments on questionnaires returned by course participants provide invaluable information on the personal opinions, experiences, and professional activities of each trainee; information which is otherwise unavailable from the questionnaire's more quantitative, standardized questions. Moreover, these reactions, which are received at least a minimum of six months after the individual took a course, point out concerns which remain relevant to participants long after the course has been completed. Thus, these comments provide JHPIEGO with yet another mechanism by which to evaluate the success of its program.

The open-ended survey questions include requests for trainee opinions on the benefits of the course, suggestions for improvements in course design, and comments on the current family planning situation in their regions. The benefits help us to determine the success and failure of our program; the suggestions lend direction to our efforts towards improvement of the course. The comments on specific conditions in the trainees' regions can be very useful in both understanding the local situation and in planning new approaches to meet the needs of the participants.

The comments recorded in this section were provided by survey respondents who participated in one of the following courses: Management of the Infertile Couple, Infertility/Sexually Transmitted Diseases, Reproductive Health for Administrators of Family Health and Family Planning Programs, and Academic Skills for Medical School Faculty in Reproductive Health. It should be noted that the comments requested from the participants vary according to the course they attended.

Management of the Infertile Couple and Control of Sexually Transmitted Diseases

Participants in the courses in Management of the Infertile Couple and Control of Sexually Transmitted Diseases were requested to provide comments on tangible benefits of the course, and information which could be useful to other participants. Many trainees expressed their appreciation for the opportunity to attend a course on the management of infertility, a condition that represents a significant problem in many of their countries. They viewed their course attendance as an opportunity to acquire the skills and information necessary to help overcome this problem. In specifying benefits derived through course participation, they discussed both the overall philosophy and certain aspects of the course which they found useful. The respondents most frequently mentioned that the course aided them in their relations with, and treatment of patients. Many also commented that the teaching materials they received were extremely useful in helping to educate their hospital staffs and students, as well as themselves. They also found the broad overview of the field of family planning and contraceptive use very helpful. The trainees were grateful for the current contraception information provided and the opportunity to exchange views

with participants from other developing countries. Some mentioned that the JHPIEGO course had enabled them to become familiar with laparoscopic equipment and tubal ligation. In general, many participants felt that the course helped them to become better reproductive health practitioners.

Additional comments were related to the issue of laparoscopic equipment. Some respondents reported that the interval between the completion of the course and their receipt of equipment was too long. Participants from Kenya, Nigeria, St. Kitts, and Sri Lanka complained of a shortage of equipment, lab facilities, drugs, and other medical supplies. They would welcome any advice or assistance that JHPIEGO could provide in those areas. Follow-up visits or courses were also requested. A respondent from the United Arab Emirates wanted his country's government to be approached to sponsor candidates to JHPIEGO courses. A Kenyan trainee believed that governments of concerned countries should be involved in an effort to gain approval for population control. Participants from Ghana and Nigeria commented that patients need additional education before they will accept certain forms of birth control.

The participants in both courses were pleased with the knowledge they acquired and the manner in which the information was presented. A number of trainees suggested that in vitro fertilization be covered in future courses.

Advances in Reproductive Health for Administrators

Participants in the Reproductive Health for Administrators of Family Health and Family Planning Programs course who returned questionnaires were enthusiastic in their responses regarding the training. Most participants commented that the course was well structured, emphasized the appropriate topics, and enabled them to learn from other participants.

Many of the respondents stated that because they are working in responsible reproductive health administrative positions, the course afforded them an opportunity for greater professional development in the areas of family planning and health care management. They described how the course enabled them to refine their management skills, thereby enhancing their ability to manage and promote reproductive health activities, supervise personnel, conduct research projects, and understand the latest concepts in family planning.

Skills taught in the course which some of the trainees mentioned having learned included planning by setting priorities, establishing educational programs, evaluation of health programs, and new techniques and approaches for medical research. In addition to learning useful management skills, the respondents reported that they appreciated the opportunity to receive updated information on the clinical aspects of reproductive health through the coverage of a wide range of reproductive health topics. Participants gained increased confidence in their ability to relate the benefits of family planning to their patients, as well as in their capacities as supervisors. They learned a great deal from the sharing of knowledge and experiences with colleagues from other countries. One participant from Zimbabwe reported that he now had a clearer understanding of problems confronting third world countries with regard to resource allocation and health activities, population growth and its consequences on development programs, and shortages of manpower and skills in most service areas. He also acquired additional knowledge in clinic management, setting up information systems, and developing and submitting research projects for funding by donor agencies.

Other trainees cited instances where their training has enriched their professional activities. A Ghanaian respondent stated that he had never taught family planning before attending the administrators course. Since returning to his country,

however, he has implemented a training program for regional MCH/FP officials on family planning in their regions. The course was entitled, "Management of MCH/FP Programs and Nutrition," with an emphasis on management skills. He has also taught student public health nurses the knowledge and skills used in providing nonprescription contraceptives. He planned to include IUD insertion in future training. Another participant from Jordan is in the process of establishing an information program for physicians and nurses within the Jordan Medical Association. He is also giving lectures to mothers in the village schools. Finally, an administrator in Zimbabwe has been promoted to Director of Nursing Services for the Ministry of Health since completing the course.

A number of respondents suggested that practical demonstrations would improve the course ome felt there should have been more practical rather than theoretical training. A trainee stated that the teaching methodology could be improved by having group discussions and workshops, rather than lectures, so as to allow participants to discuss the programs in their own countries among themselves. He also thought there were too many visual aids being used, and that some were too old to be relevant. Others thought the participants chosen for each course should be on the same educational level, and that physicians and nurses should attend separate courses. Some trainees thought the course should be longer and commented that the following topics should be covered more thoroughly: health administration and financial management, the study of management techniques, and country profiles. Others mentioned topics they would like to see discussed, primarily because of their relation to the situations present in their respective countries. For example, a respondent from Fiji felt that "Management of Adolescent Fertility Problems" should be addressed in the course. Another trainee, from the Yemen Arab Republic, suggested including a discussion of the issue of family planning and Islam. Finally, one trainee expressed the need for a follow-up to the course, perhaps a postprogram seminar.

Academic Skills

The Academic Skills For Medical School Faculty in Reproductive Health course provides instruction in the initiation and administration of teaching and research projects. Trainees who returned survey questionnaires were quite enthusiastic in their comments regarding the course. They reported that the training provided them with the motivation necessary to develop, initiate, and conduct research projects. Several of the respondents elaborated by describing projects they had started. A participant from India began a study of the advantages of using child-spacing and IUDs for birth control, in an effort to make these methods more acceptable in his country. Others described projects to: a) study estrogen receptors in the endometrium; b) determine if protein intake is an important factor in the prevention of gestational trophoblastic growth; c) examine factors that influence fetal survival and well-being; d) ascertain whether plasma renin activity (PRA) differs significantly in women who develop postpartum hypertension from those who do not; e) study uterine tubes removed by laparotomy as a result of ectopic pregnancy; and f) examine the influence of a previous abortion on the delivery and birth weight of a subsequent child.

The participants also described obstacles that hindered or prevented the development of projects. Among the difficulties mentioned most frequently was the lack of financial support available for research projects. This problem was cited even though many participants were successful in contacting and receiving grants from various funding agencies. For example, a clinical study on the management and outcome of high-risk pregnancy conducted in Sri Lanka was funded by the World Health Organization.

Some of the participants said they acquired new skills and confidence during the course -- skills that would greatly enhance their professional activity. Some of the skills the respondents identified as being most useful were: teaching methodology, collection of material, statistical analysis, research proposal writing, and experimental project design.

The respondents commented on the need to keep abreast of new developments and techniques in their field. Unfortunately, they are experiencing problems in this area because current medical publications are not always available. As a result, they were pleased with the wealth of information and educational materials distributed during the training. One participant requested additional copies of Population Reports for his teaching, while another thought receiving other teaching materials on a regular basis would be beneficial. Other respondents commented that they would like to use audio visual aids, such as slides and transparencies, but the materials needed were not available.

As for the course content, it was suggested that less time be used for the lecture on biostatistics, and more time be spent on the clinical discussion, lecture skills, and research skills presentations. Most of the participants, however, enjoyed the course in its present form and commented on its numerous benefits.

IN-COUNTRY PROGRAMS

ANNUAL PARTICIPANT SURVEY

JHPIEGO initially sought to improve the quality of reproductive health care in the developing world by providing education and training to key health professionals from developing countries. The prevailing philosophy was that these professionals, once trained, would develop reproductive health programs within their own institutions. JHPIEGO's premise was correct; for each year as the corporation continued its U.S.-based training, the number of requests for its support of regional and national programs grew.

JHPIEGO understands that the widespread use of preventive measures in the care and treatment of reproductive health matters can make an important contribution not only to the regulation of fertility, but to the well-being of families. The corporation also realizes that to effectively reach women and children, a sufficient number of ob/gyn specialists and other qualified personnel are needed in developing countries to provide these health measures. This understanding, coupled with requests from key health professionals, has led to a shift in JHPIEGO's training activities from U.S.-based centers to the establishment of an international network of regional and national training centers for ob/gyn physicians and other qualified health professionals.

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 participation in the program.

As a result of the growth in in-country training (96% of the participants in JHPIEGO training programs during FY'85 attended regional or in-country courses), JHPIEGO saw a need for a mechanism by which to monitor in-country program activities and to analyze the impact and effectiveness of these programs. Accordingly, a questionnaire was designed, the Annual Participant Survey (APS), to be used in this evaluation process. Through the use of this questionnaire, JHPIEGO hopes to receive information regarding the success of the in-country programs' efforts in transferring reproductive health knowledge and skills. JHPIEGO also wishes to assess the professional activities undertaken by the trainees since they attended the course, the condition and utilization of equipment donated, and a description of both successes and problems encountered by the trainees.

Additionally, the APS survey has been designed to reflect many aspects of in-country training activity, thereby enabling it to provide both operational and evaluative information for JHPIEGO and in-country project officials. Operational information furnished to JHPIEGO by the survey includes changes in mailing addresses,

institutional affiliations, and professional positions, as well as reports of equipment problems. The appropriateness of the selection of candidates is reviewed as the information is received on the surveys, and revisions are made in these areas when necessary. Furthermore, the operational information provided by the survey, because it is program specific, permits project officials to monitor the location of trainees and equipment having specific problems that should be addressed, such as equipment malfunction or high complication rates for clinical procedures. Utilization of this information can aid project officials in program planning and troubleshooting.

The evaluation process encompassed by the APS is a joint effort between JHPIEGO and the project director and his staff. The project director is responsible for sending the survey to trainees, monitoring mailings and returns, and forwarding the packets of returned surveys to JHPIEGO. The corporation's role in the evaluation process is twofold. First, it serves in the same capacity as the project director in that it is responsible for distributing questionnaires to regional trainees. As a result, JHPIEGO must ensure that these trainees also have sufficient understanding of the survey, its questions, and the need for the evaluation. However, JHPIEGO's role goes beyond that of administering the survey to regional trainees. It is also responsible for performing the statistical analyses of the survey responses, and for returning the results of these analyses to the project directors. Each project director, after reviewing the results of the analysis, can plan modifications in his program.

The survey is sent to participants of all JHPIEGO-sponsored courses with a clinical component, as well as to participants in some JHPIEGO-sponsored didactic update courses. It is first sent to these participants at least six months after a course. Thereafter, it is sent to all eligible participants on a yearly basis.

A total of 2,486 individuals, excluding medical and nursing students, participated in regional and in-country training programs during FY'85. Of that number, 1,020 trainees were eligible for the survey. The other 1,466 attendees were not sent questionnaires because they participated after January 1, 1985, the cut-off date for the distribution of questionnaires to be included in the FY'85 evaluation report. Since each trainee is sent a survey a minimum of six months after course completion, the cut off date allows the last eligible participants three months to receive, fill out, and return the instrument before the close of the fiscal year. Of the 1,020 regional and in-country course attendees sent questionnaires, 612 responded to it (Table 28 lists the names of countries represented by survey respondents). This is a survey response rate of 60%. Participants returning questionnaires included 340 physicians, 237 nurses, and 35 anesthetists. The survey response rates for these subgroups were 55%, 39%, and 6%, respectively.

The following subsection will focus on the analyses of the responses by participants trained in regional and national programs in the African, Asian, Near Eastern, and Latin American regions. A word of caution should be mentioned before any attempts to compare the findings in the following subsection are made. The respondent groups represent different populations of individuals with potentially very different characteristics. No measure of how the respondents are intrinsically different from one another has been made. Furthermore, this evaluation has not covered the activities of the eligible individuals before they participated in the program, so that differences in the groups which are independent of the training they received cannot be assessed here. Finally, due to the many differences in the populations, their languages and their cultural habits, which are encountered in cross-cultural research, care must be taken to achieve conceptual and linguistic equivalence of the survey as well as an equivalence of the indicators used. This survey has not

Table 28

SURVEY RESPONDENTS' COUNTRIES OF ORIGIN, BY REGION

AFRICA (198)[1]	ASIA (72)[1]	LATIN AMERICA (243)[1]	NEAR EAST (99)[1]
Benin	Cook Island	Barbados	Egypt
Burkina Faso	Fiji	Brazil	Jordan
Burundi	India	Dominica	Morocco
Cameroon	Indonesia	Haiti	Tunisia
Central African Republic	Malaysia	Jamaica	
Chad	Maldives	Mexico	
Comoro Islands	Nepal	Peru	
Congo	Pakistan	St. Lucia	
Gabon	Philippines	Trinidad	
Guinea	Sri Lanka	Uruguay	
Ivory Coast	Western Samoa		
Kenya			
Liberia			
Madagascar			
Malawi			
Mali			
Mauritius			
Nigeria			
Rwanda			
Senegal			
Sierra Leone			
Somalia			
Tanzania			
Uganda			
Zaire			

Note: Number in parentheses indicates number of respondents from each region.

been pretested in different cultures, so no assurances of these equivalences can be made. There may be some differences between the respondents due to differences in the versions of the questionnaires received (English, French, Portuguese, or Spanish), as well as cultural differences in the response styles of the individuals surveyed. Thus, if any comparisons between these groups are to be made, emphasis should be placed on the qualitative rather than the quantitative differences.

SELECTED FINDINGS

Respondents reported many aspects of their professional activities on the survey, as well as their opinions about selected components of the courses they took. The findings covered in this section will focus on: (1) the respondents' current professional activities; (2) the use of laparoscopes installed at each respondent's institution; (3) teaching and training activities of respondents; and (4) evaluation of the course as it is viewed by respondents at least six months since their participation.

Respondents were asked to comment on their institutional affiliations and professional positions. Of the participants responding to this question, 4% stated that they worked at medical schools, 74% worked at general, provincial or regional hospitals, and 6% were employed by ministries of health. In addition, 74% reported working in the same position at the same institution which sponsored them for the course; 26% reported having changed positions and institutional affiliation following course participation. Data on regional, national and U.S.-based trainees with teaching responsibilities indicate that fewer in-country respondents have faculty positions than U.S.-based participants. The majority of regional and national respondents are employed as health care service providers in hospitals, clinics, and health centers. Of the respondents reporting changes in their positions of responsibility, 6.9% stated that they now work at medical or nursing schools, 66% work at general, provincial or regional hospitals, 6.3% are employed by ministries of health, 3.5% have positions on the staff of private family planning clinics, and 2.5% are employed at nonprofit family planning clinics. The data also show that the majority of respondents who reported changes in positions are health care service providers.

Participants were also asked whether they were using the skills obtained during their training in their primary positions; 85% of the respondents said yes. Forty-four percent of the respondents also reported using the skills obtained during training in secondary positions. In addition, 72% of the respondents reporting position changes stated that they were using the skills obtained during training in their new areas of responsibility.

Respondents reported on the number of contraceptive and other obstetric and gynecologic procedures they had performed, assisted at, or scrubbed for in the past 12 months (Table 29). The contraceptive procedures most often cited were IUD insertion (67%), family planning counseling (67%), and provision of oral contraceptives (65%). Normal delivery (60%) was the most frequently reported obstetric/gynecologic procedure. The least cited procedures were tubal reanastomosis and provision of injectable contraceptives.

Respondents reported on the types of anesthesia used during the laparoscopy or minilaparotomy procedures they had personally performed, assisted at, or scrubbed for. Fifty-one percent of the respondents to this question replied that local anesthesia was used and 45% reported using general anesthesia. Most respondents, 66%, also reported that laparoscopy or minilaparotomy under local anesthesia was taught in their course. Very few respondents, 5%, reported any major complications from the use of local anesthesia during the laparoscopy and minilaparotomy procedures that they performed.

TABLE 29

PERCENTAGE OF ALL RESPONDENTS WHO REPORTED PERFORMING, ASSISTING AT, OR SCRUBBING FOR SELECTED CLINICAL PROCEDURES

Type of Clinical Procedure	Percentage of Respondents (612)[1]
Contraceptive Procedures	
IUD Insertion	67%
Family Planning Counseling	67
Provision of Oral Contraceptives	65
Minilaparotomy	56
Laparoscopic Tubal Ligation	54
Provision of Barrier Methods	45
Provision of Injectable Contraceptives	37
Obstetric/Gynecologic Procedures	
Normal Delivery	60
Cesarean Section	59
Diagnostic Laparoscopy	45
Tubal Reanastomosis	14

1. Number in parentheses denotes the number of respondents included in the denominator of each percentage.

A relatively high proportion of respondents, 59%, reported that laparoscopic equipment had been installed at their institution. Of the respondents who reported having equipment at their institution, only 3% stated that it was not working at the time they completed the survey. Most, 89%, reported that there was a staff member at their institution to clean and maintain the equipment after each use, and 47% reported that they had access to a technician who could repair the equipment. Thirty-seven percent of all the respondents with equipment at their institution reported that there had been some problems with its operation. The problems most frequently cited were bursting light bulbs, fogging and breaking of offset laparoscope lenses, problems with the Falope-Ring applicator or uterine cannula, CO_2 leaks, and unavailability of some small incidental parts.

Respondents were asked to report on their teaching, training, or supervisory responsibilities (Table 30). The respondents from all four regions most frequently reported instructing nurses or nurse-midwives. Participants from Asia reported teaching or supervising equal proportions (44%) of physicians, medical students, and medical school graduates. Similarly, 32% of the respondents from Latin America reported teaching or supervisory responsibilities for the following three types of health personnel: physicians, medical students, and nursing students. Conversely, the respondents from the African region appeared to have taught or supervised more nursing and auxiliary health workers (64% and 57%, respectively) than any other type of health care personnel. Finally, Near Eastern participants reported training about the same percentage of physicians (35%) and nursing students (32%).

Trainees who indicated on the survey that they taught others were asked which concepts and techniques they included in their teaching and training from those listed in Table 31. The most commonly taught concept was high-risk pregnancy; an average of 55% of the respondents reported including the concept in their lectures. Overall, a slightly higher proportion of respondents reported teaching the concept of anatomy and physiology than those who reported teaching management of infertility. However, participants from the Near East stated that they emphasized infertility.

As shown in Table 31, there were variations among the types of clinical procedures taught across world regions. Regional differences reflected, in part, underlying differences in the emphasis placed on certain obstetric and gynecologic procedures. More respondents from Asia and Latin America provided instruction in laparoscopic techniques, such as tubal ligation, and diagnostic laparoscopy, than the respondents from Africa and the Near East. A higher proportion of African participants, 68%, reported including IUD insertion in their curriculum than did the attendees from the other regions. Few respondents included tubal reanastomosis as a part of their clinical instruction.

Sixty-eight percent of the respondents said that they worked with someone trained by JHPIEGO. Most, 92%, felt that the course helped them work more effectively with other health professionals. Only 38% of the respondents reported that there had been any changes since the course in the way responsibilities were shared among the health professionals with whom they work. Eighty-six percent reported that they felt there had been a greater emphasis on patient counseling since the course.

Respondents were asked to rate the courses they took in terms of the topics they considered to be the most interesting and most useful, and the least interesting. In response to what were the most useful and most interesting topics, the respondents mentioned the following: clinical uses of the laprocator, family planning, nonsurgical contraception, and reproductive health. It should be noted, however, that some of the trainees felt that all the topics were useful as well as interesting. When considering

Table 30

PERCENTAGE OF RESPONDENTS WITH TEACHING RESPONSIBILITIES BY TYPE OF HEALTH PERSONNEL, BY REGION

Type of Health Personnel	Region			
	Africa	Asia	Latin America	Near East
Physicians	21%	44%	32%	35%
Medical Students	31	44	32	17
Medical School Graduates	28	44	24	20
Nurses/Midwives	64	52	40	42
Nursing Students	51	38	32	32
Operating Room Technicians	32	36	16	10
Auxiliary Health Workers	57	39	30	10
Other Health Personnel	30	13	11	6

TABLE 31

PERCENTAGE OF RESPONDENTS WHO PROVIDED INSTRUCTION, BY TOPIC OF INSTRUCTION, BY REGION

	Region			
	Africa	Asia	Latin America	Near East
Concepts				
High Risk Pregnancy	74%	55%	47%	44%
Anatomy and Physiology	63	53	48	30
Management of Infertility	62	46	48	37
Clinical Skills				
IUD Insertion	68	49	54	52
Laparoscopic Tubal Ligation	16	60	50	40
Minilaparotomy	37	58	50	30
Diagnostic Laparoscopy	14	53	42	43
Tubal Reanastomosis	14	21	13	5

the topics they felt to be the least interesting, the respondents listed: reproductive health, family planning, surgical contraception, statistics, and demographics. It is interesting to note that two of the topics, reproductive health and family planning, were rated by some trainees as being both useful and interesting, while others thought the reverse.

CONCLUSION

In their overall rating of the courses, the respondents stated that there had been improvements in their professional activities which they attributed to participation in this program. In addition, 66% of the respondents felt confident in their ability to train others to perform the procedures practiced during their clinical training. Furthermore, participants stated that they had shared the materials obtained during their courses with other health care providers. Sixty-eight percent of the participants felt that their courses were most beneficial and indicated that they would recommend participation in a JHPIEGO-supported training program to their colleagues.

They felt that reproductive health topics were covered very well in the course, and they were even more enthusiastic in their ratings of the materials on family planning. Laparoscopy was the topic cited as being the most interesting and the most useful to the respondents. With regard to the clinical training component of the course, over 75% of respondents reported that they currently perform or assist with the procedures practiced during their clinical training, and that they felt this training was adequate. The majority (71%) also reported that they were still able to dismantle, clean, and assemble laparoscopic equipment at the time they filled out the survey.

Finally, the majority found that they are better able to work more effectively with other health professionals since their course participation. Thus, these responses to the Annual Participant Survey provide an indication of the success of the regional and national in-country training programs in meeting their objective of improving reproductive health care in developing countries through the upgrading of the knowledge and skills of health care professionals.

APPENDIX

AID REGIONAL DESIGNATION OF COUNTRIES

AFRICA

1. Algeria
2. Benin
3. Botswana
4. Burkina Faso
5. Burundi
6. Cameroon
7. Cape Verde
8. Central African Republic
9. Chad
10. Comoro Islands
11. Congo
12. Ethiopia
13. Gabon
14. Gambia
15. Ghana
16. Guinea
17. Guinea Bissau
18. Ivory Coast
19. Kenya
20. Lesotho
21. Liberia
22. Madagascar
23. Malawi
24. Mali
25. Mauritania
26. Mauritius
27. Mozambique
28. Niger
29. Nigeria
30. Rwanda
31. Senegal
32. Seychelles
33. Sierra Leone
34. Somalia
35. South Africa
36. Sudan
37. Swaziland
38. Tanzania
39. Togo
40. Uganda
41. Zaire
42. Zambia
43. Zimbabwe

ASIA

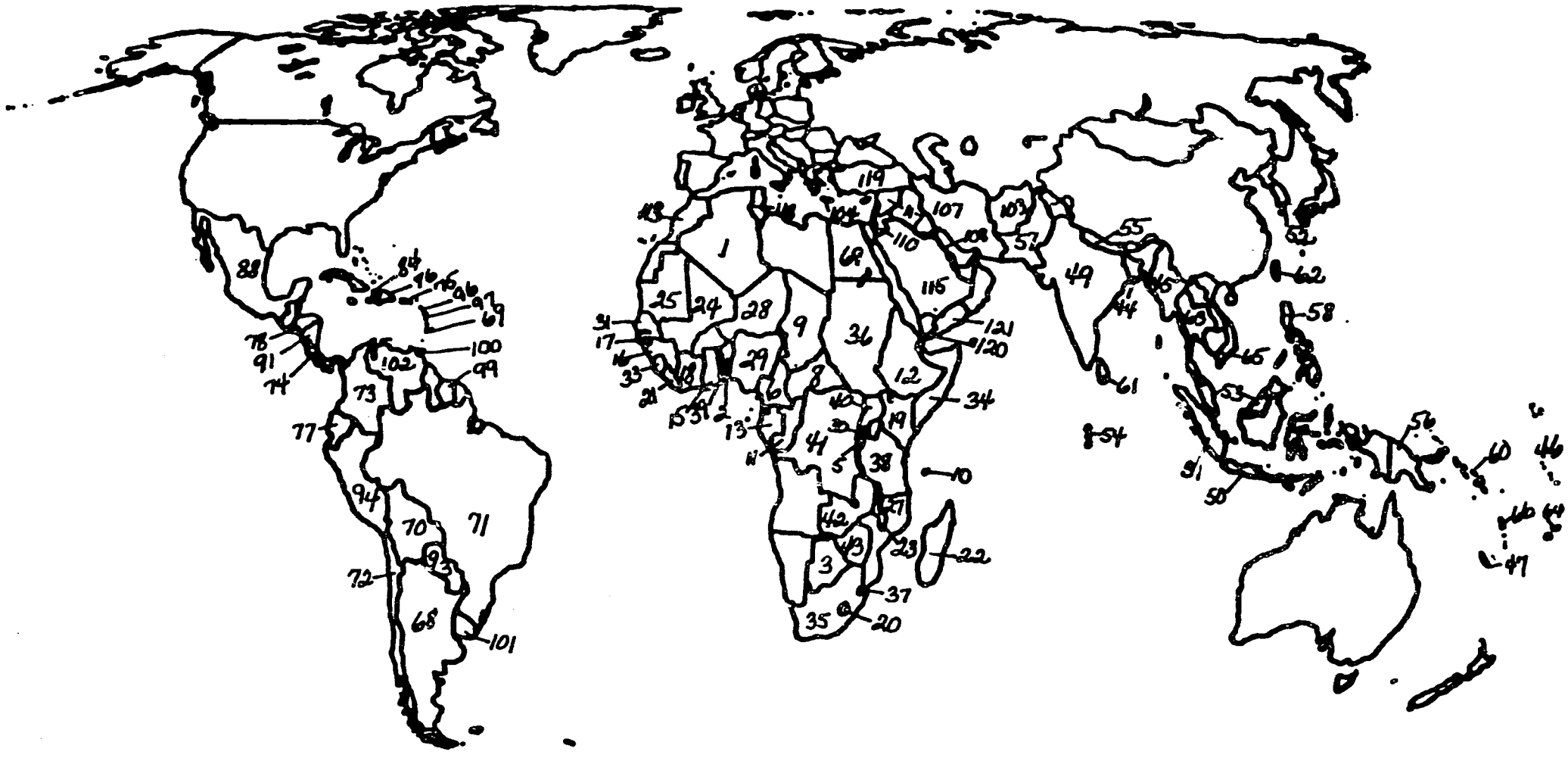
44. Bangladesh
45. Burma
46. Cook Islands
47. Fiji
48. Hong Kong
49. India
50. Indonesia
51. Khmer Republic
52. Korea
53. Malaysia
54. Maldives
55. Nepal
56. Papua New Guinea
57. Pakistan
58. Philippines
59. Singapore
60. Solomon Islands
61. Sri Lanka
62. Taiwan
63. Thailand
64. Tonga
65. Vietnam
66. Western Samoa

Latin America

67. Antigua
68. Argentina
69. Barbados
70. Bolivia
71. Brazil
72. Chile
73. Colombia
74. Costa Rica
75. Dominica
76. Dominican Republic
77. Ecuador
78. El Salvador
79. French Guiana
80. Grenada
81. Guadeloupe
82. Guatemala
83. Guyana
84. Haiti
85. Honduras
86. Jamaica
87. Martinique
88. Mexico
89. Montserrat
90. Netherlands Antilles
91. Nicaragua
92. Panama
93. Paraguay
94. Peru
95. St. Kitts
96. St. Lucia
97. St. Martin
98. St. Vincent
99. Suriname
100. Trinidad
101. Uruguay
102. Venezuela

NEAR EAST

103. Afghanistan
104. Cyprus
105. Egypt
106. Greece
107. Iran
108. Iraq
109. Italy
110. Jordan
111. Kiribati
112. Lebanon
113. Morocco
114. Portugal
115. Saudi Arabia
116. Spain
117. Syria
118. Tunisia
119. Turkey
120. Yemen Arab Republic
121. Yemen, Democratic



COUNTRIES REPRESENTED IN JHPIEGO PROGRAMS. NUMBERS REFER TO LISTING ON FACING PAGE.

FISCAL REPORT

Recap A is a combined summary report of AID Grant pha-G-1064 and Cooperative Agreement DSPE CA-0083 through the current authorized period. Grant pha-G-1064 was completed as of September 30, 1984. The Cooperative Agreement is still active and is expected to be funded through September 30, 1986.

Recaps B through F are summary and detail reports by line item of Cooperative Agreement DSPE CA-0083.

RECAP A

AID GRANT pha-G-1064 AND COOPERATIVE AGREEMENT DSPE CA-0083

	Disbursements 07-01-74 thru 09-30-84	Disbursements 10-01-84 thru 09-30-85	Proj. Disbursements & Unliquidated Obligations 10-01-85/12-31-85	TOTAL
Central Costs	12,669,834	1,902,116	810,361	15,382,311
Planning/Development	1,029,189	178,635	1,005,067	2,212,891
Equipment Costs	10,779,369	328,644	1,761,191	12,869,204
Training Costs	20,720,340	3,748,646	8,008,269	32,477,255
TOTAL	$45,198,732	$6,158,041	$11,584,888	$62,941,661

RECAP B

AID GRANT DSPE CA-0083

	Disbursements 09-01-80 thru 09-30-84	Disbursements 10-01-84 thru 09-30-85	Proj. Disbursements and Unliquidated Obligations 10-01-85/12-31-85	TOTAL
Central Costs	6,503,460	1,902,116	810,361	9,215,937
Planning/Development	1,029,189	178,635	1,005,067	2,212,891
Equipment Costs	1,627,414	328,644	1,761,191	3,717,249
Training Costs	10,863,646	3,748,646	8,008,269	22,620,561
TOTAL	$20,023,709	$6,158,041	$11,584,888	$37,766,638

IN TRAINING
5 LINE ITEMS:

PARTICIPANT COST
TRAVEL/PER DIEM (T37)

NJ-1 AGREEMENT OBGYN/JHPIEGO = BALTIMORE

EDUC. MATERIALS

FIELD TRAINING
CAP TRAINING IN REGIONAL
EVALUATION OF

NATIONAL + REGIONAL PROGRAMS
FOR TRAINING

37

RECAP C

AID GRANT DSPE CA-0083

CENTRAL COSTS

	Disbursements 09-01-80 thru 09-30-84	Disbursements 10-01-84 thru 09-30-85	Proj. Disbursements and Unliquidated Obligations 10-01-85/12-31-85	TOTAL
Salaries	3,666,943	1,069,814	479,716	5,216,473
Fringe Benefits	739,024	252,305	86,843	1,078,172
Supplies	159,864	21,937	61,993	243,794
DOMESTIC Travel	20,778	6,870	4,057	31,705
Office Equipment	35,443	3,361	13,480	52,284
Telecommunications	459,040	86,312	60,613	605,965
Space Costs	376,116	114,558	45,607	536,281
Other Direct	249,247	106,535	(35,975)	319,807
Indirect Cost	797,005	240,424	94,027	1,131,456
TOTAL	$6,503,460	$1,902,116	$810,361	$9,215,937

RECAP D

AID GRANT DSPE CA-0083

PLANNING AND DEVELOPMENT

	Disbursements 09-01-80 thru 09-30-84	Disbursements 10-01-84 thru 09-30-85	Proj. Disbursements and Unliquidated Obligations 10-01-85/12-31-85	TOTAL
Consultants	33,663	3,880	27,365	64,908
Travel	641,675	83,142	326,209	1,051,026
Audit Fees	61,000	42,000	470,000	573,000
Conference Cost	34,463	15,004	8,457	57,924
Publications	131,989	24,595	37,690	194,274
Indirect Cost	126,399	10,014	135,346	271,759
TOTAL	$1,029,189	$178,635	$1,005,067	$2,212,891

RECAP E

AID GRANT DSPE CA-0083

EQUIPMENT COSTS

	Disbursements 09-01-80 thru 09-30-84	Disbursements 10-01-84 thru 09-30-85	Proj. Disbursements and Unliquidated Obligations as of 10-01-85/12-31-85	TOTAL
Procurement	1,235,684	245,828	1,521,084	3,002,596
Repairs	15,344	- 0 -	29,376	44,720
Freight	194,885	39,712	60,233	294,830
Warehousing	151,871	37,730	136,721	326,322
Indirect Cost	29,630	5,374	13,777	48,781
TOTAL	$1,627,414	$328,644	$1,761,191	$3,717,249

RECAP F

AID GRANT DSPE CA-0083

TRAINING COSTS

	Disbursements 09-01-80 thru 09-30-84	Disbursements 10-01-84 thru 09-30-85	Proj. Disbursements and Unliquidated Obligations 10-01-85/12-31-85	Total
Participant Cost	2,807,003	430,952	572,565	3,810,520
Field Training	299,758	111,539	325,001	736,298
Educational Materials	761,673	277,185	198,870	1,237,728
Maintenance Agreements	261,401	81,557	191,303	534,261
Natl./Regional Programs	4,570,566	2,232,596	4,663,985	11,467,147
Clinical Practice	261,111	9,765	189,088	459,964
U.S. Training Centers	905,684	195,438	196,533	1,297,655
Direct Support	720,909	289,886	1,311,535	2,322,330
Special Projects	275,541	119,728	359,389	754,658
TOTAL	$10,863,646	$3,748,646	$8,008,269	$22,620,561

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