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Education in Gynecology and Obstetrics**



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Services Unit

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I. INTRODUCTION

JHPIEGO is an educational program which is dedicated to improving the health of women and children throughout the developing world. It attempts to achieve this goal by sponsoring activities designed to upgrade the knowledge, skills, and technology available to all types of reproductive health professionals in developing countries. Where appropriate, training programs are conducted, educational materials distributed, equipment donated and maintained, and collaborative agreements established with government and health officials. Through these endeavors JHPIEGO strives to institutionalize the practice and teaching of new reproductive health skills, prepare personnel to provide comprehensive reproductive health services, and increase the number of qualified professionals and specialists in the field of reproductive health.

The objectives of JHPIEGO's educational programs are to improve knowledge of reproductive health, management capabilities, technical skills, and the educational leadership abilities of health professionals. The discussions held and educational materials provided during the courses help to inspire and renew a commitment to the goals of family planning. Courses which are offered include general reproductive health care, management of infertility, microsurgery, administration, and academic skills. The health professionals who are trained in these courses come from many different areas of the world with diverse socio-economic, cultural, and health conditions. JHPIEGO remains aware of and adaptable to these varying conditions and is receptive to the many needs expressed by the course participants. There is an emphasis on highly personalized instruction in essential technical skills to prepare trainees for the provision of instruction and services in their own countries. Curricula are revised to meet changing needs and to reflect technological developments.

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 JHPIEGO initiatives, about new institutions which are being mobilized, about the use of equipment and other program resources, and about 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. These methods include site visits to course graduates at their home institutions to assess their personal situation and progress since the course, and correspondence with JHPIEGO trainees and consultants. Perhaps the most systematic method of evaluation available to JHPIEGO, however, is the use of follow-up mail surveys designed specifically for participants of JHPIEGO's courses.

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 provides a forum for specific details on the activities of trainees, the problems they encounter, suggestions for expansion and improvement of the program, as well as requests directed 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 different surveys is sent to most JHPIEGO trainees depending upon the type of course taken. Participants of U.S.-based courses are sent surveys tailored to the course they attended a minimum of six months after their course participation. Those who attend the Advances in Reproductive Health for Physicians or the Promoting Reproductive Health through Management of Sexually Transmitted Diseases course are sent the clinician survey. Participants in the Management of the Infertile Couple course or the Academic Skills for Medical School Faculty in Reproductive Health course are also sent the clinician survey, but they receive in addition a questionnaire insert which addresses topics specific to one of these courses. Trainees who take the Advances in Reproductive Health for Administrators of Family Health and Family Planning Programs are sent the administrator survey. In contrast, all participants of in-country courses, with the exception of medical students and conference attendees, are sent the annual participant survey. 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 US-based courses, as well as results from the annual participant surveys received from in-country programs based in Brazil and the Philippines. Section II is devoted to evaluation of US-based training, while Section III addresses some components of the evaluation of in-country training.

Section II is divided into six subsections. Subsection II.A contains a summary of the postcourse evaluations by participants of courses held at the JHPIEGO International Training Center during fiscal year 1983. The administrator survey will be discussed in Subsection II.B. This subsection covers findings from the follow-up

survey sent to health professionals who attended Advances in Reproductive Health for Administrators of Family Health and Family Planning Programs courses at the JHPIEGO International Training Center from April 1976 to the end of December 1982. Subsection II.C is devoted to findings from the clinician survey of physicians participating in the Advances in Reproductive Health for Physicians, the Management of the Infertile Couple, the Promoting Reproductive Health through Management of Sexually Transmitted Diseases, and the Academic Skills for Medical School Faculty in Reproductive Health courses. This survey has been sent to those trainees whose courses were held from November 1972 to December 1982. Specific results concerning participants of the Management of the Infertile Couple and Academic Skills for Medical School Faculty in Reproductive Health courses appear in two subsections for each type of course. Findings broken down by type of course of participation which are derived from the clinician survey data are included in the discussion on the clinician survey in Subsection II.C. Separate discussions of these courses, concerned primarily with the special inserts sent with the clinician survey, appear in Subsections II.D and II.E. Subsection II.D covers findings from the infertility insert for the 128 respondents trained in the Management of the Infertile Couple course who returned this form to JHPIEGO. Subsection II.E addresses the academic skills insert returned by 36 of these course participants. Finally, Subsection II.F is devoted to a review of all the comments and suggestions included in the surveys received during FY'82. This subsection provides a more personal review of the JHPIEGO program by participants. It is a unique opportunity to qualitatively evaluate these courses and to gain insight into issues not easily captured in the quantitative analyses of Subsections II.B, II.C, II.D, and II.E.

Section III is divided into three subsections. The introduction in Subsection III.A contains a brief description of the annual participant survey, including a discussion on how it is conducted. This survey is the first comprehensive tool developed by

JHPIEGO to systematically evaluate all its in-country training programs for physicians, paramedics, and anesthetists. Implementation of this survey is an important step for JHPIEGO in the process of gaining the necessary feedback on the effectiveness of each of these projects. Subsection III.B is devoted to the results reported by 72 annual participant survey respondents who were trained in the Philippines in-country program between June, 1981 and September, 1982. Subsection III.C addresses findings compiled from responses to a Portuguese version of the annual participant survey as reported by 193 responding participants of the Brazil in-country program trained between January, 1980 and August, 1982.

SECTION II: EVALUATION OF THE U.S.-BASED TRAINING PROGRAM

II.A. COURSE EVALUATION SUMMARY FOR FISCAL YEAR 1983

Introduction

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 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. These courses are conducted at the Johns Hopkins Educational Center in Baltimore by a small staff known as the JHPIEGO International Training Center.

This fiscal year, 203 trainees participated in eleven courses offered at the Johns Hopkins Educational Center. Twenty-three physicians participated in one of the two sessions of Academic Skills for Medical School Faculty in Reproductive Health, both offered in English. The Management of the Infertile Couple course was offered twice, in Spanish and English, to a total of 50 participants. There were eleven participants in the Microsurgery for Tubal Reconstruction course which was offered twice, in French and English. Forty-seven participants were trained in either the French or English session of Promoting Reproductive Health through the Management of Sexually Transmitted Diseases course. Finally, the Reproductive Health for Administrators of Family Health and Family Planning Programs course was offered three times, in English, Portuguese and French, to a total of 72 participants.

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

Summary of the Academic Skills Course Evaluation

The JHPIEGO Academic Skills for Medical School Faculty in Reproductive Health Course, held 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 a medical school faculty. Included in the course are refresher seminars in reproductive health care, training and research skills required by medical investigators for clinical studies, and lectures in teaching skills. Emphasis is placed on preventive health care, epidemiological and biostatistical methods, and effectiveness in the classroom.

Two courses in Academic Skills, both in English, were offered in 1983. The first course, from February 7th through March 4th, included 12 participants, and the second course, from May 9th through June 3rd, included 11 participants.

To provide an indication of the usefulness of the course, the respondents rated the course objectives and its overall organization on their postcourse evaluation forms. Other areas covered on the course evaluation form include an assessment of the presentation of course topics, and inquiries as to which lectures should be added, which should be deleted, and which were most helpful. Also included was a rating on the helpfulness of the audio-visual workshop. For almost every question there was a total response on the part of participants, numbering 23 in all.

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 very favorable, with most presentations receiving a good or an excellent rating. No respondents felt that any of the topics were handled poorly, and only two of the topics, biostatistics and epidemiology, received any average ratings, and these by only a small percentage of participants. Almost half of the trainees, 48%, felt the overview of reproductive health had been

excellently handled, and 52% felt it had been handled well. Epidemiology received similar ratings, with 52% rating the course presentation as excellent, 39% as good, and 9% as average. The teaching skills portion of the course was very well received, with 78% of participants rating this topic as excellent, and 22% as good. Ratings for biostatistics were less enthusiastic: 35% felt the presentation was excellent, 43% felt that it was good, and 22% that it was average.

To provide information which could be of further use to the course, participants were asked to specify other major teaching areas or lectures to be included. A majority of the participants, 57%, seemed content with the schedule as is, and 43% suggested that either other lectures be included, or that existing lectures be expanded. Specific suggestions were to space out the teaching skills material, and to add a presentation on sexually transmitted diseases, in addition to sexual education discussions tailored to the specific countries of the participants. More lectures on clinical problems were requested, as well as lectures on the principles of patient education. The presentation on adolescent health was thought to be of great value, but it was suggested that the addition of audio-visual aids would have improved it even more. One respondent suggested attending grand rounds during scheduled class periods, and another that biostatistics would have been more effective if it had been scheduled at the beginning of the course.

Responses were mixed as to which topics should be deleted and which were most useful to participants in their teaching. In response to which lectures should be deleted from the course, a number of respondents mentioned social environment and reproduction. Also mentioned were lectures on trends in obstetrical care, practical exercises in ob/gyn research, ovarian cancer, the lecture on adolescent pregnancy, and epidemiology. Conversely, epidemiology was selected by two respondents as the most useful topic. All the major topics covered in the course - biostatistics, epidemiology, reproductive health and teaching skills, were mentioned as very useful to participants

in their teaching, although it was suggested that the biostatistics section should be simplified. Of special interest were lectures on teaching common clinical problems in obstetrics and gynecology, practical applications of ob/gyn research, and teaching skills.

In rating the workshop on using and preparing audio-visual media for medical presentations, 70% of the participants felt it was very helpful, 26% that it was helpful, and the remaining 4% gave it only an average rating. Comments about the workshop ranged from very enthusiastic, with one respondent expressing an intention to utilize more audio visuals in the future, to practical suggestions for improvement. One respondent suggested that more practice with slide preparation would be beneficial, but another felt that the presentation should not have been based on such sophisticated technology since for most of the trainees slide-making is not possible.

Comments in response to what was best liked about the course were very enthusiastic, especially as regards 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, biostatistics, and practical applications of Ob/Gyn research.

In response to what was least liked about the course, some participants mentioned the lectures on social environment and human reproduction. Others questioned the relevancy of parts of the epidemiology and biostatistics lectures to their needs, especially the mathematical aspect of biostatistics. It was suggested that biostatistics not be placed at the end of the course and also that the lectures on biostatistics were too complicated.

The response to the organization of the course was very positive. A significant 91% of the participants felt the overall organization was excellent, 9% felt it was good. The same was true of what was learned from the course: 78% of the

participants felt they had learned a great deal and 22% felt they had learned a moderate amount. The overall rating of the course was also very high, with 74% of the respondents rating it as excellent, and 26% as good.

There were a number of additional comments on course content and administration. The lectures in biostatistics were of particular interest. It was suggested that because of the difficulty of the material, these lectures should be expanded and spread throughout the seminar, or, as previously mentioned, that these lectures be scheduled at the beginning of the course. There was also a request to expand the epidemiology segment of the course, and to increase the liaison between biostatistics and epidemiology, providing more exercises (including programmed learning) in both. Additional lectures on research preparation were requested. There were also a number of requests for more lectures on clinical activities, and a suggestion to increase the duration of the course to five weeks.

In summary, responses to the Academic Skills for Medical School Faculty in Reproductive Health postcourse evaluation were in general very favorable. There was agreement on the part of participants as to the excellence of course objectives, content, and execution. They were content with overall organization of the course and the amount of material they learned. Participants exhibited a good deal of enthusiasm and appreciation for the efforts and contributions of all the JHPIEGO staff.

Summary of the Management of the Infertile Couple Course Evaluation

The JHPIEGO course for Management of the Infertile Couple, held since fiscal year 1980, is designed for physicians whose special interest is the diagnosis and treatment of infertility. An emphasis is placed on reproductive health care, including topics on contraceptive use and maternal child health, and current information is provided on factors which affect and cause infertility.

Two courses in Management of the Infertile Couple were offered in 1982-1983. The first course, from November 29 through December 10, 1982 included 24 participants, and the second, from September 12 through the 23rd, included 26 participants, for a total of 50 participants.

To provide an indication of the usefulness of the course, the participants rated the course objectives and its overall organization on their postcourse evaluation forms. Other areas covered on the course evaluation include an assessment of the presentation of course topics and an inquiry as to which lectures should be added, which should be deleted, and which were most helpful. Also included was a rating on the helpfulness of the audio-visual workshop. In almost every case there was a total response on the part 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 infertility management and the practical aspects of infertility management. Participant ratings in this regard were very favorable, especially for the theoretical basis of infertility, which 96% of the respondents felt had been handled very well. The remaining 4% felt it had been handled moderately well. Over half the trainees, 55%, felt the practical aspects of infertility management had been handled very well, and 45% felt it had been handled moderately well. None of the respondents felt that either presentation was poorly presented. Furthermore, almost all of the respondents, 96%, felt that the topics for lectures were well selected. Of the remaining 4% it was suggested that more clinical aspects on the management of the infertile couple should be included in the course presentation.

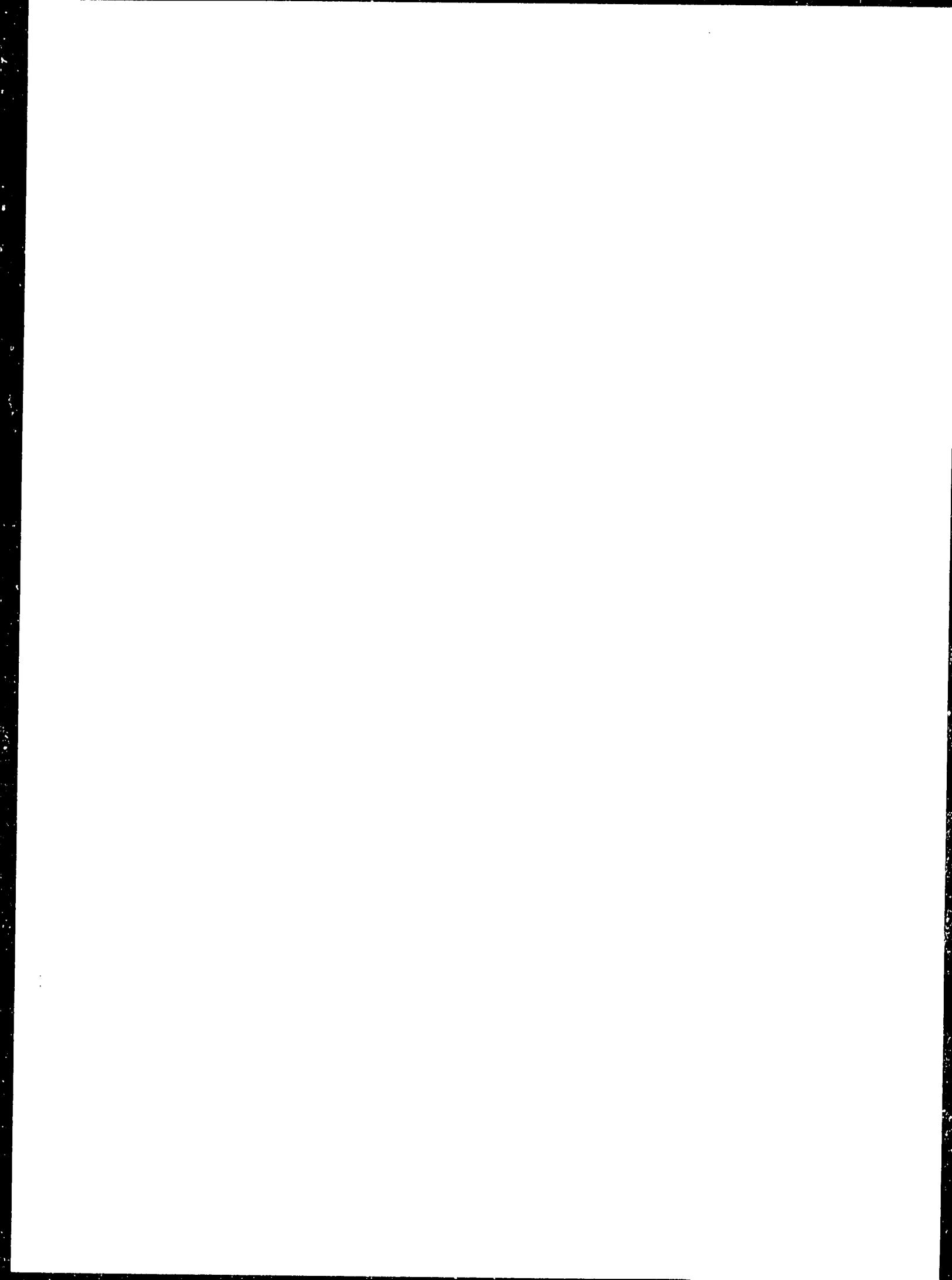
To provide information which would be of further use to the course, participants were asked to specify other major teaching areas or lectures to be included. A majority of the respondents, 52%, seemed content with the schedule as is, and the

remaining 48% suggested that either other lectures be included, or that existing lectures be expanded. Specific suggestions were to add lectures on gyn-endocrinology, immunology, microsurgery, the infectious aspects of infertility, the physical aspects of infertility, and infertility problems common in developing countries, especially tuberculus salpingitis. Also requested were lectures on the management of women with habitual abortion problems, and lectures on menstrual disorders, especially amenorrhea, and on the use of oral contraceptives and IUD's. There were many requests for more clinical practice, and one participant suggested providing a model on the procedures of an infertility clinic.

Only a small number of participants, 12%, felt that any topics should be deleted. Those mentioned were contraception, human sexuality and the sexual education lecture, population problems and some family planning topics, and the discussion on laparoscopic equipment.

There were a number of responses as to which lectures would be most useful to participants in their practice. A large number of respondents mentioned microsurgery, endocrinology, management of the infertile couple, stress and infertility, and diagnostic laparoscopy, including equipment maintenance. Also mentioned were surgical management of the infertile couple, pelvic inflammatory disease and infertility, infertility and reproductive health, sexually transmitted diseases and infertility, and pathology and the management of the infertile male. Also of interest were the lectures on the investigations of the infertile couple, the selection of patients for a particular therapy, and the lecture concerning principal indications for tubal surgery. Finally, the lectures on hirsutism, endometriosis, and the use of prolactin in infertility were mentioned as useful and some respondents suggested that all of the topics were very useful.

Participants were also asked to respond as to which topics would be least useful to them in their practice. Again, some respondents felt that all the topics would be



In response to what was least liked about the course, it was suggested that the course schedule was too compact, and that there was a lack of practical exposure and surgical practice. One of the respondents felt that the lecture on sexual behavior was not applicable to his country's needs, and the presentation on male infertility was mentioned as the least liked. There was also a request for more handouts.

In rating the workshop on using and preparing audio-visual media for medical presentations, 58% of the respondents felt that the presentation was sufficient and did not need to be expanded. Those that suggested expansion requested more clinical and scientific films, more visual aids on operative techniques relating to the management of the infertile couple, and more case discussions of patients with infertility problems. There was also a request to view surgery by closed circuit and a request for hysteroscopic procedures.

Of the 17% of respondents who felt that material should be deleted from the audio-visual aids presentation, respondents suggested that the film "The Cheerful Revolution" could be replaced by a technical film, or that it could be used in other courses. It was suggested that the videotape on hysterectomy and the pelvic exam for contraception film could also be deleted.

Response to the overall organization of the course was very positive. A high percentage of respondents, 90%, felt that the course organization was excellent and 10% felt that it was good. None of the respondents chose a rating of average or below in rating overall course organization.

The same was true of the overall rating for the course. Again, a high percentage of respondents, 77%, rated the course as excellent and the remaining 23% rated it as good. There were no ratings of average or below average for the overall course rating.

In this vein, none of the respondents felt that the course should be discontinued. Many respondents, 69%, felt that it should be continued without modification and 31% that it should be continued with modifications. Suggestions included a request for

smaller class sizes, and a request to view more advanced technology, including clinical observation, as many respondents are from developing countries. It was also suggested that more time be devoted to microsurgery, since tubal factors are the greatest cause of infertility in developing countries. In addition, many respondents felt that the course organization and overall structure were excellent, and the interchange between classmates and speakers was highly valued. The course was appreciated as a great service to developing countries.

There were a number of additional comments on course content and administration, most of which expressed a large amount of gratitude and appreciation for the course. For the practical aspects, it was suggested that more time should be allotted for the clinical aspect of the course and its discussion, and for the surgical aspect, and that more topics should be included on the practical aspects of infertility management. There was a request to update the videotapes and two participants suggested planning a question and answer period at the end of the lectures. There was much praise for the course content and administration, and for the attitude of the JHPIEGO staff as a whole.

In summary, responses to the Management of the Infertile Couple postcourse evaluation were very favorable. Participants were in agreement as to the overall excellence of course objectives, content, and execution. They were very appreciative of the overall organization of the course, the amount of material learned, and the efforts and consideration of all the JHPIEGO staff.

Summary of the Management of Sexually Transmitted Diseases Course Evaluation

The JHPIEGO course in Promoting Reproductive Health through the Management of Sexually Transmitted Diseases, offered in fiscal year 1983, emphasizes the role of family planning as a possible preventive measure for sexually transmitted diseases (STDs). The first course, from October 27 through November 5, 1982, was offered in

French and included 21 participants, and the second course, from April 18 through the 29, 1983, was offered in English and included 26 participants.

Respondents were provided with a postcourse evaluation form to rate course objectives and overall organization. Other areas covered on the course evaluation form include an assessment of the presentation of course topics, and inquiries as to which lectures should be added, which should be deleted, and which were most helpful. Also included was a rating on the helpfulness of the audio-visual workshop. For almost every question there was nearly a total response on the part of participants, numbering 47 in all.

Participants were first asked to assign a rating from poor to excellent on how well they felt individual course presentations had been handled. Presentations included in this rating were those on the theoretical basis of STD management, the practical basis of STD Management, and the role of family planning services in detecting, treating and preventing STDs. Participant ratings in this regard were very favorable, with most presentations receiving a good or an excellent rating. Only a very small percentage of respondents felt that any of the topics were poorly handled. Almost all of the participants, 91%, felt that the theoretical basis of STD management had been handled very well, and 9% felt it had been handled moderately well. Ratings for the practical aspects of STD management were less enthusiastic, with 38% of the respondents rating the presentation as excellently handled and 56% as handled well. Only 6% of the respondents felt the presentation was poorly handled. Ratings for the role of family planning services in detecting, treating and preventing STD were also good: 45% felt the presentation had been excellently executed, 48% that it had been presented well, and only 7% felt that it had been poorly presented.

Participants were asked if they felt that the course topics for lectures had been well selected. A very large number of participants, 91%, felt that the topics had been selected well. The remaining 9% felt that there was too much overlap, especially in

the subject matter on herpes, gonorrhoea, and genital ulcers, and suggested that the various presentations could be better coordinated. There was also a request to include a discussion of treponematosi and late syphilis as course topics.

Participants were then asked to specify other major teaching areas or lectures to be included. A majority of the respondents, 56%, seemed content with the schedule as is, and 43% suggested that other lectures should be included. Specific suggestions were to include more lectures on diseases prevalent in developing countries, and also on the evaluation of male and female infertility. There were a number of requests from French-speaking participants for lectures on dermatology and STDs, including parasitic dermatological diseases which are not transmitted sexually (lice, scabies, etc.) and for lectures on dermatology and pregnancy. Practical clinical sessions were suggested, along with a plan to carry out a specific study of STDs, including the basics of medical statistics. Also requested were lectures on pregnancy complications of grand multiparas and on condyloma acuminatum.

Participants were also asked to specify which topics could be deleted from the course presentation. Of the 29% of the respondents who felt some topics could be deleted, suggestions were to revise the lab sessions, either deleting them altogether or, alternatively, revising them to include a demonstration of equipment for lab techniques. Suggested topics which respondents thought could be deleted included the history of STDs and the lecture on doctor-patient relationships. One respondent felt that it is impossible to teach doctor-patient relationships in a didactic course. On the other hand, another respondent felt that this lecture would be very useful to him in his practice.

Responses as to which lectures would be most useful to participants in their practice were varied. A large number of respondents mentioned the lectures on pelvic inflammatory diseases and on vaginitis and cervicitis, as well as laboratory experience with practical exercises. Also mentioned were the lectures on herpes, gonorrhoea,

syphilis, acquired immune deficiency (AIDs), chlamydia, and nongonococcal urethritis. Some respondents also chose the lectures on the history of STDs, on the organization and administration of an STD control program, and especially on the integration of STD control with family planning as the most useful. In addition, respondents mentioned the lectures concerning homosexuality, dermatology and STDs, laparoscopy, and consulting and interviewing techniques. A number of respondents felt that all of the lectures would be very useful to them in their practices.

Conversely, the lectures on herpes, AIDs, lab techniques, STDs and family planning, and again on doctor-patient relationships were also chosen by some respondents as those which would be least useful to them in their practices, showing a divergence of opinion among respondents. Many respondents also chose the update on STD lab techniques as being the least useful, and some mentioned the update on male sterilization and the development of research studies on STDs.

In regard to what was learned from the course as a whole, comments were very favorable, with 83% of the respondents feeling that they had learned a great deal and 15% that they had learned a moderate amount. Areas of particular interest cited were those dealing with modern methods of diagnosis and treatment of STDs, and, specifically, the information concerning the approach to genital lesions in women. Other respondents appreciated the opportunity to exchange experiences with colleagues, and to receive any information helpful in the establishment of STD treatment programs in their own countries. One respondent suggested that the program in general was too full and could be simplified.

In response to what was best liked about the course, participants responded very favorably to the re-evaluation of reproductive health; specifically, the treatment of STDs as related to family planning programs. Presentations mentioned in particular were epidemiological aspects and treatments, the presentations regarding herpes and chlamydia (as these were unknown to one respondent), and the treatment of STDs as

related to genital infections and sterility. In general, participants were very appreciative of the overall course organization, the enthusiastic and knowledgeable attitude of the lecturers, and especially, of the exchange of ideas between staff and participants and between the participants themselves. Also appreciated were the use of slides and handouts in presentations, the panels and discussions, the diversity of topics covered, and the authority with which the material was presented.

In response to what was least liked about the course, there was agreement among many respondents that the course was too heavily scheduled, and, again, that there was too much overlap of some subject matter -- the discussions of chlamydia and herpes in particular. One respondent felt that the bacteriological lecture was too long and thus, not very practical, and a number of respondents disliked the presentation of lab techniques. Also mentioned as least liked were the panel discussion on doctor-patient interaction, the films, and the amount of per diem provided.

Respondents were also asked to comment on the audio-visual aids presentation. In response, 57% of the participants felt the presentation did not need expansion. Of the remaining 43%, suggestions for expansion included requests for STD slides to be provided to participants, and there were more requests for additional information (in the form of slides) on STDs and dermatology, and on the diagnosis of STDs. Also requested were films on the practical aspect of the course, i.e., gram techniques, cultures, and serology, a demonstration of wet prep mounts under the microscope, and photographs of dermatological lesions.

Most respondents, 95%, did not feel that any part of the audio-visual presentation should be deleted; one respondent suggested deleting the film "Pelvic Exam for Contraception".

Participants' response to the overall organization of the course was very positive. On a scale from poor to excellent, 60% of the respondents felt the course

organization was excellent; the remaining 40% felt that it was good. None of the respondents gave the course organization a rating of average or below.

The same was true of participants' overall rating of the course: 51% of the respondents felt the course overall was excellent; 49% felt that it was good, and no respondents felt that it was average or below average.

In accordance with these ratings, 62% of the respondents felt that the course should be continued; the remaining 38% felt it should be continued with modifications. Suggested modifications included a request to add some sessions particularly related to STDs in developing countries.

Participants were also asked to provide additional comments on how course content or administration could be improved. In regard to course content, a number of respondents suggested including a practical session of slide preparation and use of the microscope in addition to providing slides on the clinical aspects of STDs. Again, there was a request for a session on STDs and dermatology, and one respondent requested a better balance between the theoretical and the practical training in the STD clinic and the lab. As regards course administration, many respondents (especially those who took the French course) agreed that the course schedule was too full and that either the duration of the course should be lengthened or some material should be deleted, especially in the case of overlapping material. In this respect there was also a request for more free time outside of class to establish contacts with colleagues, and to allow more time for relaxation. One respondent requested a follow-up course, another suggested providing participants with their pre- and post-test scores, and a third suggested that the per diem was inadequate, as mentioned before. Finally, replies in general to the course organization and administration were enthusiastic and much gratitude for the opportunity to participate was expressed by participants.

In summary, participants were enthusiastic in their responses to the Promoting Reproductive Health through the Management of Sexually Transmitted Diseases postcourse evaluation. In addition to providing suggestions for improvement, respondents were in agreement as to the efficient organization and administration of the course and appreciative of the amount of material learned.

Summary of the Advances in Reproductive Health for Administrators Course Evaluation

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

Three courses for administrators were conducted during 1983. The first course, for English administrators, offered from January 10 through January 28, included 18 participants. The second course, for French administrators, offered from June 13 through July 1, included 26 participants. The third course, for Portuguese administrators, offered March 14 through April 1, included 25 participants, for a total of 72 participants.

Participants were provided with a postcourse evaluation form to rate objectives, organization, and overall usefulness of the course. Areas covered on the evaluation form include a rating of general course objectives, an inquiry as to which topics could be added or deleted, and which were most helpful, and a rating on the audio-visual presentation and the use of educational materials. Respondents numbered 69, and in nearly every case there was almost a total response on their part.

Objective A, the presentation of reproductive health concepts and family planning, received very high ratings, with 87% of the respondents rating the presentation as excellent and 13% rating it as good. Objective B, family health and world population problems, was also very well received, with 72% of the respondents rating the presentation as excellent and 25% rating it as good. The same was true of Objective C, evaluation of family health and family planning program organization: 87% felt the course was excellently presented. For Objective D, the review of health care delivery systems, 94% felt the subject was either excellently or moderately well presented.

As regards the rationale for integrated health and family planning efforts, again, a large number of respondents, 62%, felt the subject had been excellently presented and 37% felt it had been presented well.

Response to topic selection for lectures was also very favorable, with 97% of respondents agreeing that course topics had been well selected. Response to which topics should be added was mixed; of the 53% who suggested the addition of topics, a number of respondents requested more information on administration and on the clinical aspects of reproductive health, and one respondent requested stressing the diagnosis and treatment of infertility, while another requested more information on human sexuality. There were many requests for additional information on family planning and on the use of contraceptives. Specific topics requested for expansion included the supervision of high-risk pregnancy, methods of reproductive health education for adolescents in developing countries, and the effects of over-population in specific countries. Finally, one respondent suggested it would be helpful if representatives from developing countries could discuss reproductive health management in their own countries.

Almost all the respondents, 90%, agreed that no topics should be deleted. Of the remaining 10%, some respondents suggested deleting the history and analysis of clinic

management. Other topics suggested for deletion included contraception techniques, vasectomy and sterilization techniques, and the fetal monitoring sessions.

Participants were also asked to specify which lecture they felt would be most useful to them in their practice. Many participants were highly appreciative of the lectures on reproductive health care management and administration, in particular, the lectures on clinic management, and management and finances. Also thought to be of great use by many participants were the lectures on family planning, including family planning in rural areas, family planning and reproductive health, family planning and maternal and child care, the use of paramedics in family planning, and the functioning of a family planning clinic. The update on contraceptives was also thought to be of much use by many participants, as were the lectures on human sexuality, sexually transmitted diseases, advances in reproductive endocrinology, and reproductive health. Also mentioned were the lectures on voluntary sterilization, social environment and reproduction, management of the infertile couple, and the lectures on demography and statistics.

Participants were next asked to specify which lectures they thought would be least useful to them in their practice. There was some discrepancy in this regard as some respondents chose the lectures on management, management and finances, sterilization (especially vasectomy), and advances in reproductive endocrinology as those least useful to their practice. Recall from above that other respondents had chosen these same lectures as the most useful. Also thought to be of little use were the contraceptive prevalence surveys, the technical lectures, the lecture entitled "Organization and Management of Family Planning/MCH programs in Maryland" and the lectures on trends in breast feeding, advances in male fertility, and maintenance of laparoscopic equipment. One respondent felt the information concerning surgical methods of contraception would be of little use to him, since his area of concern was

preventive medicine. Many respondents felt that all of the lectures would be very useful in their practice.

Again, participants expressed their appreciation for the course in their ratings of how much they felt they had learned from the overall course: 77% felt they had learned a great deal, and 22% felt they had learned a moderate amount.

When asked what was best liked about the course, participants were highly enthusiastic, especially as regards the quality and competency of staff and administration. Many participants commented very favorably on the authority of the professors and on their clarity, friendliness, availability, and willingness to answer questions. Also appreciated by many were the respect accorded participants and the interaction between lecturers and participants. The quality of course content was also noted by many, as was course administration and overall organization. In particular, a large number of participants responded very well to the lectures on administration and on the role of family planning in health service delivery. Also mentioned were the administration's policy towards family planning, and the audio-visual demonstration, the group discussions, the visits to family planning centers and the profile presentations by participants from various countries. Finally, some respondents chose the following lectures as their favorite aspect of the course: the lectures on fetal monitoring (in contrast to what one respondent had suggested earlier), on progress in contraceptive research, the relationship of sexually transmitted diseases and methods of contraception, and on sexuality, sexually transmitted diseases, and the problems of adolescents.

When asked what was least liked about the course, there was a consensus among respondents that there was too little time allowed for some of the very interesting lectures. Respondents also mentioned the brevity of the course, its pedagogical nature, and the modest per diem as those factors that were least liked. Some respondents mentioned the field visits to various health care and family planning

centers as those aspects of the course which were least liked. Lectures in particular which a small number of respondents did not favor very highly were those on trends in breast feeding, and on fetal monitoring and vasectomy, in contrast to what was mentioned above. There was one request for copies of the lectures, or for a detailed outline, and some respondents liked everything about the course.

Participants were also asked if they would expand any part of the educational materials provided or the audio-visual presentation. Replies to this were mixed, as 59% of respondents felt these areas needed no expansion. Of the remaining 41%, there were a number of requests for more educational materials, including handouts, films, slides, posters, and Omni instruments, and for projectors for the use of staff members. Some respondents also requested more material on human sexuality, and audio-visual information and literature specifically suited to the needs of particular countries. In addition, there were requests for slides on the histo-pathology of the principal STDs and their causative organisms, for a film on methods of palpating the breast and for more films, slides, cassettes and literature on family planning. Also requested were more materials on sterilization by laparoscopy, and on the preparation of films for video cassettes. The Portuguese-speaking administrators commented favorably on a number of films, in particular those on microsurgery, mini-laparotomy, family planning and the film "The Social Debt [Regarding Brazil]". One French-speaking administrator requested more educational material applicable to particular family planning programs.

In response to which part of the audio-visual presentation should be deleted, 95% of the respondents were content with the course as is. There were suggestions by some participants that the headsets should be changed and another felt that some of the material was biased.

Participants were very enthusiastic in their responses to the rating of overall course organization. On a rating scale from poor to excellent, 70% of respondents felt the course organization was excellent, and 30% felt that it was good. There were

many favorable comments on course organization, coordination, variety of resources, and on the competence and availability of the staff. One respondent stated that it was one of the best organized courses he had ever attended. Another felt that everything possible had been done to facilitate the creation and direction of family planning services in the various participants' countries. It was suggested, again, that the course was too heavily scheduled and that its duration should be extended. There were also requests for more practical field work, especially in the area of obstetrics and gynecology.

In accordance with these views, 70% of the respondents gave the course an overall rating of excellent, and 30% rated it as good. Furthermore, 66% felt the course should be continued, and 34% thought that it should be continued with modifications.

Much gratitude was expressed on the part of respondents for the opportunity to participate in a course of this type. Additional comments on the improvement of course administration and content included many requests for an expansion of the lectures on administration, as many felt that this was the purpose of the program, and for expansion of the program in general, including allotting more time to interpreters. A number of respondents suggested that the program could be better oriented towards trainees in each specific course, with a greater in-depth study of these participants' countries, and more time for group discussion of project profiles. There was also a request for more field trips to show participants the realities of health care in the U.S., and a suggestion to give clinical demonstrations whenever possible. Specific requests included those for lectures on pedagogical matters, on the relationship of nutrition to fertility, on information, education and especially communication, and for more material on sexually transmitted diseases, male sterilization and new contraceptive procedures. As regards specific organization of the course, there were suggestions to distribute lecture materials two days before the delivery of lectures,

II.B. SELECTED FINDINGS FROM THE ADMINISTRATOR SURVEY

Introduction

The administrator survey, initiated in November 1980, has been designed to assess the success of the course Reproductive Health for Administrators of Family Health and Family Planning Programs. The survey focuses on the content of the administrator course, the uses to which the material learned during the course has been put, and the possible avenues which future training in this field can take. The specific ways which the course has been beneficial to participants are also delineated, and questions about the relevance and utility of the educational materials obtained during the course are an important focus of the survey. Furthermore, the information from the coded surveys is combined with biodata on each trainee's application form to gain a comprehensive picture of this course and its impact on the participants.

This survey has been sent to all participants of the administrator course trained at the Johns Hopkins Educational Center. A total of 554 individuals have participated in the course between its inception in April, 1976, and the end of FY'83. This report, however, will only be concerned with the 482 trainees who attended courses held prior to January 1, 1983, and who therefore had adequate opportunity to receive, fill out, and return the administrator survey. Since each trainee is sent a survey a minimum of 6 months after completing the course, this cut-off date allows the last eligible participants 3 months to receive and return the survey before the close of the fiscal year. Other surveys received during FY'83 from participants trained in courses held after January 1, 1983 are not included in the analysis. This procedure reduces 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 survey.

Of the 482 administrator course participants trained prior to the cut-off date, 301 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 this survey is 62%. Fifty out of the total 301 surveys received have been added since the close of FY'82, while 75 additional trainees have been included in the sample.

The findings discussed in this section will be concerned primarily with the 301 administrator course participants who responded to the survey. First, however, there will be a comparison of those characteristics of the respondent and nonrespondent groups which can be generalized from the individual application forms filled out by all participants. The remainder of the section will then cover the findings compiled from the responses given on the returned questionnaires.

Comparison of Respondents with Nonrespondents

It is important to compare survey respondents with nonrespondents in order to assess whether there are any noticeable differences between the two groups. If such differences are detected, then it is not possible to conclude that the responses of nonrespondents would on the average be the same as the responses of respondents if the nonrespondents had in fact returned a survey. If, however, respondents are found to be similar to nonrespondents on their background characteristics, then it may be possible to generalize the responses discussed in the remainder of this section to all individuals who participated in the administrator course.

The following comparisons between respondents and nonrespondents are based on the data abstracted from their individual application forms. Some of the most interesting comparisons to be made between these groups, especially those pertaining to professional duties prior to the course, cannot be reliably made due to the many changes made in the forms over the years since the administrator course was initiated. Other characteristics, specifically the number of individuals supervised by type of professional, were also found to be highly variable across all participants. Therefore, comparisons of some of these characteristics will be based only on those participants

trained in FY'81 and more recently, or in the case of the number of individuals supervised, will not be discussed.

General background characteristics of participants were found to be similar for respondents and nonrespondents. Both groups are composed of about 75% males and 25% females. They are about the same age, 46 years old on the average. Respondents and nonrespondents have essentially the same geographic distribution by world region, although a slightly higher than average proportion of the participants from Asia responded to the survey. Similar proportions, about 36%, reported they had faculty appointments at medical or nursing schools. The majority of all participants are physicians, and about 80% had obtained a medical residency.

A large proportion of the participants in the sample, 88%, have attended only one JHPIEGO course, Reproductive Health for Administrators of Family Health and Family Planning Programs. There was a slight, statistically significant tendency (due to the large numbers included) for the 12% of the participants who had been trained in more than one JHPIEGO course to respond more frequently to the survey than those participants who had been trained in only one course. This tendency is not surprising since individuals who attend more than one course are selected because of their deep commitment to the goals of the JHPIEGO program. There are also some differences in respondents according to the language of the course they participated in. Higher than average proportions of respondents who attended English and Portuguese language courses responded to the survey, while attendees of French, Spanish, and Turkish language courses tended to respond to the survey less frequently.

Clinical practice training is offered to some of the physician participants in the administrator course who are expected to have the opportunity to apply clinical skills in laparoscopy at their home institutions. More respondents than nonrespondents, 20% versus 13% or an average of about 17%, have attended JHPIEGO clinical practicetraining. Most of these clinical practice participants, 67%, are from the Latin American region.

Respondents and nonrespondents trained in fiscal year 1981 or fiscal year 1982 reported spending essentially similar proportions of their time performing various professional activities. On the average, 27% of their time was spent in patient care, 13% in teaching, 6% in research, 47% in administration, and 7% in other activities. Only recently trained participants are reported here due to the substantial changes in the application forms over the years, resulting in this question being asked primarily to more recently trained participants. It is possible though that unknown biases are influencing these averages since only recent participants are included, and there may have been changes in the population of individuals selected to attend the administrator course since its inception in 1976.

In conclusion, it appears that respondents are similar to nonrespondents on demographic characteristics, in terms of levels of medical training, and with respect to how they spend their professional time. Slight differences were detected in these groups according to the number of courses taken, the language of the course, and whether or not they were selected to attend clinical practice. Other factors of importance to the comparison of respondents to nonrespondents were not analyzed due to the lack of this information from the majority of participants, as well as the substantial variability among all participants who did supply such information. Thus, there is insufficient evidence to conclude that the respondent and nonrespondent groups are similar. The findings reported in the remainder of this section should not be generalized to all administrator course participants.

Selected Findings

This discussion on the findings compiled from the administrator survey will focus on four of the five main components of the administrator survey. First the professional activities of respondents will be reviewed. Then there will be a discussion on how they rated the usefulness of many of the topics and general issues covered in

the course. The analysis will move from there into the benefits of the course to the respondents in their professional activities and with regard to the educational materials they received. Additional discussion of the specific benefits of this training, as cited individually by respondents in their comments on the survey, can be found in Section II.F. of this report. Finally, the opinions of respondents concerning which professionals are most appropriate for future training programs, and where such programs should be conducted will be reviewed. A discussion of the fifth component of this survey, individual respondents' comments about the course and their suggestions about the local situation of training in family health and family planning in their area, is included in Section II.F.

Respondents reported on their current responsibilities in the initial section of the survey. Such information is useful for this evaluation because it provides a backdrop for understanding the attitudes expressed later in the questionnaire. Among the questions which provide a perspective on the demands and roles of the survey respondents are items about whether or not their primary position has changed since they attended the course, and how they spend their professional time. The analysis revealed that just over 30% of respondents reported that their primary position had changed since they participated in the JHPIEGO course. Furthermore, 42% rated themselves primarily as administrators, 35% as clinicians, 13% 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 38%, while 34% was spent in patient care, 16% in teaching, and 7% on research.

Most respondents reported they worked in two or three different types of institutions including medical schools, hospitals, clinics, government service and private practice. As a group, they spent most of their time (28%) in nonclinical government service. They also estimated spending 19% of their time in medical schools and teaching hospitals, 17% in other hospitals, 16% in private practice, 10% in

Table II.B.1

MEAN RATING BY ADMINISTRATOR SURVEY RESPONDENTS OF THE DISCUSSION
ON REPRODUCTIVE HEALTH SUBJECTS

Subject	Rating				
	Not Very Useful	-----			Very Useful
	1	2	3	4	5
Contraception	//////////////////////////////////// 4.5				
Demography and Population Problems	//////////////////////////////////// 4.3				
High-risk Pregnancy	//////////////////////////////////// 4.1				
Infertility Problems	//////////////////////////////////// 3.9				
Sterilization	//////////////////////////////////// 3.9				
High-risk Gynecology	//////////////////////////////////// 3.8				

clinics, and 9% in other institutions. Since these are average figures, the time spent in any one institution by a given trainee may be as low as zero or as high as one hundred percent.

Respondents were asked to rate the subjects and general issues discussed in the course as to how useful they were. Ratings ranged from one to five where a "one" signified not very useful and a "five" corresponded to very useful. Respondents on the whole tended to rate all aspects of the course above average, i.e., above a score of three.

Table II.B.1 lists the mean rating by respondents on reproductive health topics. The discussion on contraception was rated highest with a mean score of 4.5.

Table II.B.2

MEAN RATING BY ADMINISTRATOR SURVEY RESPONDENTS OF THE DISCUSSION
ON GENERAL REPRODUCTIVE HEALTH ISSUES

Subject	Rating				
	Not Very Useful -----Very Useful				
	1	2	3	4	5
Health Rationale for Family Planning	//////////////////// 4.3				
Planning for Community Services vs. Hospital Services	//////////////////// 4.3				
Concept of Reproductive Health vs. Reproductive Medicine	//////////////////// 4.0				

Discussions on high-risk pregnancy, and demography and population problems also received ratings above four. Discussions 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 on Table II.1 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, 6% or less for each topic, rated any of these discussions as not very useful (i.e., a score of 1).

Table II.B.2 shows the mean ratings by respondents on general reproductive health issues. These discussions 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 follows the same patterns as the data for

Table II.B.3

MEAN RATING BY ADMINISTRATOR SURVEY RESPONDENTS OF THE DISCUSSION
ON ADMINISTRATIVE TOPICS

Topic	Rating				
	Not Very Useful -----Very Useful				
	1	2	3	4	5
Evaluation of Effectiveness of Services	//////////////////// 4.4				
Establishing Priorities	//////////////////// 4.3				
Application of Management Techniques to Health Programs	//////////////////// 4.2				
Motivation of Employees	//////////////////// 4.2				
Patterns of Supervision	//////////////////// 4.1				
How Values Enter into Decision Making	//////////////////// 4.1				
Systems of Budgeting	//////////////////// 3.9				
Importance of Learning to Relate to Bureaucracy	//////////////////// 3.9				

the topics presented in Table II.B.1. Over half of all respondents considered these issues to be very useful (score 5), and less than 2% of all respondents felt these discussions were not very useful (score 1). The country case studies (not shown in Table II.2) were given a mean rating of 4.0.

Table II.B.4

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

Activity	Percent of Respondents
Administration	76%
Teaching and Training	71
Clinical Responsibilities	50
Research	24
Other	14
None	3

The mean ratings for selected administrative topics are shown in Table II.B.3. The discussion on the evaluation of the effectiveness of services received a higher rating (4.4) than any other topic. Over 86% of all respondents rated this topic as either very useful (score 5) or useful (score 4). The discussions on establishing priorities, motivation of employees, and application of health techniques to management programs also received higher ratings than the other topics. For each topic listed on Table II.B.3, no more than 2% of all respondents gave a rating of not very useful (score 1). In conclusion, based on the responses, the data suggest that the majority of the topics discussed in the administrator courses are considered to be very useful by the attendees.

Table II.B.5

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

Activity	Self-Classification			
	Administrator (123)	Teacher (38)	Clinician (105)	More than one role (31)
Administration	93%	55%	63%	77%
Teaching and Training	67	92	67	71
Clinical Responsibilities	36	34	67	65
Research	20	39	22	32
Other	20	8	10	13
None	2	0	5	0

(Numbers in parentheses indicate number of respondents in each category).

Respondents noted which of each kind of major activity they perform has been influenced by the course. Table II.B.4 shows the percent of respondents who reported the course was of practical value for each activity. Most respondents applied the skills learned to their administrative activities (76%) or to their teaching and training activities (71%). Half the respondents found the course helpful in their clinical work (50%), and 24% applied the skills to their research. Breaking down this table further

(see Table II.B.5), we find that of the individuals who rated themselves as primarily administrators, 93% found the course influenced their administrative activities, 67% found it also influenced teaching and training, and 36% indicated that it was helpful in their clinical activities. Likewise, 92% of those participants who rated themselves primarily as teachers felt that the course influenced their teaching and training activities, while 55% of this subgroup found the course helpful in administrative activities, and 34% in clinical work. However, those participants who rated themselves primarily as clinicians did not show this strong tendency. Only 67% of this subgroup felt the course influenced their clinical activities, and similar proportions, 63% and 67% respectively, felt the course influenced their administrative and teaching or training activities as well.

Participants receive a variety of educational materials during the course. Included are textbooks, family planning pamphlets, Population Reports, and lecture handouts. There is some variation by date and language of the course as to exactly which materials are given to participants. It is anticipated that trainees will 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.

Table II.B.6 summarizes the reports of respondents on which educational materials they had used since the course. The majority of respondents reported using the material. Most popular were the Population Reports, with 88% of respondents reporting they had used them. Family planning pamphlets were used by 83% of respondents, lecture handouts by 73%, and the management text by 63%. Of all the materials, the management text was the item most frequently cited as not received. This is 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. Breaking down these figures by language and date of the course, we find that over half of the French-speaking respondents reported that they had not received this text, and nearly half of the participants trained in fiscal year 1978 or earlier had not received it.

Table II.B.6

PERCENTAGE OF ADMINISTRATOR SURVEY RESPONDENTS WHO REPORTED
THEY USED THE EDUCATIONAL MATERIALS PROVIDED IN THEIR COURSE

Educational Materials	Percent of Respondents Reporting They Had			Total
	Used the Materials	Not Used the Materials	Not Obtained the Materials	
Population Reports	88%	7%	5%	100% (275)
Family Planning Pamphlets	83	6	11	100 (273)
Lecture Handouts	73	13	14	100 (259)
Management Text	63	14	23	100 (265)

(Numbers in parentheses indicate the total respondents in each category.)

On the average, respondents reported using two or three of the materials listed in Table II.B.6. There is a trend over time by fiscal year of course for respondents to report using more of the materials listed on the survey. There is also a trend by fiscal year of course for respondents to report that they have received a larger number of the materials listed. It appears that the availability of all types of educational materials to administrator course participants has increased in recent years of the course, and that the large majority of respondents report using those materials which they have received.

Respondents used the educational materials in a variety of ways, six of which are shown in Table II.B.7. Teaching and training is the activity in which most respondents (71%) used the materials. Many also shared them with colleagues (67%), and consulted

Table II.B.7

PERCENTAGE OF ADMINISTRATOR SURVEY RESPONDENTS
REPORTING HOW THEY USED THE EDUCATIONAL MATERIALS
PROVIDED IN THEIR COURSE

Activity	Percent of Respondents
Teaching and Training	71%
Shared with Colleagues	67
For Special Lectures	57
Preparation of Reports	45
Placed in a Library	33
Other	9

them for special lectures (57%) and the preparation of reports (45%). On the average, respondents reported using these materials in about three of the activities listed in Table II.B.7, and 28% of all respondents used the materials for four to six of these activities.

Over half of all respondents, 54%, felt some of the materials they received or used in the course would be more useful to them if translated to 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, 58% requested these other materials, 49% indicated they

wanted the family planning pamphlets translated, 34% the management text, 34% the Population Reports, and 25% the lecture handouts. The languages most frequently requested were Spanish, Portuguese, French and Arabic. Others mentioned include Turkish, Indonesian, Malay, Thai, Marathi, Bengali, Urdu, Tamil, Persian, and African languages such as Yoruba, Swahili, and Kiswahili.

Respondents completed a few questions on who would benefit from the kind of training they received, and where such programs should be conducted. Only a few respondents, 3%, said they would not recommend the course to others. About 86% of all respondents had already recommended the course to colleagues in their country, and 53% had assisted them in making an application to JHPIEGO. Respondents felt individuals in government positions would benefit more from the course than their nongovernment colleagues. Only 37% of respondents would recommend the course to nongovernment clinicians and 35% to nongovernment administrators, whereas 68% would recommend the course to government clinicians and 77% to government administrators. The majority, 63%, would also recommend the course to faculty members.

Only a small proportion of respondents, 3%, felt the time was not right for training programs in family health and family planning to be initiated in their country. Of the rest, 46% stated that training programs in family health and family planning are underway, and 51% felt they should be initiated. Looking at these figures by world region, we find that higher proportions of these participants from Africa (67%) and the Near East (55%) feel training should be initiated, while the majority of respondents from Latin America (58%) replied that such a program is already underway in their country.

Of the 97% of all respondents who felt the time was right for reproductive health training programs to be conducted in their country, 63% thought it should be

Table II.B.8

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

Where should training programs be conducted?	World Region				All Regions* (289)
	Africa (84)	Asia (41)	Near East (37)	Latin America (126)	
Ministry of Health	69%	59%	62%	61%	63%
Medical Schools	46	66	57	71	61
Other Locations	40	27	30	47	40

*Includes 1 respondent who now resides outside these world regions.

started in the ministry of health , 61% wanted to see it in medical schools, and 40% suggested a variety of other locations for the training. Table II.B.8 shows how these percentages change when they are tabulated by world region. Respondents from Africa more frequently favor training through the ministry of health while those from Asia and Latin America favor training in medical schools. Furthermore, more respondents from Africa and Latin America suggested training should be conducted in other locations than respondents from Asia and the Near East. Some of the other locations most frequently suggested include family planning associations, family planning clinics, nursing and paramedical schools, private clinics and hospitals, rural health centers with MCH programs, rural and urban communities, elementary schools, and nongovernment organizations. There were also suggestions for training during the

medical internship, in conjunction with the training of general practitioners, in the women's organizations, and in cooperation with the church. Thus, from these questions, it is apparent that the administrator course either stimulates or clearly identifies training needs in the participants' countries; a benefit which assists JHPIEGO in establishing in-country programs.

Conclusion

In conclusion, respondents to the administrator survey gave very positive feedback about the course Reproductive Health for Administrators of Family Health and Family Planning Programs. They rated the majority of the topics discussed in the course as useful. They reported on the impact of the course in their professional lives by detailing several activities in which it has been of practical value to them. The specific activities where the course had impact on respondents varied by their primary professional role, showing that the concepts learned are useful to health professionals playing a variety of roles in the administration of reproductive health and family planning programs.

Respondents also gave positive feedback about the educational materials they had received in the course. They found the materials useful and had utilized them upon their return from the course. Materials had been shared with colleagues or otherwise made available to individuals not participating in the course. Information contained in them was most helpful to respondents in their teaching and training activities.

The course had been recommended by respondents to colleagues in their countries. By making this recommendation respondents demonstrated through their behavior that the course was useful to them. Furthermore, they gave suggestions on their questionnaires about the continuation and initiation of training programs in their

native lands. Many creative ideas to specifically target problems in individual countries were supplied on the questionnaire.

Thus, although the findings stated above cannot be generalized to all administrator course participants, it is clear that this course has been beneficial to the 62% of the trainees who responded to the survey. The results of this survey allow JHPIEGO to document that the course has had a definite positive impact on the majority of its participants. Furthermore, although the findings cannot be generalized to survey nonrespondents, no evidence has been received to contraindicate that the course has been beneficial to this group as well.

II.C. SELECTED FINDINGS FROM THE CLINICIAN SURVEY

Introduction

The clinician survey, instituted in its present form in February 1979, is an on-going mechanism for long-term follow-up of participants trained in U.S.-based JHPIEGO courses for clinicians. It is designed to evaluate the experiences of participants trained in the JHPIEGO Advances in Reproductive Health for Physicians, Management of the Infertile Couple, Academic Skills for Medical School Faculty in Reproductive Health, and Promoting Reproductive Health through the Management of Sexually Transmitted Diseases courses. The survey addresses the professional activities of these trainees subsequent to the course, including how they spend their professional time, what laparoscopic equipment they use and how it is maintained, which procedures they perform, and what ways they share their knowledge with others. Inserts to the clinician survey are sent to the Management of the Infertile Couple and Academic Skills for Medical School Faculty in Reproductive Health course participants to evaluate specific aspects of these courses. Selected findings from each of these inserts will be presented in Sections II.D. and II.E. of this report.

This survey has been sent to participants in these clinical courses who were trained at the JHPIEGO International Training Center, as well as those trained in previously active centers in St. Louis, Pittsburgh, and Beirut, Lebanon. A total of 1373 individuals have participated in at least one of these courses since the inception of the JHPIEGO program in 1972 to the end of FY'83. Seventeen have participated in two such courses, yielding the 1390 attendees reported trained to the end of FY'83 in Volume I of the JHPIEGO Annual Report. This report, however, will only be concerned with 1306 trainees who attended at least one of the clinical courses held prior to January 1, 1983. This cut-off date allows each participant included in the population ample opportunity to have received, filled out, and returned the clinician survey. Since

surveys are not sent to participants until six months after they complete the course, the most recently trained participants are given three months to receive and return the survey.

Of the population of 1306 clinician course participants eligible for the survey, 757 responded to it. Fifty-four participants were not sent surveys because of information available to JHPIEGO prior to the survey mailing indicating that they should not be surveyed. Reasons included political difficulties in the participants' country, changes in the participants' status such as death, retirement, emigration, a move to an unknown address, or, occasionally, an administrative oversight. The gross response rate to this survey is 58%. Excluding individuals not surveyed, the net response rate is 60%. Over 2463 mailings were sent to eligible participants. Nonrespondents received an average of 2.2 mailings apiece, while respondents received an average of 1.7 mailings. Ninety-three out of the total 757 surveys received have been added since the close of FY'82, while 111 additional trainees have been included.

Of the 1306 participants in the population, 977 are categorized under the Advances in Reproductive Health courses, 250 are included in the Management of the Infertile Couple courses, 57 participated in the Academic Skills for Medical School Faculty in Reproductive Health courses, 22 are included in the Promoting Reproductive Health through Management of Sexually Transmitted Diseases course. Twelve of the 14 individuals who participated in more than one of these courses before January 1, 1983 are categorized under their most recent course, most frequently infertility or academic skills. The remaining two participants are classified under their infertility course even though they were subsequently trained in a sexually transmitted diseases course. Surveys with inserts were returned by 36 of the academic skills course participants and 128 of the infertility course participants. Thus the response rates for these subgroups are 69% and 52%, respectively.

The findings discussed in this section will primarily cover only those participants who returned a survey. First, however, there will be a comparison of those characteristics of the respondent and nonrespondent groups which can be generalized from the individual application forms filled out by all participants. The remainder of the section will then cover the findings 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 capacities 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 reports. The text indicates in each report how the numbers were arrived at and which participants were included in them. 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.

Comparison of Respondents with Nonrespondents

A comparison of the 757 survey respondents to the 549 nonrespondents is reported in this subsection in order to determine whether respondents are like nonrespondents on their background characteristics. The comparison is based on the

data abstracted from the individual application forms filled out by all trainees prior to their participation in the course, as well as on basic training data available for all participants. If differences between the respondent and nonrespondent groups are detected, then it is not possible to conclude that the responses of nonrespondents would on the average be the same as the responses of respondents if the nonrespondents had in fact returned a survey. If, however, respondents are found to be similar to nonrespondents on their background characteristics, then we will feel more comfortable about generalizing the findings compiled from the respondents' surveys to the total population of JHPIEGO U.S.-based clinical course participants. Caution should be exercised in any such generalization because it is possible that respondents and nonrespondents differ in important ways which are not measured on their individual application forms.

No differences were found between survey respondents and nonrespondents on selected demographic characteristics and for variables summarizing their pre-JHPIEGO training experiences. Both groups are composed of 83% males and 19% females. The average year of birth for both respondents and nonrespondents was 1938. The distribution over AID regions* for country of medical school education was the same for respondents and nonrespondents. Furthermore, the average year when the medical degree was obtained, 1963, was found to be the same for both groups. Over 90% of both the respondents and nonrespondents had obtained a medical residency, and over 83% had obtained an Ob/Gyn residency. The average number of months of Ob/Gyn training was 39 for respondents and 40 for nonrespondents, an insignificant difference. The most recent year of Ob/Gyn training was 1971 on the average. Respondents had worked an average of 8.1 years beyond their training and nonrespondents worked 7.6 years, also an insignificant difference. Over 50% of both

* See Appendix I for a list of countries in each region.

respondents and nonrespondents had medical or nursing school appointments at the time of their application to the course.

Respondents and nonrespondents reported spending similar proportions of their time performing various professional activities. Both groups spent, on the average, 59% of their time in patient care, 21% in teaching, 9% in research, 9% in administration, and 2% performing other activities. The average percent time spent by respondent and nonrespondent groups in various professional institutions was also similar for all types of institutions included on the application form.

Respondents and nonrespondents were in general similar in terms of the number of procedures performed per month as reported to JHPIEGO on their application forms. At the time of their application, clinician course participants reported the total number of procedures they had performed during the previous three years for each procedure listed on the form. The mean number of procedures performed per month for each procedure was obtained by dividing the total number by 36 for each trainee. These figures were then averaged over respondents and nonrespondents so their pretraining activities could be compared. For most of the selected procedures, nonrespondents reported performing the same number or slightly fewer procedures per month than respondents. The largest difference observed is for IUD insertions where respondents reported on the average 10.3 procedures per month while nonrespondents reported a mean of 8.1 procedures. A difference also exists for the mean number of laparoscopic sterilization procedures performed prior to training. Here respondents performed 2.3 procedures per month while nonrespondents averaged 1.3 procedures. For the remaining procedures, the differences were small. Averaging over all participants, 6.0 cesarean sections, 3.1 abdominal hysterectomies, 1.1 vaginal hysterectomies, 3.6 tubal ligations, and 1.2 diagnostic laparoscopies were reported per person per month for the three-year period prior to JHPIEGO training.

There were slight differences in respondents and nonrespondents according to geographic distribution by world region. A slightly higher than average proportion of participants from Asia responded to the survey, while a slightly lower than average proportion of participants from Africa responded to it. In keeping with this trend, participants of French language courses responded to the survey less frequently than those who took courses offered in other languages. By course type, participants of the infertility and academic skills courses were more apt to respond to the survey than the individuals who took advances in reproductive health or sexually transmitted diseases. A large proportion of participants in the sample, 90%, have attended only one JHPIEGO course. There was a slight tendency for the remaining 10% of participants, most of whom had taken two JHPIEGO courses, to respond more frequently to the survey. Just over 50% of the trainees in the sample were offered clinical practice training. Those who had clinical practice responded more frequently to the survey than those who did not receive this training.

In conclusion, based upon information compiled from application forms, it appears that respondents are similar to nonrespondents on demographic characteristics, in terms of levels of medical training, and with respect to how they spend their professional time. They also reported similar performances of number of procedures per month for most procedures. Some differences however were detected between respondents and nonrespondents in the number of IUD insertions and laparoscopic sterilization procedures performed per month prior to the course. An analysis of some basic course data available for all participants revealed slight differences between respondents and nonrespondents by region of origin, language of course, type of course, number of JHPIEGO courses, and clinical practice participation. In any event, there is evidence to suggest that respondent and nonrespondent groups are quite similar. However, although the findings reported in this section could be generalized to include all clinician course participants, such generalizations may not necessarily be appropriate in all instances.

Table II.C.1

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

Professional Activity	Percentage of the 726 Respondents Who Reported Any Professional Activities
Seeing Inpatients	92%
Seeing Outpatients	88
Surgery, except Sterilization and Laparoscopy	87
Female Sterilization	85
Diagnostic Laparoscopy	70
Clinical Supervision of Medical Students	67
Clinical Supervision of Postgraduates	65
Research Investigations	58
Administrative Duties	54
Male Sterilization	13

Professional Activities

The patterns of professional responsibilities of participants reflect the opportunities they have to use the knowledge and skills learned at JHPIEGO. Examination of these activities helps us identify how trainees on the average spend their time, and the kinds of limitations with which they are 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, patients and communities.

Over half of all respondents, 53%, reported they had a medical school faculty appointment. Nearly all respondents, 98%, reported they served on the staff of one or more hospitals. Fifty-three percent (53%) of these physicians served on the staff of only one hospital, and the remaining proportion reported serving on the staff of two or more hospitals. Data on the professional activities performed by all the respondents serving on the staff of one or more hospitals are presented in Table II.C.1 for their hospital of primary affiliation. Most physicians, 92%, reported seeing inpatients, and at least 85% also reported seeing outpatients and performing surgery, including female sterilization. Diagnostic laparoscopy was reported by 70% of these respondents. Furthermore, at least 65% reported clinical supervision of medical students or postgraduates. Over half also had administrative and research responsibilities at this hospital. Only 13% listed male sterilization as one of their activities at the hospital where they were primarily affiliated.

Table II.C.2 shows the mean percent distribution of professional time spent by respondents in the different activities in which they engage. The figures are shown for all respondents as well as broken down by the type of course participation. The table is not broken down by region because less variation was found between regions in the time spent in these activities, especially for the time spent in patient care. Overall, respondents spend just under three fifths of their time caring for patients, one fifth teaching, one tenth in administration and one tenth in research. There are some differences between respondents depending upon the type of course they participated in. While these differences are not large, they indicate that respondents spend relatively more time in the specific activities targeted by the course in which they

Table II.C.2

MEAN PERCENT OF PROFESSIONAL TIME SPENT BY CLINICIAN SURVEY
RESPONDENTS IN PROFESSIONAL ACTIVITIES, BY TYPE OF COURSE PARTICIPATION

Activity	All Courses* (739)	Advances in Reproductive Health (539)	Management of the Infertile Couple (151)	Academic Skills (41)
Patient Care	57%	58%	57%	47%
Teaching	20	19	21	28
Administration	11	11	10	11
Research	9	8	9	12
Other Activities	3	4	3	2
Total	100	100	100	100

(Numbers in parentheses denote the number of respondents in each course.)

* Includes 8 Sexually Transmitted Diseases course participants not reported separately.

participated. This is most obvious for academic skills participants who focus on research and teaching skills in their course. These respondents tend to spend less time in patient care and more time in teaching and research than do respondents who participated in either of the other two courses.

Table II.C.3 shows the mean percent time spent by respondents in the different types of institutions where they work. This table is broken down by AID world region because of the substantial regional variation found. Overall, respondents spend more time, 27%, in medical schools and university hospitals than in any of the other institutions listed. This tendency is expected since JHPIEGO participants are often selected because of their responsibilities in the medical schools and university hospitals throughout the developing world. Respondents from all regions also report

Table II.C.3

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

Type of Institution	All Regions (723)	World Region			
		Africa (102)	Asia (184)	Near East (78)	Latin America (359)
Medical School/ University Hospital	27	31	37	37	18
Social Security Hospital	8	1	1	6	13
Government Hospital (except above)	21	33	20	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	7	4	2	3
Private Practice Outside Hospital	22	10	17	18	30
Private Maternity Home/Center	7	3	8	11	8
Other	<u>4</u>	<u>5</u>	<u>3</u>	<u>3</u>	<u>5</u>
TOTAL	100	97*	100	100	100

(Numbers in parentheses denote number of respondents in each world region.)

* This number does not add up to 100% due to some missing values in the surveys returned from this region.

spending higher percentages of their time in private practice (22%) and in government hospitals (21%) than in other types of institutions.

The regional breakdowns of these percentages reveal the same trends as the overall figures, but in each region respondents spend relatively more time in one of the types of institutions listed than in any of the others. Physicians from Africa spend most of their time in government hospitals (33%), slightly less in medical schools and university hospitals (31%), and substantially less in private practice (10%). Respondents from the Near East and Asia spend most of their time in medical schools and university hospitals (37% each). They spend smaller and nearly equal proportions of their time in government hospitals (19 and 20% respectively) and private practice (18 and 17% respectively). Physicians from Latin America report spending the greatest proportion of their time in private practice (30%) followed by medical schools and university hospitals (18%), and government hospitals (17%). They also report spending 13% of their time in social security hospitals.

Clinical Procedures

The training of obstetricians and gynecologists to perfect clinical skills, including laparoscopy, is an important component of the JHPIEGO program. In this subsection we 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. Respondents reported working at on the average two or three of the institutions listed in Table II.C.3, and 46% listed the names of two or more hospitals with which they are 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 procedures

reported here cannot be generalized to represent the total number of procedures performed at single institutions.

Since respondents to this survey are practicing gynecologists and obstetricians, it has been assumed for the initial analyses that they had access to all the facilities necessary to perform all the procedures listed in Tables II.C.4 and II.C.5. However, access to laparoscopic equipment cannot be automatically assumed for all Ob/Gyn's from lesser developed countries. Evidence obtained on the survey backs up this provision. Twenty-five percent of respondents reported that the hospital with which they were primarily affiliated did not have laparoscopic equipment, and nearly 29%, or an additional 4%, reported they did not have access to such equipment. Thus, Table II.C.6 has been included so that the numbers of laparoscopic procedures performed are also reported only for these respondents who claimed they had access to laparoscopic equipment.

Table II.C.4 shows the mean number of procedures other than laparoscopy performed per trainee month by world region for all respondents who reported the number of procedures performed. There is substantial variation between the means in this table across types of procedures and across world regions. Regional differences reflect in part underlying differences between regions in family planning practices and the role of obstetricians and gynecologists. From Table II.C.4 we find that the mean number of vaginal deliveries reported per month for all regions (15.2) was higher than the mean for any other procedure. The overall means for cesarean sections (4.0) and postpartum sterilization (4.1) were also higher than those reported for the three remaining procedures. Respondents from Asia reported performing a higher mean number of hysterectomies, post-partum 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 procedures except cesarean section.

Table II.C.5 shows the mean number of laparoscopic procedures performed by all respondents by world region and type of procedure. There is substantial variation in this table across type of procedure, i.e., diagnostic or sterilization, and across world region. Overall, three times as many sterilization procedures were reported as diagnostic procedures. By region, we find the highest mean number of total laparoscopic procedures performed, 15.3, was reported by the Asian respondents. They also reported performing the highest mean number of laparoscopic sterilizations (12.6). The total laparoscopic procedure means for the respondents from the Near East and Latin America were also quite high, 14.2 and 10.4, respectively. Respondents from the Near East reported performing more diagnostic procedures, 5.4, than those reported by respondents from any other region. The mean number of total laparoscopic procedures reported by African respondents was 4.5. Of these, approximately 3.0 were diagnostic procedures, and 1.5 were for sterilization. This was the only region from which more diagnostic procedures were reported than sterilization procedures.

A brief review of the availability and utilization of laparoscopic equipment as reported on the survey for the respondents' institution of primary affiliation is helpful in understanding these data. About 75% of respondents reported there was laparoscopic equipment at their primary institution. Those respondents with equipment at their institution reported that there were on the average 1.8 pieces of equipment at this institution including cautery systems, System A's, System B's, and laprocaters. 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, 96% reported they had access to these systems. They reported that an average of 4.9 people, including themselves, were using the equipment at this institution. Most (72%) reported between one and five individuals used the equipment, and 26% claimed that between six and fifty people used this

Table II.C.4

MEAN NUMBER OF PROCEDURES OTHER THAN LAPAROSCOPY PERFORMED BY CLINICIAN SURVEY RESPONDENTS
PER TRAINEE MONTH BY WORLD REGION AND TYPE OF PROCEDURE

World Region	Type of Clinical Procedure					
	Normal Delivery	Cesarean Section	Hysterectomy	Postpartum Sterilization	Interval Minilaparotomy	Vasectomy
Africa	12.8 (104)	4.3 (104)	2.1 (105)	1.3 (105)	0.8 (102)	0.02 (105)
Asia	21.2 (184)	4.3 (184)	4.2 (184)	7.7 (183)	4.0 (183)	1.1 (184)
Near East	23.4 (81)	3.9 (82)	3.6 (82)	0.8 (81)	1.6 (81)	0.05 (80)
Latin America	<u>11.0</u> (<u>363</u>)	<u>3.8</u> (<u>362</u>)	<u>2.3</u> (<u>363</u>)	<u>3.9</u> (<u>360</u>)	<u>1.9</u> (<u>358</u>)	<u>0.2</u> (<u>358</u>)
Total*	15.2 (734)	4.0 (734)	2.7 (736)	4.1 (731)	2.2 (726)	0.4 (729)

(Numbers in parentheses indicate number of respondents used to calculate each mean.)

*Total includes 2 respondents who now reside outside these world regions.

Table II.C.5

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

World Region	Type of Laparoscopic Procedure				Total Laparoscopic Procedures	
	Sterilization Procedures		Diagnostic Procedures			
	Mean Number of Procedures	Number of Respondents	Mean Number of Procedures	Number of Respondents	Mean Number of Procedures	Number of Respondents
Africa	1.5	(106)	3.0	(105)	4.5	(106)
Asia	12.6	(187)	2.7	(185)	15.3	(187)
Near East	8.4	(81)	5.8	(81)	14.2	(81)
Latin America	<u>8.2</u>	<u>(363)</u>	<u>2.2</u>	<u>(360)</u>	<u>10.4</u>	<u>(363)</u>
Total*	8.4	(739)	2.9	(733)	11.2	(739)

(Numbers in parentheses indicate number of respondents used to calculate each mean.)
 *Total includes 2 respondents who now reside outside these world regions.

Table II.C.6

MEAN NUMBER OF LAPAROSCOPIC PROCEDURES PERFORMED PER TRAINEE MONTH
BY CLINICIAN SURVEY RESPONDENTS WITH ACCESS TO LAPAROSCOPIC EQUIPMENT
BY WORLD REGION AND TYPE OF PROCEDURE

World Region	Type of Laparoscopic Procedure				Total Laparoscopic Procedures	
	Sterilization Procedures		Diagnostic Procedures			
	Mean Number of Procedures	Number of Respondents	Mean Number of Procedures	Number of Respondents	Mean Number of Procedures	Number of Respondents
Africa	2.3	(64)	4.7	(63)	7.0	(64)
Asia	16.6	(130)	3.9	(128)	20.4	(130)
Near East	9.6	(69)	6.7	(69)	16.3	(69)
Latin America	<u>10.8</u>	<u>(268)</u>	<u>2.8</u>	<u>(265)</u>	<u>13.6</u>	<u>(268)</u>
Total	11.0	(531)	3.8	(525)	14.8	(531)

(Numbers in parentheses indicate number of respondents used to calculate each mean.)

equipment. Finally, 92% reported that the equipment was working at the time they filled out the survey, and 79% indicated that the equipment had been in good working condition seventy-five percent 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.

If the responses of only those participants who reported access to laparoscopic equipment on their survey are analyzed, the mean number of laparoscopic procedures performed per month increases, as shown in Table II.C.6. These respondents report performing 14.8 laparoscopic procedures per month overall, of which 11.0 are for sterilization and 3.8 are diagnostic procedures. The proportion of respondents who reported access to laparoscopic equipment on their survey varies by region. Only 60% of the African participants reported access at the time they returned the survey, while over 70% of the Asians and Latin Americans, and 85% of individuals from the Near East reported they had access. However, the relative numbers of procedures performed per month by region are similar to those shown in Table II.C.5. It is still the case that respondents from Asia report performing the highest number of procedures overall while African respondents report the lowest mean number.

An earlier discussion in this report claimed that the procedures reported by individual respondents cannot be generalized to the institutions where these respondents work. However, of those respondents who reported access to laparoscopic equipment at their institution of primary affiliation, 84% reported that at least one additional person was using the equipment. Although these findings cannot be generalized to institutions or pieces of equipment, by making some assumptions about the limited availability of laparoscopic equipment and its utilization by at least one physician in institutions where it is available, we can view the number of procedures reported here as an average minimum number performed per month at institutions of the respondents' primary affiliation. Thus, it is likely that more procedures are being

performed per month than those reported in Table II.C.6 for each of the institutions represented by these respondents.

Tables II.C.4 and II.C.5 include all the clinical procedures reported on by all clinician survey respondents. These tables can be compared to see how many laparoscopic procedures respondents perform per month relative to other clinical procedures. Overall, laparoscopy (diagnostic and sterilization procedures combined) is performed more than any other procedure, except vaginal delivery, by this population of JHPIEGO-trained physicians. Again looking at the means for all regions, we find that laparoscopic sterilization procedures are performed by these respondents more frequently than any of the surgical procedures listed in Table II.C.4. Diagnostic laparoscopy is performed by all respondents about as frequently as hysterectomies.

The means displayed in Tables II.C.4 and II.C.5 can be broken down by type of course participation rather than the respondents' world region to display differences which may result from the JHPIEGO course selection process and/or the content of the individual courses. Firm conclusions cannot be drawn from these breakdowns because the number of respondents in each procedure category ranges from about 541 for the Advances in Reproductive Health course, about 148 for the Management of the Infertile Couple course, to 38 for the Academic Skills course. Over most procedures, participants of the Advances in Reproductive Health course report performing more procedures per month than do participants from either of the other two courses. Due to the large number of respondents who took this course, the means for this subgroup are very close to the overall means for each procedure. Academic Skills course participants report performing consistently small numbers of procedures each month. They average between two and three procedures per month for every surgical procedure listed except normal delivery, where they report 8.3 deliveries, diagnostic laparoscopy, where they report 5.4 procedures, laparoscopic sterilization, where they report 14.2 procedures, and vasectomy, where they report only 0.2 procedures. The

mean number of procedures reported by participants in the Management of the Infertile Couple course is lower for all sterilization procedures including laparoscopy, post-partum sterilization, interval minilaparotomy, and vasectomy than the means reported by respondents from the Advances in Reproductive Health course. In contrast, for nonsterilization surgical procedures, these respondents reported a similar or higher mean number of procedures than those reported by the Advances in Reproductive Health course participants. Thus, these data indicate that performance of surgical procedures by respondents varies according to the type of JHPIEGO course taken. In general, the respondents' performance reflects the orientation of the course in which they participated, as well as the expertise they had prior to being selected for the training.

There is considerable variation in the performance of laparoscopic procedures among trainees, a quality which is not evident from the means reported in Table II.C.4. Displayed in Table II.C.7 is the distribution of respondents who reported having access to laparoscopic equipment according to the mean number of procedures they performed per month. There is more variation between respondents in the number of sterilization procedures performed per month than in the number of diagnostic procedures, due in part to 12.7% of the respondents who report performing more than 20 sterilization procedures per month as compared to only 2% who report this number of diagnostic procedures. Over 50% of respondents with access to laparoscopic equipment reported performing 5 or more total laparoscopic procedures per month. Furthermore, only a small proportion of these respondents, less than 5%, reported that they did not perform any of the procedures. In the columns separated by type of procedure performed, 66 of the respondents reported they did not perform any sterilization procedures and 44 reported they did not perform any diagnostic procedures. However, since about 5% or 25 physicians did not perform any procedures, the remaining respondents exclusively perform only one type of procedure.

Table II.C.7

DISTRIBUTION OF CLINICIAN SURVEY RESPONDENTS WITH ACCESS TO LAPAROSCOPIC EQUIPMENT
ACCORDING TO MEAN NUMBER OF LAPAROSCOPIC PROCEDURES PERFORMED
PER TRAINEE MONTH BY TYPE OF PROCEDURE

Mean Number of Procedures Per Month	Type of Laparoscopic Procedure				Total Laparoscopic Procedures	
	Sterilization Procedures		Diagnostic Procedures			
	Number of Respondents	Percent of Respondents	Number of Respondents	Percent of Respondents	Number of Respondents	Percent of Respondents
None	66	12.4%	44	8.4%	25	4.7%
Less than 5.0	272	51.1	376	71.4	225	42.3
5.0 - 9.9	79	14.8	63	12.0	100	18.8
10.0 - 19.9	47	8.8	33	6.3	92	17.3
20 - 29.9	24	4.5	5	1.0	37	7.0
30 - 99.9	38	7.1	5	1.0	43	8.1
100 or more	<u>6</u>	<u>1.1</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>1.9</u>
Total	(532)	100	(526)	100	(532)	100

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. When the mean number of procedures performed by each respondent is averaged over the primary use of equipment at their institution, we find consistency in these responses. More diagnostic procedures, 5.2, are done by respondents affiliated with hospitals where the equipment is used more for diagnosis. A smaller number, 4.2, are performed where it is used equally for both purposes, and the fewest are completed, 2.3, where it is used primarily for sterilization. Those respondents affiliated with hospitals rated as using the equipment equally for diagnostic and for sterilization purposes reported performing the most sterilizations, 14.1, followed by respondents from hospitals using it most for sterilization who reported 13.7 sterilization procedures per month. Finally, respondents from hospitals where the equipment was used more for diagnosis only performed 1.9 sterilization procedures per month.

Table II.C.8 displays the percent distribution by region of the clinician survey respondents with access to laparoscopic equipment according to whether they reported the equipment was used at their institution of primary affiliation more for diagnosis versus sterilization or about equally. Averaging over all regions, we find that respondents reported using the equipment more for sterilization. Within regions this tendency is true for Latin America and Asia. Respondents from the Near East are distributed fairly evenly in their responses as to how the equipment is primarily used. The greatest divergence from the main effect for all regions is found for the African respondents. Here 68% reported the equipment was used more for diagnostic purposes, 21% felt it was used about equally for diagnosis and for sterilization, and only 10% reported it was used more for sterilization.

A comparison can be made between the regional percentage distributions of preferred institutional use of laparoscopic equipment revealed in Table II.C.8 with the

Table II.C.8

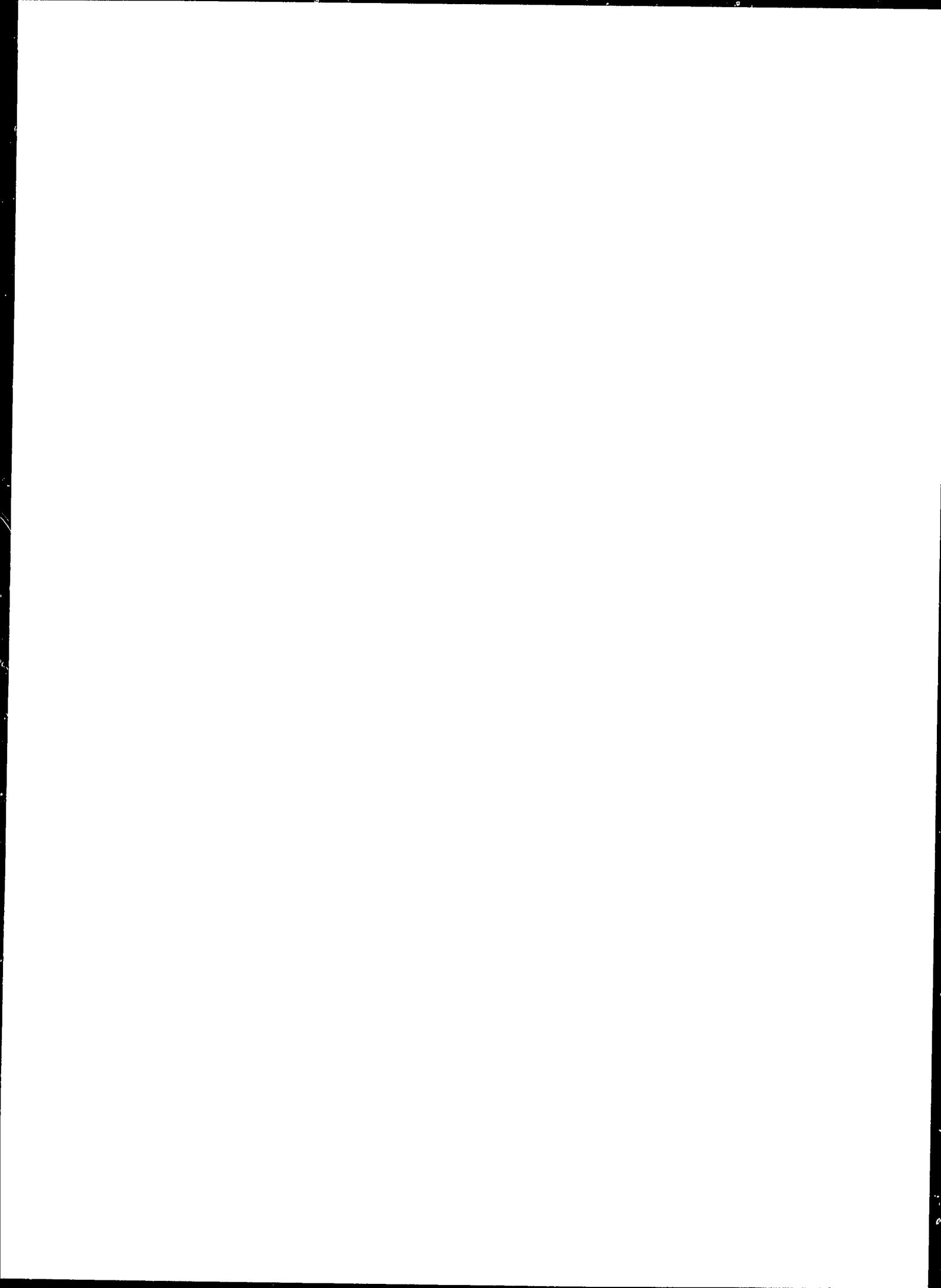
PERCENTAGE DISTRIBUTION OF CLINICIAN SURVEY RESPONDENTS ACCORDING TO
REPORTED USE OF EQUIPMENT FOR DIAGNOSIS VERSUS STERILIZATION, BY
WORLD REGION

Is equipment used more for diagnostic purposes or for sterilization purposes?	World Region				
	Africa (69)	Asia (132)	Near East (69)	Latin America (277)	All regions (547)
Used more for diagnostic purposes	68%	18%	35	21%	28%
Used about equally for diagnosis and for sterilization	22	32	35	27	29
Used more for sterilization	10	50	30	52	43
Total	100	100	100	100	100

(Numbers in parentheses denote number of respondents in each region.)

mean number of laparoscopic procedures reported by respondents by region in Table II.C.6. There is consistency between the procedures performed by the respondents and their opinions about how the equipment is used most at the institution with which they are primarily affiliated. African respondents perform more than twice as many diagnostic as sterilization procedures. Both Latin American and Asian respondents perform about four times more sterilization procedures than diagnostic procedures, and participants from the Near East report performing only about one and one half times more sterilizations than diagnostic laparoscopies.

In summary, respondents to the clinician survey report performing as a group more laparoscopies than any of the other surgical procedures included on the



encountered by trainees in their countries. Participants are encouraged to broaden their perspectives which are often limited to traditional hospital-based medicine. Techniques of abortion are 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 on the specific topic addressed. A comparison of respondents' training activity by type of course taken for some general topics and techniques which are covered in all the courses will be discussed below. For more in-depth discussions on the Management of the Infertile Couple and Academic Skills courses, refer to Sections II.D. and II.E. of this report.

Referring back to Tables II.C.1, II.C.2, and II.C.3, we are reminded that teaching and training activities are important components of the professional responsibilities of JHPIEGO clinician course participants. Table II.C.2 shows that on the average 20% of the professional time spent by all respondents is devoted to teaching. From Table II.C.3 we find that they spend an average of 27% of their time in medical schools and university hospitals. And, from Table II.C.1 we see that at the hospital of primary affiliation over 65% of all respondents are responsible for clinically supervising either medical students or postgraduates. Thus, JHPIEGO-trained physicians have ample opportunities to pass on the training they received in this program to other health professionals. Furthermore, we can presume that some of these newly-acquired skills are imparted through modeling at times not specifically devoted to 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. About 86% of these physicians reported they taught or provided clinical supervision in obstetrics and gynecology or fertility management. Table II.C.9 shows the percentages of both all respondents and of the subgroup reporting training responsibilities for several types of health

Table II.C.9

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 in Ob/Gyn or fertility management?	Percentage of All 757 Respondents	Percentage of the 640 Respondents Reporting Teaching or Training Responsibilities
Medical School Graduates in Clinical Training	70%	83%
Medical Students	61	72
Nurses or Nurse-midwives	50	60
Other Health Personnel	24	28

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.

Trainees were asked which subjects and techniques they included in their teaching and training from among those listed in Tables II.C.10 and II.C.11. Recall that 86% of all respondents reported they had teaching or training responsibilities. In addition, 81% of the respondents who participated in the Advances in Reproductive Health course reported these responsibilities, while 89% of the Management of the

Infertile Couple course respondents, and 95% of the Academic Skills course respondents reported teaching or training responsibilities. Some discussion of each of the topics listed in Table II.C.10 was included in each type of clinician course. Note that over all courses, the majority of respondents include 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.

Looking at the proportions in Table II.C.10 by course type we find that more Academic Skills course participants include the majority of these topics in their teaching than do participants from either of the other two courses. Notable exceptions occur for those topics which receive more in-depth coverage in one of the other two courses. For instance, over 86% of the Advances in Reproductive Health course respondents include discussions on either contraceptive techniques or selection of an appropriate sterilization procedure in their teaching, as compared with slightly smaller proportions of the infertility and academic skills respondents. More Management of the Infertile Couple course participants, 93%, report including diagnosis and treatment of infertility in their teaching than do respondents from either of the other courses. A high proportion of infertility course participants, 85%, also report teaching others about patient counseling in fertility management. Thus, by looking at 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 report teaching the most overall, the Management of the Infertile Couple course respondents focus most on topics concerned with infertility, while Advances in Reproductive Health respondents most often report teaching general reproductive health and contraception subjects.

Table II.C.10

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

Subject	All Courses* (630)	Advances in Reproductive Health (454)	Management of the Infertile Couple (132)	Academic Skills (39)
Contraceptive Techniques	86%	87%	83%	85%
Reproductive Physiology and Health	85	86	80	92
Selection of Appropriate Sterilization procedures	84	86	77	85
High-risk Pregnancy	83	85	78	87
Management of Incomplete Abortion	81	82	76	87
Diagnosis and Treatment of Infertility	81	78	93	87
Patient Counseling in Fertility Management**	81	80	85	82
Demography and Population Problems	43	45	35	54
Organization and Management of Advanced Fertility Clinic	35	34	39	41

(Numbers in parentheses indicate the number of respondents in each course type with teaching or training responsibilities.)

* Includes 5 Sexually Transmitted Diseases participants not reported separately.

** This item was inadvertently omitted from the early mailings of the questionnaire, leaving only 549 total respondents, most of whom participated in the Advances in Reproductive Health course. Percentages have been adjusted to the reduced number of respondents in each category.

Table II.C.11

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 * (630)	Advances in Reproductive Health (454)	Management of the Infertile Couple (132)	Academic Skills (39)
Postpartum Sterilization	77%	79%	67%	87%
Diagnostic Laparoscopy	68	66	73	79
Interval Minilaparotomy	69	68	65	82
Laparoscopic Sterilization, Any method	65	64	67	85
Laparoscopic Sterilization, Falope Method	60	56	64	82
Laparoscopic Sterilization, Cautery Method	32	33	25	38
Vasectomy	13	16	6	10

(Numbers in parentheses indicate the number of respondents in each course type with teaching or training responsibilities.)

* Includes 5 Sexually Transmitted Diseases participants not reported separately.

Table II.C.11 shows selected surgical and diagnostic techniques and the percentage of respondents who include them in their training by type of course participation. Of the respondents who report teaching or training responsibilities, 77% train in postpartum sterilization, 68% train in diagnostic laparoscopy, 69% in interval

minilaparotomy, and 65% in laparoscopic sterilization. It is interesting to note that more respondents report training in diagnostic laparoscopy than in either the cautery or falope methods of laparoscopic sterilization. Very few respondents report that they train others to perform vasectomies.

As found in Table II.C.10, there are some differences in the proportion of respondents who teach each of the procedures shown in Table II.C.11 depending upon the type of course in which they participated. For all procedures except vasectomy, a higher proportion of Academic Skills respondents report including these techniques in their teaching than do participants from either of the other courses. Within this subgroup of respondents, the highest number report training in postpartum sterilization, followed by laparoscopic sterilization. A comparison of the Management of the Infertile Couple participants with the Advances in Reproductive Health participants shows that overall more infertility course respondents report training in laparoscopy for both the diagnostic and sterilization techniques. This is not necessarily unexpected since laparoscopy is one of the important techniques used for diagnosing cases of infertility. Furthermore, since the skills necessary to perform laparoscopy are similar for both the diagnostic and sterilization procedures, it is not surprising to find that infertility course participants report training others to perform sterilization techniques as well as diagnostic laparoscopy. In contrast, slightly higher proportions of Advances in Reproductive Health respondents train others to perform sterilization techniques such as postpartum sterilization, interval minilaparotomy and vasectomy than do the infertility course participants. Thus, Table II.C.11 also gives evidence that differences between responses by type of course participation are in general consistent with the emphases of these courses.

Respondents listed the number of persons trained to perform the same clinical procedures displayed in Tables II.C.4 and II.C.5. The mean numbers of individuals trained per month for each procedure are shown in Tables II.C.12 and II.C.13.

Table ii.C.12

MEAN NUMBER OF PERSONS TRAINED BY CLINICIAN SURVEY RESPONDENTS IN CLINICAL PROCEDURES
OTHER THAN LAPAROSCOPY PER TRAINEE MONTH BY WORLD REGION

World Region	Type of Clinical Procedure					
	Normal Delivery	Cesarean Section	Hysterectomy	Postpartum Sterilization	Interval Minilaparotomy	Vasectomy
Africa	3.0 (102)	1.2 (102)	0.6 (102)	0.6 (101)	0.4 (102)	0.04 (103)
Asia	5.8 (178)	1.4 (181)	1.3 (181)	1.6 (179)	1.4 (182)	0.2 (183)
Near East	4.0 (76)	1.1 (78)	0.9 (79)	0.2 (78)	0.3 (79)	0.02 (78)
Latin America	<u>2.2 (349)</u>	<u>1.0 (350)</u>	<u>0.6 (352)</u>	<u>0.7 (351)</u>	<u>0.5 (351)</u>	<u>0.06 (346)</u>
Total*	3.4 (707)	1.1 (713)	0.8 (716)	0.9 (711)	0.7 (716)	0.1 (712)

(Numbers in parentheses indicate number of respondents used to calculate each mean.)

*Total includes 2 respondents who now reside outside these world regions.

Table II.C.13

MEAN NUMBER OF PERSONS TRAINED BY CLINICIAN SURVEY RESPONDENTS
IN LAPAROSCOPIC PROCEDURES PER TRAINEE MONTH BY WORLD REGION

World Region	Mean Number of Persons Trained in Laparoscopic Procedures	Number of Respondents
Africa	0.7	(104)
Asia	0.8	(185)
Near East	1.4	(79)
Latin America	<u>0.7</u>	<u>(354)</u>
Total*	0.8	(724)

*Total includes 2 respondents who now reside outside these world regions.

a single mean for the number of persons trained to perform laparoscopy has been calculated since the skills necessary to perform diagnostic versus sterilization techniques are similar. Furthermore, Table II.C.14 has been included to show the number of persons trained per month to perform laparoscopy for only those respondents who reported on their survey that they had access to laparoscopic equipment.

Table II.C.12 lists the mean number of persons trained to perform selected clinical procedures other than laparoscopy per trainee month. Once again there is substantial regional variation in these reports. Similar to the findings from Table II.C.4, more individuals were trained in normal delivery than in any of the procedures listed. Likewise, for every procedure, respondents from Asia report training more

individuals than do respondents from any other region. Furthermore, very few people have been trained to perform vasectomy by JHPIEGO-trained physicians from any region.

Table II.C.13 shows the mean number of persons trained to perform laparoscopic procedures per month by world region for all respondents. Participants from the Near East report training more persons per month (1.4) than respondents from any other region. The mean number of persons trained by physicians in the remaining three regions ranges between 0.7 and 0.8. The overall mean for laparoscopic training was 0.8 persons per trainee per month.

The average number of individuals trained to perform laparoscopy per month increases for all regions when only those respondents who report access to laparoscopic equipment are considered. Table II.C.14 shows that overall, for the 520 respondents who reported access to equipment, an average of one person per month is trained by each respondent. Average numbers of individuals trained per person per year can be calculated from these figures, and total numbers can be calculated using the number of respondents in each category. Refer, however, to Table II.C.15 for an indication of the variation between individual respondents with access to equipment in terms of their laparoscopic training activity.

By comparing the means reported in Table II.C.12 with those reported in Table II.C.13 we find that overall about the same number of individuals were trained to perform laparoscopy as any of the other surgical procedures listed. There is, however, some regional variation in this tendency. Respondents from the Near East report training others to perform laparoscopy more than the other surgical procedures listed. In contrast, Asian respondents reported training others in laparoscopy much less frequently than for each of the other surgical procedures listed except vasectomy. These data suggest that while there is some regional variation, on the average these respondents give laparoscopic training a priority at least equal to that given to training in other gynecological and obstetric procedures.

Table II.C.14

MEAN NUMBER OF PERSONS TRAINED PER TRAINEE MONTH BY CLINICIAN SURVEY
RESPONDENTS WITH ACCESS TO LAPAROSCOPIC EQUIPMENT
IN LAPAROSCOPIC PROCEDURES BY WORLD REGION

World Region	Mean Number of Persons Trained in Laparoscopic Procedures	Number of Respondents
Africa	1.1	(63)
Asia	1.1	(128)
Near East	1.5	(67)
Latin America	<u>0.9</u>	<u>(262)</u>
Total	1.0	(520)

(Numbers in parentheses indicate number of respondents used to calculate each mean.)

The mean number of individuals trained for each of the procedures displayed in Tables II.C.12 and II.C.13 can also be broken down by the type of course in which respondents participated. The training activity of participants can then be compared for these courses. Once again, since the variation in number of participants by type of course is large, definite conclusions about these differences cannot easily be drawn from the data. Looking, however, at the overall trends, we find that for all surgical procedures except cesarean section and laparoscopy, participants from the Management of the Infertile Couple course train fewer people than do trainees from either Advances in Reproductive Health, or the Academic Skills course. The Academic Skills course participants report training more people in every type of

Table II.C.15

DISTRIBUTION OF CLINICAN SURVEY RESPONDENTS WITH ACCESS TO
LAPAROSCOPIC EQUIPMENT ACCORDING TO MEAN NUMBER OF PERSONS TRAINED
IN LAPAROSCOPIC PROCEDURES PER TRAINEE MONTH

Mean Number of Persons Trained in Laparoscopic Procedures per Trainee Month	Number of Trainees	Percent of Total
None	102	19.6%
Less than 1.0	323	62.0
1.0 - 4.9	81	15.6
5.0 - 9.9	7	1.3
10 or more	<u>8</u>	<u>1.6</u>
Total	521	100

procedure listed except for vasectomy than do participants from either of the other two courses. They train the highest number of individuals, 7.5 per month, to perform normal deliveries. They also train a relatively large number of people per month, 3.8, to perform laparoscopy. In the last subsection we found the performance of clinical procedures by these respondents was low relative to the performance of the other course participants. Thus, it appears that physicians who take the Academic Skills course focus more on training others to perform procedures than on performing them themselves.

Table II.C.15 represents the distribution of respondents with access to laparoscopic equipment by the number of individuals they trained to perform laparoscopy per trainee month. Note that 20% of the respondents did not train anyone in laparoscopy. This percentage is reasonable since 14% of all respondents to the

clinician survey reported that they do not teach or train. Furthermore, over half of all respondents reported training less than one person per month. The remaining 19% of respondents reported training more than one person per month. Since the mean number of persons trained per month by respondents with access to laparoscopic equipment from all regions is 1.0, the 19% of respondents who are training more than one person per month are making a substantial contribution to the total number of individuals trained. Several factors not measured by this survey may influence the ability of respondents to train in laparoscopy, including the personal skill and confidence of these individuals, as well as the availability of operating room time for educational activities.

In summary, we have found that most respondents have teaching or training responsibilities. The exact proportions vary by type of course participation, as do the subjects and techniques in which training is given. Academic Skills course participants report the most training activity. Participants from the Management of the Infertile Couple course focus on subjects and techniques relevant to infertility problems, including laparoscopy, while the Advances in Reproductive Health course participants emphasize general reproductive health and contraception in their training. Trainees with access to laparoscopic equipment report training a mean of 1.0 persons each month to perform laparoscopic procedures. Breaking down the training figures by region, we found that respondents from the Near East report training more individuals in laparoscopy while respondents from Asia did the most training in all other surgical procedures.

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 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 II.C.16 we see that more than three-fourths are members of a medical association, and the majority, 62%, belong to a national medical association. Most respondents, 75%, also belong to an Ob/Gyn society, and most of them belong to a national obstetrics and gynecology society. A smaller proportion, 42%, belong to a family planning organization, and the majority of these individuals are members of a national family planning organization. In fact, most respondents who belong to any of these organizations are members of their national organization. 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 is another indicator of the opportunities taken by respondents to disseminate their knowledge. Over half of the respondents, 51%, listed the topic of one or more presentations they had made during the previous 12 months. The 384 respondents who reported any

Table II.C.16

PERCENTAGE OF CLINICIAN SURVEY RESPONDENTS WHO REPORTED
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Type of Membership	Percentage of Respondents	Number of Respondents
Any medical organization	79%	(728)
National medical organization in own country	62	(728)
Any Ob/Gyn organization	75	(717)
National Ob/Gyn organization in own country	60	(717)
Any family planning organization	42	(704)
National family planning organization in own country	32	(704)

(Numbers in parentheses denote the number of participants included in the denominator of the percentages.)

presentations made an average of two to three presentations each during the 12 months prior to returning the survey, a total of 923 presentations. Most of these respondents, 62%, made at least one national presentation, 45% made one or more local presentations, and 22% made international presentations. Thirty percent of the respondents also reported the titles of books and journal articles they had published in the previous 12 months. Of the individuals reporting publications, an average of at least two publications per person were listed.

One mechanism used by physicians to keep informed about new developments in the medical field and about current research findings is to regularly read one or more professional journals. Most respondents, 96%, listed the titles of several publications

which they read regularly. There was space on the survey to list five journals, and 76% of the respondents who listed any publications included the names of three to five journals.

These data show that respondents not only keep informed about current issues in reproductive health, but that they are also active in sharing their knowledge with members of their professional communities. There are, however, other ways in which JHPIEGO trainees may contribute to the process of disseminating reproductive health information and influencing attitudes of their fellow countrymen. They may 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 have a significant impact on the community through contact with patients and community groups. Radio shows and other educational programs are important tools for reaching many groups of people. Since questions about these activities have not been included as part of the clinician survey, these activities will not be discussed in this report. However, through other communication channels JHPIEGO is aware that its trainees do participate in these activities. It is important to keep in mind that participants play key roles in the process of disseminating information on reproductive health and family planning in ways other than those addressed in the survey.

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 is impressive. The knowledge and skills covered in the JHPIEGO courses have been put to use both didactically and clinically. 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.

II.D. SELECTED FINDINGS FROM THE INFERTILITY COURSE QUESTIONNAIRE INSERT

Introduction

The infertility course questionnaire insert, initiated in August 1981, has been designed to assess the success of the Management of the Infertile Couple course. The course targets physicians who have a special interest in the diagnosis and treatment of infertility. The curriculum includes core content on reproductive health care, including topics on contraception and maternal and child health, current information on the factors which affect fertility, diagnostic techniques, and the medical and surgical management of infertility. The questionnaire insert addresses the impact of this curriculum on course participants by focusing on the content specific to the infertility course, and the uses to which the material learned during the course has been put. The specific ways in which the course has been beneficial to participants are also delineated, and questions about the relevance and utility of the educational materials obtained during the course are an important focus of the survey.

The infertility questionnaire is inserted into the clinician survey. It has been sent to the majority of the 250 infertility course participants trained in courses held between April, 1979, and November, 1982. Of these trainees, 128 returned the questionnaire. The findings from the infertility insert discussed in this section will be concerned only with these 128 infertility course participants who returned the questionnaire. Please refer to Section II.C. for a review of the responses provided by these individuals on the clinician survey, as well as discussions on the mechanics of the survey and a comparison of all survey respondents with nonrespondents.

Selected Findings

This discussion on the findings compiled from the infertility insert will focus on the three main components of the insert. First there will be a review of how the

respondents rated the usefulness of many of the topics covered in the course. Then there will be a discussion of the benefits of the course to respondents in their professional activities. Additional discussion of the specific benefits of this training, as cited individually by respondents in their comments on the survey, can be found in Section II.F. of this report. Finally, there will be a review of whether these respondents used the educational materials received in the course and in which activities they have been used. Respondents' opinions about the need for translation of these materials will also be discussed.

Respondents were asked to rate the subjects and general issues discussed in the course both as to how useful they felt they were, and as to whether or not they had had the opportunity to utilize the information in actual practice. They rated the topics on a scale from one to five, where a "one" represents not very useful and "five" represents very useful. For the purposes of this report, the topics and general issues have been divided into two subject classifications: factors influencing fertility, and topics related to the treatment of infertility.

Table II.D.1 shows the mean ratings respondents of topics related to factors influencing fertility. Overall, these topics were rated as being very useful. The mean ratings range from 3.4 to 4.5. The most highly rated topics were pelvic inflammatory disease and infertility, pathology of infertility, and cervical and uterine factors of infertility. These topics all received a mean rating of 4.5. The physiology of infertility, and tubal physiology and pathology followed closely with a mean rating 4.4. The next most useful topics according to the overall ratings were endometriosis (4.2), male infertility (4.0), and stress and infertility (4.0). The remaining topics on the table, epidemiology of infertility, infertility and human sexual behavior, and genetic implications of infertility, all received mean ratings below four. The relatively low ratings of these topics compared with the others listed in Table II.D.1 may be explained by the possibility that such information is not as relevant to the daily reproductive

Table II.D.1

MEAN RATING BY INFERTILITY SURVEY RESPONDENTS OF TOPICS RELATED TO
FACTORS WHICH INFLUENCE FERTILITY

Topics on Factors Which Influence Infertility	Rating				
	Not Very Useful 1	2	3	4	Very Useful 5
Pelvic Inflammatory Disease and Infertility	////////////////////////////////////				4.5
Pathology of Infertility	////////////////////////////////////				4.5
Cervical and Uterine Factors of Infertility	////////////////////////////////////				4.5
Tubal Physiology and Pathology	////////////////////////////////////				4.4
Physiology of Infertility	////////////////////////////////////				4.4
Endometriosis	////////////////////////////////////				4.2
Male Infertility	////////////////////////////////////				4.0
Stress and Infertility	////////////////////////////////////				4.0
Epidemiology of Infertility	////////////////////////////////////				3.7
Infertility and Human Sexual Behavior	////////////////////////////////////				3.7
Genetic Implications of Infertility	////////////////////////////////////				3.4

health problems encountered by physicians from developing countries as those topics which were more highly rated.

No more than 4% of respondents rating the topics listed in Table II.D.1 gave a rating of not very useful (i.e., a score of 1) for most of the topics. Higher proportions, 5% to 7%, rated epidemiology of infertility, infertility and human sexual behavior, and genetic implications of infertility as not very useful. Several respondents also felt that some of the topics listed in Table II.D.1 were not discussed in the course in which they participated. Topics most frequently cited were stress and infertility, and infertility and human sexual behavior by 12% and 8% of respondents, respectively.

Information related to each of the topics listed in Table II.D.1 was utilized by the majority of respondents. The most highly rated of these factors related to infertility were also the topics utilized in actual practice by the largest proportions of respondents. Information relevant to all topics which received mean ratings of 4.4 or higher was utilized by over 90% of the respondents. Information on pelvic inflammatory disease and infertility, and cervical and uterine factors of infertility was utilized by the highest proportions of respondents, 98% and 97%, respectively.

Table II.D.2 shows the mean ratings by respondents of topics related to treatment of infertility. Again the overall ratings for these topics were high indicating that the trainees found them very useful. The topic which received the highest rating, 4.7, was management of the infertile couple. Endoscopy for fertility evaluation, and induction of ovulation followed close behind with mean ratings of 4.6. Most other topics received mean ratings over 4.0. The only topics which received an average rating of less than 4.0 were artificial insemination (3.3), and vasovasostomy (3.1). Since it is likely that these participants primarily treat female patients, it is not surprising that vasovasostomy received the lowest rating of all the topics listed.

With the exception of the last two topics listed on Table II.D.2, no more than 3% of all respondents rated the topics as not very useful. Some topics were rated as not discussed by as many as 20% of respondents. Those most frequently mentioned were

Table II.D.2

MEAN RATING BY INFERTILITY SURVEY RESPONDENTS OF TOPICS RELATED TO
TREATMENT OF INFERTILITY

Topics on Treatment of Infertility	Rating				
	Not Very Useful ----- Very Useful				
	1	2	3	4	5
Management of the Infertile Couple	//////////////////////////////////// 4.7				
Endoscopy for Fertility Evaluation	//////////////////////////////////// 4.6				
Induction of Ovulation	//////////////////////////////////// 4.6				
Advances in Endocrinology	//////////////////////////////////// 4.4				
Surgical Management of Infertility	//////////////////////////////////// 4.3				
Drugs for Treatment of Infertility	//////////////////////////////////// 4.3				
Tubal Surgery	//////////////////////////////////// 4.2				
Future of Fertility Management	//////////////////////////////////// 4.1				
Preventive versus Therapeutic Approaches to Reproductive Health	//////////////////////////////////// 4.1				
Laparoscopic Equipment Care	//////////////////////////////////// 4.1				
Artificial Insemination	//////////////////////////////////// 3.3				
Vasovasostomy	//////////////////////////////////// 3.1				

laparoscopic equipment care, vasovasostomy, and the future of fertility management. These subject areas were not included in the curriculum of the first few infertility courses offered by JHPIEGO.

Information related to all but the last two topics listed in Table II.D.2 was utilized by at least 60% of respondents. The topics management of the infertile couple and induction of ovulation were most frequently utilized in actual practice; 95% of respondents reported they had used information or techniques related to these topics. Furthermore, more than three-quarters of the respondents reported utilizing endoscopy for fertility evaluation, drugs for treatment of infertility, and preventive versus therapeutic approaches to reproductive health in actual practice.

Respondents noted which of each kind of activity they perform has been influenced by the course. Table II.D.3 shows the percent of respondents who reported that the course was of practical value for each activity. Teaching and training was the activity in which most respondents found the course was of practical value; 83% of all respondents felt that the course had enhanced this activity. Seventy-five percent of respondents also felt the course was of practical value in their clinical responsibilities. Lower proportions, 45% and 14% respectively, felt that the course was of practical value in their research and administrative activities. Only 2% of respondents reported that the course was not of practical value in any of their activities.

Information on the utilization of educational materials is requested on the infertility course questionnaire insert. The distribution and utilization of educational materials is an important aspect of all JHPIEGO courses. Participants receive a variety of educational materials, including textbooks, family planning pamphlets, Population Reports, and lecture handouts. There is some variation by date and language of the course as to exactly which materials are given to participants.

Table II.D.3

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

Activity	Percent of Respondents (125)
Teaching and Training	83%
Clinical Responsibilities	75
Research	45
Administration	14
Other	10
None	2

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

Table II.D.4 summarizes the reports of respondents on which educational materials they had used since the course. More than 75% of all respondents reported using each type of material listed. Most popular were Population Reports, with 90% of respondents reporting they had used them. This item was also obtained by the largest proportion of respondents; only 2% reported that they had not yet obtained the Population Reports. The lecture handouts were used by 35% of respondents, the infertility textbook by 80%, and reproductive health pamphlets by 79%. The item most frequently reported as not obtained was the infertility textbook. On the average, respondents reported using three of the materials listed in Table II.D.4.

Table II.D.4

PERCENTAGE OF INFERTILITY SURVEY RESPONDENTS WHO REPORTED THAT THEY USED THE EDUCATIONAL MATERIALS PROVIDED IN THEIR COURSE

Educational Materials	Percent of Respondents Reporting They Had			Total
	Used the Materials.	Not Used the Materials	Not Obtained the Materials	
Population Reports	90%	8%	2%	100% (117)
Lecture Handouts	85	5	10	100 (116)
Textbook on Infertility	80	3	17	100 (117)
Reproductive Health Pamphlets	79	9	12	100 (113)

(Numbers in parentheses indicate the total respondents in each category.)

Respondents used the educational materials in a variety of ways, six of which are shown in Table II.D.5. Teaching and training is the activity in which most respondents (76%) used the materials. Many also shared them with colleagues (69%), and consulted them for special lectures (59%). Smaller proportions had used them in the preparation of reports (32%), placed them in a library (23%), or utilized them in other ways (7%). On the average, respondents reported using these materials in two or three of the activities listed in Table II.D.5, and 21% of the respondents used the materials in more than three of these activities.

Table II.D.5

PERCENTAGE OF INFERTILITY SURVEY RESPONDENTS
REPORTING HOW THEY USED THE EDUCATIONAL MATERIALS
PROVIDED IN THEIR COURSE

Activity	Percent of Respondents (121)
Teaching and Training	76%
Shared with Colleagues	69
For Special Lectures	59
Preparation of Reports	32
Placed in a Library	23
Other	7

About half of the respondents felt that some of the educational materials they received or used in the course would be more useful to them if translated into another language. Most frequently requested were the textbook on infertility, and a variety of items not obtained during the course. Of the respondents who thought the materials would be more useful if translated into another language, 62% requested the other materials, 51% the infertility textbook, 25% the lecture handouts, 21% the reproductive health pamphlets, and 17% the Population Reports. The languages most frequently requested were Spanish and French. Others mentioned include Portuguese, Arabic, Greek, Turkish, Indonesian, Malay, and Swahili.

Conclusion

In conclusion, respondents to the infertility course questionnaire insert found the course Management of the Infertile Couple to be a positive and useful experience. They rated most of the topics discussed in the course as useful. Essentially all respondents had utilized at least some of the information learned during the course in their actual practice. They reported on the impact of the course in their professional lives by detailing several activities in which it has been of practical value to them.

Respondents also gave positive feedback about the educational materials they had received in the course. They found the materials useful and had used them upon their return from the course. Information contained in the educational materials was most useful to respondents in their teaching and training activities. Materials had also been shared with colleagues or otherwise made available to individuals not participating in the course.

II.E. SELECTED FINDINGS FROM THE ACADEMIC SKILLS QUESTIONNAIRE INSERT

Introduction

The academic skills questionnaire insert, which accompanies the clinician survey, was designed to assist in evaluating the Academic Skills for Medical School Faculty in Reproductive Health course. This course, offered since fiscal year 1980, teaches academic and administrative skills to physicians from developing countries who are faculty members in obstetrical and gynecological departments of medical schools. Subject matter concentrates on three areas: reproductive health, with an emphasis on preventive health care, research methodology, including such skills as biostatistics and epidemiology, and teaching and training skills. The questionnaire insert addresses the impact of this material on participants by focusing on respondents' opinions on the usefulness of course topics. It also includes an inquiry as to the practical application of course material in professional activities, and an inquiry as to how educational materials obtained in the course had been utilized. Finally, since one of the goals of this course is the preparation of participants to carry out their own research, trainees were also asked to comment on whether they had implemented any research projects since the completion of the course, and, if so, to what extent the JHPIEGO course had aided in the implementation of these projects.

The academic skills questionnaire, which is inserted into the clinician survey, has been sent to the 57 participants who were trained in academic skills courses held between June, 1980 and May, 1982. Of these 57 participants, 36 responded to the questionnaire insert. The findings discussed in this section will deal with only the findings provided by those 36 participants who returned the questionnaire insert. Please refer to Section II.C. of this report for a review of these participants' responses to the clinician survey, as well as discussions on the mechanics of the survey and a comparison of survey respondents with non-respondents.

Selected Findings

The academic skills insert includes three areas of concentration which will be the focus of this discussion. The first section relates to respondents' ratings of various course topics. The next area to be discussed will be the value of the JHPIEGO course which respondents ascribed to their professional activities. Additional comments about how the course related to individual respondent's specific activities can be found in Section II.F. of this report. Finally, there will be a discussion of whether the educational materials received in the course had been utilized, and, if so, in what manner.

Respondents were asked to rate a number of course topics as to their usefulness and as to whether they had been able to utilize the information obtained in their actual practice. Topics included in this rating were those related to reproductive health, teaching and training skills, and research methodology. These were rated on a scale from one to five, where "one" represents not very useful and "five" represents very useful.

Table II.E.1 shows the mean ratings provided by the respondents as to the usefulness of those topics related to reproductive health. Respondents viewed all of these subjects as useful, with mean ratings ranging from 3.4 to 4.2. High-risk pregnancy was rated as that topic which respondents considered the most useful, receiving a mean rating of 4.2. Also considered very useful were infant mortality and high-risk gynecology, both receiving a mean rating of 3.9. Social environment and reproduction, and physical and chemical environmental factors in reproduction both received a mean rating of 3.7, and the topic of preventive versus therapeutic approach to reproductive health was rated at 3.6. Also considered useful, but to a slightly lesser extent, were the role of ob/gyn pathology research, and genetic factors in reproduction, which received mean ratings of 3.5 and 3.4 respectively.

Table II.E.1

MEAN RATING BY ACADEMIC SKILLS SURVEY RESPONDENTS OF
TOPICS RELATED TO REPRODUCTIVE HEALTH

Reproductive Health Subjects	Rating				
	Not	Very Useful	-----	Very Useful	
	1	2	3	4	5
High-risk Pregnancy	////	////	////	////	4.2
Infant Mortality	////	////	////	////	3.9
High-risk Gynecology	////	////	////	////	3.9
Social Environment and Reproduction	////	////	////	////	3.7
Physical and Chemical Environmental Factors in Reproduction	////	////	////	////	3.7
Preventive versus Therapeutic Approach to Reproductive Health	////	////	////	////	3.6
Role of Ob/Gyn Pathology Research	////	////	////	////	3.5
Genetic Factors in Reproduction	////	////	////	////	3.4

Some of the topics listed in Table II.E.1 were rated as not having been discussed by more than 20% of the respondents. For instance, 42% of the respondents stated that the subject of high risk gynecology had not been included in their course discussions, and 23% that the topic genetic factors in reproduction had not been discussed. Two topics, preventive vs. therapeutic approach to reproductive health and

the role of ob/gyn pathology research, were mentioned by a little less than 20% of respondents as not having been discussed.

All of the course topics listed in Table II.E.1 were utilized in actual practice by the majority of respondents. Material relevant to two topics, social environment in reproduction and high-risk pregnancy, was put to use by over 90% of the respondents. Among the topics listed in Table II.E.1, high-risk pregnancy had also been assigned the highest mean rating, so it is clear that participants valued this particular course material. Eighty-nine percent of the respondents reported utilizing information gained from the course discussion of the preventive vs. therapeutic approach to reproductive health. Over 75% of the respondents felt their actual practice was aided by knowledge of infant mortality, high risk gynecology, and physical and chemical factors in reproduction, and 68% felt their practice was aided by knowledge of genetic factors in reproduction.

Table II.E.2 shows the mean ratings of those topics related to teaching and training skills. These topics received even higher ratings than those shown in Table V.1, with ratings ranging from 4.0 to 4.8. Teaching methodology received the highest mean rating, 4.8, followed by the topic relating to concept of responsibility -- teacher versus student, which received a mean rating of 4.6. The audio-visual workshops were considered quite useful, with a mean rating of 4.3. A number of topics, curriculum development methodology, communication skills, small group processes, and rating skills, all received a high mean rating of 4.2, and the course topic instructional materials for reproductive health education and training received a mean rating of 4.0. Since one focus of this course is on the improvement of participants' teaching skills, these findings illustrate very clearly the benefits participants derived from this type of course material.

Most respondents felt that all the topics listed in Table II.E.2 had been discussed in their course, and they had put the knowledge they gained from them to use in their

Table II.E.2

MEAN RATING BY ACADEMIC SKILLS SURVEY RESPONDENTS OF TOPICS
RELATED TO TEACHING AND TRAINING SKILLS

Topics Related to Teaching and Training Skills	Rating				
	Not Very Useful ----- Very Useful				
	1	2	3	4	5
Teaching Methodology	//////////////////// 4.8				
Concept of Responsibility for Learning -- Teacher versus Student	//////////////////// 4.6				
Audio-visual Workshops	//////////////////// 4.3				
Curriculum Development Methodology	//////////////////// 4.2				
Communication Skills	//////////////////// 4.2				
Small Group Processes	//////////////////// 4.2				
Rating Skills	//////////////////// 4.2				
Instructional Materials for Reproductive Health Education and Training	//////////////////// 4.0				

actual practice. For instance, all of the topics related to teaching and training skills, except one, were reported as not having been discussed by at most 3% of respondents. However, 10% reported that curriculum development methodology had not been discussed. As regards the utility of this material, the topic which was assigned the highest mean rating, teaching methodology, was also reportedly utilized by 100% of the respondents. The course topic concept of responsibility for learning -- teacher vs.

student, was also utilized by a very high percentage of respondents (94%), and 90% of the respondents had utilized the information obtained in the discussion of communication skills. All course discussions of teaching skills had been utilized by at least 74% of the respondents.

Table II.E.3 shows respondent ratings of topics related to research methodology. These ratings were also favorable on the average, ranging from 3.5 to 4.3. The topic regarded most highly by respondents was research proposal writing, which received a mean rating of 4.3. Also appreciated were problems of management, and process versus outcome research methodology, both of which received mean ratings of 4.1. The course topics screening for detection of risk factors, and research funding sources both received mean ratings of 4.0, and the topic analytical study techniques was also well received, with a mean rating of 3.9. Respondents assigned a mean rating of 3.8 or 3.7 to biostatistics, experimental design and statistical inference, and a rating of 3.5 to indices of health.

Two of the topics listed in Table II.E.3, indices of health and experimental design, were reported as not having been discussed, by 13% and 10% of the respondents respectively. The course material most utilized by respondents in their practice was statistical inference (82%), even though the course discussion on this topic had received one of the lower mean ratings of the topics shown in Table II.E.3. Two topics were utilized by approximately 80% of respondents: problems of measurement, and process vs. outcome research methodology. Furthermore, even though the course discussion on research proposal writing received the highest mean rating of the topics in Table II.E.3, a smaller percentage of respondents, 68%, reported having utilized this material in their practice. The course topic utilized by the smallest percentage of respondents, 50%, was research funding sources.

Table II.E.3

MEAN RATING BY ACADEMIC SKILLS SURVEY RESPONDENTS OF TOPICS
RELATED TO RESEARCH METHODOLOGY

Topics Related to Research Methodology	Rating				
	Not Very Useful ----- Very Useful				
	1	2	3	4	5
Research Proposal Writing	//////////////////// 4.3				
Problems of Measurement	//////////////////// 4.1				
Process versus Outcome Research Methodology	//////////////////// 4.1				
Screening for Detection of Risk Factors	//////////////////// 4.0				
Research Funding Sources	//////////////////// 4.0				
Analytical Study Techniques	//////////////////// 3.9				
Biostatistics	//////////////////// 3.8				
Experimental Design	//////////////////// 3.8				
Statistical Inference	//////////////////// 3.7				
Indices of Health	//////////////////// 3.5				

Table II.E.4

PERCENTAGE OF ACADEMIC SKILLS SURVEY RESPONDENTS REPORTING
PROFESSIONAL ACTIVITIES IN WHICH THE COURSE WAS OF
PRACTICAL VALUE

Activity	Percent of Respondents (34)
Teaching and Training	97%
Research	56
Clinical Responsibilities	44
Administration	32
Other	12
None	0

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

In addition to the ratings of course topics, the academic skills insert includes questions on the practical applications of the JHPIEGO course in the professional activities of participants. Table II.E.4 illustrates the responses to this inquiry. Almost all of the respondents, 97%, reported that the JHPIEGO course was most valuable to them in their teaching and training activities. This report is consistent with the uniformly high mean rating assigned by respondents to the course discussions of teaching and training skills. Fifty-six percent of respondents stated that the course

Table II.E.5

PERCENTAGE OF ACADEMIC SKILLS SURVEY RESPONDENTS WHO REPORTED
THAT THEY USED THE EDUCATIONAL MATERIALS PROVIDED IN THEIR COURSE

Educational Materials	Percent of Respondents Reporting They Had			Total
	Used the Materials	Not Used the Materials	Not Obtained the Materials	
Education Textbooks	88%	6%	6%	100% (34)
Population Reports	85	3	12	100 (34)
Lecture Handouts	87	3	10	100 (31)
Measurement Textbooks	68	19	13	100 (31)
Reproductive Health Pamphlets	68	16	16	100 (32)
Health Textbooks	68	16	16	100 (32)
Self-Study Modules	43	10	47	100 (30)

(Numbers in parentheses indicate the total respondents in each category.)

was valuable in the area of research, and 44% felt the course was of assistance in their clinical responsibilities. A smaller percentage, 32%, felt that the course has been of practical value in their administrative activities. Finally, all of the academic skills respondents felt that this course had been of value in at least one of their professional activities, and on the average they cited its value in at least two of the activities listed in Table II.E.4.

Participants were also asked to furnish information on whether they had received or used the educational materials provided in the course. Table II.E.5 illustrates these findings. Those items used by the largest majority of respondents were the education textbooks, used by 88% of respondents, the lecture handouts, used by 87% of respondents, and the Population Reports, used by 85% of respondents. Most of the respondents had received each of these items; no more than 12% of respondents reported not receiving any one of these materials. Sixty-eight percent of the respondents had utilized the measurement textbooks, the health textbooks, and the reproductive health pamphlets. These materials had not been obtained by between 16% and 13% of the respondents. Only 43% of the respondents had made use of the self-study modules, which 47% of the respondents reported that they had not obtained. On the average, respondents reported using four or five of the materials listed in Table II.E.5.

As illustrated in Table II.E.6, participants were also asked to indicate in what manner they had used the educational materials provided. The highest percentage of respondents, 83%, reported that they had used the educational materials in teaching and training. Nearly two-thirds of the respondents reported sharing the materials with colleagues, and 74% reported using the materials for special lectures. Over 30% reported using the materials in research projects and proposal writing in preparation of reports, or by placing them in a library. On the average, respondents reported using these materials in three of the ways listed in Table II.E.6, and 44% of the respondents used the materials in more than three of these activities.

About one quarter of the respondents felt that some of the educational materials they received or used in the course would be more useful to them if translated into another language. The materials most frequently listed were a variety of items not obtained during the course. The languages most frequently requested were Spanish and Portuguese. Others mentioned include Hindi, Bengali, Thai, Indonesian, and Kiswahili.

Table II.E.6

PERCENTAGE OF ACADEMIC SKILLS SURVEY RESPONDENTS
REPORTING HOW THEY USED THE EDUCATIONAL MATERIALS
PROVIDED IN THEIR COURSE

Activity	Percent of Respondents (34)
Teaching and Training	88%
Shared with Colleagues	65
For Special Lectures	74
For Research Projects and Proposal Writing	38
Preparation of Reports	35
Placed in a Library	32
Other	3

Conclusion

Respondents to the academic skills questionnaire insert were enthusiastic as to the usefulness of course topics, the practical application of course topics to their professional activities, and the benefits of the educational materials provided in the course. The subject matter concerning teaching and training skills was of particular interest, and it is clear from the survey findings that skills and materials provided by the course were being utilized by a large majority of participants.

II.F. COMMENTS ON SURVEYS RECEIVED DURING FISCAL YEAR 1983

Introduction

JHPIEGO has instituted several methods for evaluating its educational and training programs. One such method is the review of comments compiled from questionnaires returned by course participants. These comments 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 the 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 it can 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 requested from the participants vary according to the course they attended. Therefore, the comments recorded in this section were provided by survey respondents who participated in one of the following courses: Management of the Infertile Couple, Reproductive Health for Administrators of Family Health and Family Planning Programs, and Academic Skills for Medical School Faculty in Reproductive Health.

Management of the Infertile Couple

The Management of the Infertile Couple course participants are requested to provide comments on tangible benefits of the course, and information which could be useful to other participants. The trainees who returned survey questionnaires described a number of benefits derived from the course. In providing information for other participants the respondents took two approaches. They provided background information on their countries as well as problems and successes encountered in their professional activities, and suggestions for improvement of the course.

Many trainees expressed their appreciation for the opportunity to attend a course on the management of infertility. Infertility represents a significant problem in many of their countries and they were enthusiastic about the education provided to help overcome this problem. In providing benefit., they discussed both the overall philosophy of the course as well as certain aspects which they found useful. The most frequently cited benefit was the comprehensive education on the factors that affect fertility. Many trainees reported that the course improved their general knowledge of obstetrics and gynecology as well as their specialized understanding of infertility. They also found the broad overview of the field of family planning and contraceptive use very helpful. In general, many participants felt that the course helped them to become better reproductive health practitioners.

Many respondents described the benefits of the course in terms of their professional activities. They reported that their clinical responsibilities had increased and that the quality of patient care they provided was enhanced. A trainee from Honduras reported that he now has a better understanding of the problem of infertility and its medical treatment. Another from Ghana wrote that since completing the course he has treated about 50 patients and that even though he is working in less than desirable conditions, approximately 30 of his patients are now pregnant. A Thai trainee commented that the training received was most useful during his establishment

of an infertility clinic. Finally, a trainee from Mexico reported that after using the information and the techniques of diagnostic laparoscopy taught in the course he had very good results when treating infertility. As a result, the technique has been implemented as a routine procedure in the Ob/Gyn department at his hospital.

Some trainees pointed out areas in the course which did not fully meet their needs. Several respondents felt that the clinical component of the training was too short and should be extended. One stated that he would have liked the training to have included more practical experiences which would have enabled him to observe the investigation of infertile couples and tubal surgery. He felt that this would have provided him with invaluable information that would assist him in his treatment of patients. Another commented that while the lectures were excellent, he felt the trainees were pushed too hard to absorb an abundance of material in too short a period of time.

A number of participants expressed a desire for additional training. A trainee from Fiji expressed an interest in attending JHPIEGO's course entitled Promoting Reproductive Health through Management of Sexually Transmitted Diseases (STD). He states that his interest in the course is twofold: (1) his country has a disturbing incidence of sexually transmitted diseases, and (2) the course's emphasis on the impact of these diseases on maternal and child health. Another respondent from Yemen reported that due to the use of diagnostic laparoscopy, his institution is faced with numerous cases of tubal factor in sterility. As a result, he would like to attend a course in microsurgery. He also expressed a need for a refresher course in laparoscopy, one that covers new techniques. Some respondents also expressed a desire to attend a course in gynecological oncology.

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. They stated that one tends to forget what has been

learned during clinical practice and is often in need of a refresher course by the time the laparoscopic equipment has been installed at their institutions. Thus, the delay in the installation of equipment affects the quality of services they offer their patients. Others spoke of the need for additional equipment. One trainee reported that there is one laparoscope at his institution and that when the scope is in need of repair, laparoscopy comes to a halt. Another reported that there were seven specialists and one scope at his institution. The problem cited here is that there is not enough equipment available to meet the demands for laparoscopic procedures.

Several suggestions for improving the infertility training program were provided. Trainees recommended both additions to the course curriculum and suggestions involving follow-up activities subsequent to the course.

One trainee felt that the course is too general. He suggests that rather than attempting to meet the needs of a diverse group of participants, the course should be designed in such a way so as to facilitate its being taught according to a group's area of specialization. He believes that the goals and objectives of the course would be more easily met if designed and taught in this manner. Another trainee stated that a practical course on infertility would be most useful, especially if it was taught in conjunction with the didactic component. Still another recommended that JHPIEGO expand its course to include other areas of infertility management. Yet another stated that he would like JHPIEGO to develop a course in infertility that is designed specifically for teachers. Many respondents suggested that JHPIEGO hold periodic trainee reunions for the purposes of reorienting former trainees, developing a mutual support system among JHPIEGO graduates who are occupying high political and administrative positions, and ascertaining who is still involved in fertility control programs. Finally, one participant suggested that JHPIEGO distribute its educational materials prior to the course in order to facilitate better preparation by the trainees.

In addition to comments on the course and laparoscopic equipment, some trainees commented on the dearth of current medical journals and periodicals in their

countries. A trainee from Burma reported that medical publications were not available in bookstores in his country. As a result, the only way to keep abreast of new developments in Ob/Gyn, if one has the time, is to visit the medical college library. The library materials, however, are noncirculating. Another trainee from Jordan reported that he works at an institution that serves a large geographical area. Consequently, he sees all complicated Ob/Gyn cases that occur in the area. He expressed a need for recent Ob/Gyn publications so as to be able to provide the best medical care for his patients. Finally, a trainee from Madagascar also expressed a need for current Ob/Gyn publications so as to keep abreast of recent developments in his field.

Reproductive Health for Administrators of Family Health and Family Planning Programs

Participants in the Reproductive Health for Administrators of Family Health and Family Planning course who returned questionnaires were extremely enthusiastic in their responses regarding the training. They reported that the course was well structured, most informative and the lectures were excellent. The trainees also commented on the benefits derived from the course and offered suggestions on curriculum content and design which they felt would enhance the course offerings.

Many of the respondents stated that because they are working in responsible reproductive health administration 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.

Many described innovative reproductive health programs which they have developed since their course participation. These individuals commented that the course provided them with the incentive and direction necessary for initiating such projects.

Skills taught in the course which some of the trainees mentioned having learned and utilized are: planning by setting priorities, use of demography and statistics, establishing educational programs, evaluation of health programs, and new techniques and approaches for medical research. Many of the respondents said that the literature distributed during the course was useful and helped to remind them of the concepts taught after they had returned home. One aspect of the course which was praised repeatedly was the emphasis on interaction between trainees. Such interaction, they felt, contributed to an overall understanding of the problems and successes of reproductive health administration in developing countries. Through course discussions, they provided one another with solutions to problems and encouragement for establishing new approaches to reproductive health program management. Furthermore, they expressed the desire to remain in contact with their classmates after the course had ended so that they could continue to share experiences and new ideas.

In addition to learning useful management skills, the respondents reported that they appreciated the opportunity to be updated on the clinical aspects of reproductive health through the coverage of a wide range of reproductive health topics. They explained how a knowledge of the most current clinical concepts and techniques was essential to effective administration of reproductive health projects. The clinical discussions which proved most useful to the trainees included updates on contraceptive use and problems related to infertility. Some trainees conduct seminars on advances in reproductive health, and thus, found these discussions very instructive and relevant.

Others who work in clinical capacities described how these discussions enhanced the patient care they provide.

Some of the trainees cited instances where their training has enriched their professional activities. One trainee reported that as a result of his course participation, he is now able to administer a fertility program which is a part of Colombia's Social Security Institute. He also stated that he is now capable of organizing their public health and family planning programs. Another participant from Nigeria stated that he was attempting to establish an effective family planning program in his state of Kaduna. He was also organizing a training program for his field staff. A trainee from Brazil reported that as a result of his training, he was able to create a reproductive health pilot program for academics in medicine and nursing, as well as for other professionals in the area of reproductive health. He also promoted the first national conference on teaching family planning in medical schools. Another Brazilian tells of using the concepts he learned in the course in the planning of a prenatal service his university plans to establish in the community centers of the low-income districts in his city. In addition, a trainee from Niger commented that the course refreshed her knowledge of administrative techniques and pointed out the usefulness of scientific research in the field of nursing.

While many trainees stated that JHPIEGO is perfectly tuned in to the problems of family planning and reproductive health training and that the course was most useful, they did have a number of suggestions for improving the course. The suggestions provided by the participants involve all aspects of JHPIEGO activity. They include recommendations for recruitment of candidates, new or revised course subject matter, reorganization of course format, and follow-up activity.

A number of the suggestions made were course specific. Many of the trainees commented that the clinical practice component of the course was an extremely important phase of their training because it afforded them an opportunity to develop

their skills through the practical application of the techniques learned. Therefore, they suggested that the time allotted for the clinical practice component be extended. Some of the respondents felt that the coursework is necessary to the assimilation of effective health care programs in their countries. Consequently, they recommended that the course time be longer so as to facilitate the absorption of more information by the trainees. On the other hand, there are those who felt that the course was too intense and that the trainees were not given enough time to absorb the material presented. They too would have liked to see the length of the training period extended.

Some trainees also had suggestions regarding the educational materials used during the course. A few respondents from Spanish- and Portuguese-speaking countries felt that the texts, summaries of lessons and clinical cases used for discussion should have been translated into Portuguese and Spanish. This would enhance their comprehension of the material. Others suggested that educational materials be distributed prior to actual course participation so as to allow the participants time to become familiar with the material. This, they felt, would improve the interaction between the lecturers and the participants.

In terms of course content, one trainee recommended that the course emphasize the relationship between family planning and the improvement of children's health and welfare. He also requested that more attention be paid to the relationship between a low birthrate and a low infant mortality rate. Another respondent suggested that the course place more emphasis on subjects related to management and planning. Finally, some respondents stated that the course appeared to attach very little importance to the role of the female nurse as a health professional. They commented that the nurse was indeed an important member of the profession and is indispensable to any program, especially family planning. They suggested that the importance of the nurse's role be stressed during the course.

In addition to course content, a number of respondents had suggestions regarding trainees. One trainee commented that if JHPIEGO is to have a positive effect on matters concerning population, it should make every effort to expand the pool from which it selects course participants. He suggested that the trainees be selected not only from medical schools, public hospitals, and clinics, but should also come from ministry departments, legislative departments, and private hospitals. Another trainee recommended that course participants be selected from those who are real leaders in their communities rather than from those who simply occupy political positions in public institutions. Still another recommended that more emphasis be placed on training health administrators who could be instrumental in increasing the public's awareness of the need for family planning.

Some trainees also commented on the cosmopolitanism of the course participants. They stated that mixing a variety of health professionals in a course made it difficult to achieve the goals set for the course because the focus of each participant varied according to his or her area of specialization. Therefore, they suggested that a specific course be designed to meet the needs of each group according to their job responsibilities.

Academic Skills For Medical School Faculty in Reproductive Health

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 motivated them to develop projects and provided them with specific direction and guidance in initiating and conducting those projects. Several of the respondents elaborated by describing projects they had started. One trainee described the use of his newly acquired skills to draft a proposal to study the use of parlodol in the management of advanced

carcinoma of the cervix, for which he received funding. Another discussed his efforts to determine the number of preventable complications that occur when intrauterine devices are inserted by untrained or nonspecialized personnel. Finally, another respondent discussed a project he initiated to assess the effectiveness of teaching and its outcome in medical schools.

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 are: protocol preparation, literature searches, and statistical analyses.

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 for their perusal. As a result, they were pleased with the wealth of information and educational materials distributed during training. One trainee reported that he has been sharing the information acquired during the course by conducting small discussion group sessions for other health professionals. He also told us that he prepared a library of photocopies of the educational materials distributed during the course for use by his department.

The participants also described obstacles which 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 funding from various funding agencies. Another obstacle mentioned was that many of the participants work under physicians or professors who are reluctant to accept the new and innovative concepts introduced in the course. One participant reported that his most significant problem was a shortage of staff available to assist with research projects. He said that permanent research assistants were necessary to ensure

successful outcome of research projects. Still another stated that he and his colleagues were having difficulty keeping abreast of new developments in the area of obstetrics and gynecology because current medical journals and periodicals were not always accessible. He said that these materials would assist in enhancing their knowledge if they were more readily available.

As previously stated in this section, trainees were asked to suggest ways in which they thought the training could be improved. Several participants responding to this question suggested that the course include more practical experiences than theory. They felt that an expansion of the clinical component of the training would greatly enrich their professional development. One respondent recommended that the trainees be allowed to spend a week observing the treatment of Ob/Gyn patients in the United States. He felt that this would be most beneficial to physicians in developing nations because they would gain new insight into patient care. Another commented that the course included more statistics than was necessary. She also suggested that training should be more clinically oriented. Still another participant recommended that the course time be lengthened to a three month period. He felt that this would permit an in-depth study of the subject matter offered. He also suggested that a practical demonstration of laparoscopic techniques should be included in the training. Finally, a trainee suggested that JHPIEGO should offer refresher courses for former JHPIEGO fellows.

Conclusion

The comments sections of the questionnaires supplement JHPIEGO's evaluation data and follow-up information on trainees. Through these comments we receive useful descriptions of the medical and social conditions in developing countries, information on problems and successes faced by the trainees, discussions of benefits of the courses, and suggestions for improvement of future courses. In general, the

comments indicate how well the trainees are able to incorporate the concepts and skills learned in the course into their professional activities.

The participants demonstrated much enthusiasm and professional dedication through their comments. They described many benefits of the courses, and thus, apprised us of how the course helped them enhance their professional services. The suggestions they provided assist us in improving the specific courses and the JHPIEGO program in general.

SECTION III: EVALUATION OF IN-COUNTRY PROGRAMS

III.A. INTRODUCTION

In 1978 the emphasis of JHPIEGO's training activity shifted from U.S.-based to regional and national training. As a result, training efforts are now focused primarily on in-country projects. This shift in emphasis has, in turn, led to an increase in total training activity. As a result of the growth in in-country training, 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 has been 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 teaching reproductive health knowledge and skills. JHPIEGO also wishes to assess the professional activities undertaken by the trainees since their attendance of the course, the condition and utilization of equipment donated, and a description of both successes and problems encountered by the trainees.

The APS survey has been designed to comprehensively 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. The operational information provided by the survey, because it is program specific, permits project officials to monitor the location of trainees and equipment, to follow up on the program more carefully, and to identify those participants who are having specific problems which should be addressed, such as equipment malfunction, or

high complication rates for clinical procedures. Utilization of this information can thus aid project officials in program planning and troubleshooting.

Evaluation is a process for making decisions. It is designed to provide objective feedback about what a program is accomplishing and how well it is meeting its long-term goals. The information provided by the APS survey permits the evaluation of in-country programs on two levels: by JHPIEGO and by in-country project officials. By utilizing feedback from the respondents on procedures performed, second generation training activity, evaluation of the course, and advocacy of family planning, JHPIEGO is able to make some comparisons between similar types of programs. Care is taken to account for cultural, educational, professional and language differences between the aggregate responses obtained from different programs. This process, in turn, enables JHPIEGO to determine which factors influence the most successful of these programs. The evaluation process also benefits the in-country programs because it provides project officials with insights into their own program; insights that can be used to improve the program's efficiency and effectiveness. The broader perspective furnished by this evaluation process can enhance a program's operation if taken into consideration when decisions about the program are made.

The evaluation process encompassed by the APS is a joint effort between JHPIEGO and the project director and his staff. However, the role of the project director is a great deal different from that of JHPIEGO. The project director and his staff play a key role in the administration of the survey. Since the trainees provide the most appropriate and adequate responses when they have a clear understanding of the entire survey, one important responsibility of the project director is to explain the need for this evaluation and to discuss the specific details of the survey with the trainees. The project director is also responsible for sending the survey to trainees, monitoring mailings and returns, reviewing returned questionnaires, and forwarding the packets of returned surveys to JHPIEGO.

The review of the completed questionnaires is another important aspect of the evaluation process inasmuch as it can provide some important perspectives on the operation of the project and its success in improving the participants' knowledge and skills in reproductive health. The comments of each participant provide the project director and staff with insight into the particular experiences, needs, and problems common to many participants. This information is extremely valuable for planning modifications of the program that will improve its effectiveness and meet the changing needs of its participants.

JHPIEGO'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 insure 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 from these analyses to the project director approximately two months after receipt of the questionnaires. The project director, after reviewing the results of the analysis, can plan modifications in his program in accordance with these results.

The survey is sent to participants of all JHPIEGO-sponsored courses with a clinical component, as well as to participants of some JHPIEGO-sponsored didactic update courses. It is first sent to these participants after a minimum of six months has elapsed since their course participation. Thereafter, the survey will be sent to all eligible participants on a yearly basis until two responses are received from each trainee.

The following two subsections will focus on the analysis of the responses by participants trained in regional and national programs in Brazil and the Philippines.

The findings abstracted from the Brazilian in-country program will be presented in Section III.C of this report, while the analysis of the Philippines in-country program is summarized in Section III.B.

A word of caution should be mentioned before any attempts to compare the findings in the following subsections are made. The respondent groups represent different populations of individuals with potentially very different characteristics. No measure of how the Philippine respondents are intrinsically different from the Brazilians 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 been pretested in different cultures, so no assurances of these equivalences can be made. There may be some bias between the Brazilian and Philippine respondents due to differences in the English versus Portuguese versions of the questions, as well as due to 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 and not quantitative differences which may be revealed.

III.B. SELECTED FINDINGS FROM THE ANNUAL PARTICIPANT SURVEY
OF THE PHILIPPINES

Introduction

Since fiscal year 1979 JHPIEGO has been sponsoring the training of physicians and nurses in laparoscopy at the Mary Johnston Hospital in the Philippines. It is hoped that this program will help improve reproductive health in the Philippines by institutionalizing the practice of laparoscopy in hospitals throughout the country. Physician participants in the program are, upon completion of the didactic and clinical components of the training course, skilled in performing laparoscopy under local anesthesia, as well as familiar with up-to-date issues and methods in the field of family planning. Nurse participants are skilled in assisting physicians during laparoscopy, and in the techniques of laparoscopic equipment care. They also receive additional training in other family planning methods, infertility, counseling, administration, and management. All participants are selected from institutions that either are designated to receive laparoscopic equipment, or which are already equipped.

By the end of fiscal year 1983 the Philippines in-country program has trained 186 physicians and 111 nurses from the Philippines as well as 28 participants from other developing countries in Asia and the Near East. Eighty institutions in the Philippines are represented by the Philippine trainees, 26 of which have been equipped with JHPIEGO-donated laparoscopes. The Annual Participant Survey (APS) has been sent to 116 of the participants from the Philippines, 54 physicians and 62 nurses, who were trained between June 1, 1981 and September 30, 1982. This survey is one of the tools employed in JHPIEGO's efforts to obtain feedback about the effectiveness of this program. The survey was conducted by Dr. Virgilio Oblepías, project director of the program. Of the 116 eligible participants, 72 returned completed questionnaires, 28

refused to respond to the survey or could not be located, and 16 did not return the survey for other unknown reasons. Completed questionnaires were received from Dr. Oblepias in July, 1983 by JHPIEGO for analysis. The discussion which follows in the remainder of this subsection will be concerned with the responses of the 72 participants, 37 physicians and 35 nurses, who returned completed questionnaires.

Selected Findings

Respondents reported on many aspects of their professional activities on the survey, as well as providing their opinions about selected aspects of the course they took. The findings covered in this section will focus on these reports, beginning first with aspects of the respondents' current professional activities, specifically their current position, descriptions of the clinical procedures they have performed in the year prior to returning the survey, and a discussion of the types of anesthesia they employed. Then there will be a review of the reports on the laparoscopes installed at each respondent's institution. Following the equipment discussion this report will cover the teaching and training activities of respondents. Finally, there will be an evaluation of the course as it is viewed by respondents at least six months since their participation.

Of the 72 participants who could be located and who responded to the survey, 87% stated they were working in the same position at the same institution which sponsored them for the course. Since nearly 24% of all eligible participants could not be located at the time of the survey, primarily because they had left their institution, respondents are definitely not representative of all program participants on this question. However, although not representative of all participants in terms of their professional position, most respondents, 86%, reported they used the skills learned during the course in their primary position.

Respondents reported on the number of contraceptive and other obstetric and gynecologic procedures they had performed, assisted, or scrubbed with in the past 12 months. Table III.B.1 shows the proportion of all respondents by type of course taken who reported performing, assisting, or scrubbing with each of the procedures listed. Note that a higher proportion of physician respondents reported performing or assisting with each of the procedures listed than did the nurse respondents. Procedures listed as those most commonly performed, assisted or scrubbed with by all respondents were laparoscopic tubal ligation, minilaparotomy, family planning counseling, normal delivery, and cesarean section.

Tables III.B.2 and III.B.3 show the mean number of procedures performed, assisted or scrubbed with each month by all respondents who reported performing each of the procedures listed. Looking first at the number of contraceptive procedures shown in Table III.B.2, we find that on the whole those nurse respondents who reported any procedures reported more procedures per month than the physician respondents. The highest number of procedures performed per month by each type of professional was family planning counseling. Physician respondents reported performing or assisting with at least six of each of the following procedures each month: laparoscopic tubal ligation, minilaparotomy, provision of birth control pills, and provision of barrier methods. They provided injectable contraceptives and inserted IUDs about one third as frequently as they performed the above procedures.

The mean numbers of obstetric and gynecologic procedures performed, assisted, or scrubbed with each month by respondents are shown in Table III.B.3. Most frequently reported by both nurse and physician respondents were normal deliveries with an average of 30 per month reported by the 47 individuals who listed how many normal deliveries they had been involved in. Physicians reported performing or assisting with 7 cesarean sections and 8.9 other obstetrical and gynecological procedures each month. Very few diagnostic laparoscopies were reported by either

TABLE III.B.1

PERCENTAGE OF ALL RESPONDENTS FROM THE PHILIPPINES WHO REPORTED
PERFORMING, ASSISTING, OR SCRUBBING WITH SELECTED CLINICAL PROCEDURES,
BY PROFESSIONAL ROLE OF RESPONDENT

Type of Clinical Procedure	Professional Role of Respondent		Total
	Physician	Nurse	
<u>Contraceptive Procedures</u>			
IUD Insertion	84%	46%	65%
Laparoscopic Tubal Ligation	84	83	83
Minilaparotomy	95	74	85
Provision of Birth Control Pills	92	40	67
Provision of Barrier Methods	59	23	42
Provision of Injectable Contraceptives	54	17	36
Family Planning Counseling	92	74	83
<u>Obstetric/Gynecologic Procedures</u>			
Normal Delivery	97	74	86
Cesarean Section	97	69	83
Diagnostic Laparoscopy	78	69	74
Tubal Reanastomosis	3	3	3
Other Obstetric/Gynecologic Procedures	59	40	50

nurses or physicians, and only one physician reported performing any tubal reanastomoses.

Respondents reported on the types of anesthesia practiced during the laparoscopy or minilaparotomy procedures they had personally performed, assisted, or scrubbed with. When asked what the most common method of anesthesia used during these procedures was, 88% of the respondents to this question replied that local anesthesia was used. Of the remaining 12%, 8% reported general anesthesia was used. Most respondents, 94%, also reported that laparoscopy or minilaparotomy under local anesthesia was taught in their course. In fact, local anesthesia under laparoscopy has been taught in all of the Philippines in-country program courses. Very few respondents, 5%, reported any major complications from the use of local anesthesia during the laparoscopy and minilaparotomy procedures they perform. The only problem cited by the three respondents who did report complications was a sense of unbearable pain felt by some patients undergoing the procedure.

A relatively high proportion of respondents, 78%, reported that laparoscopic equipment has been installed at their institution. A slightly larger proportion of the physician respondents, 81%, reported their institution had laparoscopic equipment than did the nurse respondents (74%). None of these respondents with equipment reported that it was not working at the time they filled out the survey. Most, 92%, reported there was a staff member at their institution to clean and maintain the equipment after each use, and 71% reported they had access to a technician who could repair the equipment. Just over half (56%) of all the respondents with equipment at their institution reported that there had been some problems with its operation. Most frequently cited were bursting light bulbs, fogging and breaking of offset lamp lenses, problems with the falope-ring applicator, problems with the trocar, CO₂ leaks, lack of a CO₂ supplier, and unavailability of a stand-by generator during power outages.

Table III.B.2

MEAN NUMBER OF CONTRACEPTIVE PROCEDURES PERFORMED, ASSISTED, OR SCRUBBED WITH PER MONTH BY ANNUAL PARTICIPANT SURVEY RESPONDENTS FROM THE PHILIPPINES, BY PROFESSIONAL ROLE OF RESPONDENT

Type of Clinical Procedure	Professional Role of Respondent				Total	
	Physician		Nurse			
	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform
IUD Insertion	2.6	(25)	2.0	(13)	2.4	(38)
Laparoscopic Tubal Ligation	6.1	(26)	13.5	(23)	9.6	(49)
Minilaparotomy	8.4	(29)	22.2	(20)	14.0	(49)
Provision of Birth Control Pills	8.4	(28)	19.4	(12)	11.7	(40)
Provision of Barrier Methods	6.5	(17)	13.0	(8)	8.6	(25)
Provision of Injectable Contraceptives	1.6	(16)	3.7	(5)	2.1	(21)
Family Planning Counseling	41.4	(28)	43.4	(20)	42.3	(48)

Table III.B.3

MEAN NUMBER OF OBSTETRIC AND GYNECOLOGIC PROCEDURES PERFORMED, ASSISTED, OR SCRUBBED WITH
PER MONTH BY ANNUAL PARTICIPANT SURVEY RESPONDENTS FROM THE PHILIPPINES
BY PROFESSIONAL ROLE OF RESPONDENT

Type of Clinical Procedure	Professional Role of Respondent				Total	
	Physician		Nurse			
	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform
Normal Delivery	28.1	(30)	34.6	(17)	30.4	(47)
Cesarean Section	7.0	(30)	7.2	(17)	7.0	(47)
Diagnostic Laparoscopy	0.7	(25)	0.5	(19)	0.6	(44)
Tubal Reanastomosis	0.1	(1)	0	(0)	0.1	(1)
Other Obstetric/ Gynecologic Procedures	8.9	(16)	15.0	(7)	10.7	(23)

Most of the respondents, 75%, reported that they teach or provide supervised clinical training in obstetrics, gynecology, or fertility management. Table III.B.4 shows the percentage of respondents with teaching or training responsibilities who reported teaching or supervising various categories of health workers. Among the physician respondents with teaching responsibilities, 75% supervise physicians, 68% supervise medical school graduates in clinical training, and the majority also supervise medical students and/or nurses. Small proportions of physician respondents reported supervising student nurses, operating room technicians, auxiliary health workers, or other health personnel. In contrast, most nurse respondents with teaching or training responsibilities reported supervising nurses (85%), and the majority of them reported supervising student nurses (58%). Less than half of these nurse respondents reported supervising personnel in any of the other categories listed in Table III.B.4.

Even though 75% of all respondents reported they had teaching or training responsibilities, only 63% of the respondents reported that they had taught anyone the concepts or techniques learned in the course they took. By professional role of respondent, 66% of the nurses shared the concepts and skills learned in the course while only 59% of the physicians reported they had done so. Table III.B.5 lists concepts and techniques covered in JHPIEGO-sponsored courses, although not all the topics listed are covered in the courses which make up the Philippines program. In fact, topics such as tubal reanastomosis are only covered in a minority of the courses funded by JHPIEGO. Among all respondents who had taught anyone the concepts or skills learned in the course, 78% had shared skills in laparoscopic tubal ligation, and 71% reported teaching others diagnostic laparoscopy techniques. Since training in laparoscopy is the primary focus of the Philippines program, it is not surprising that respondents had most frequently shared information related to these skills. The majority of these respondents also reported teaching others skills in minilaparotomy and provision of other birth control methods, as well as concepts relating to high-risk pregnancy, anatomy, and physiology.

Table III.B.4

PERCENTAGE OF APS RESPONDENTS FROM THE PHILIPPINES
WITH TEACHING OR TRAINING RESPONSIBILITIES, BY CATEGORY
OF HEALTH WORKER SUPERVISED AND PROFESSIONAL ROLE OF RESPONDENT

Category of Person Supervised	Professional Role of Respondent	
	Physician (28)	Nurse (26)
Physicians	75%	0%
Medical School Graduates in Clinical Training	68	12
Medical Students	57	12
Nurses or Nurse-midwives	54	35
Student Nurses	25	58
Operating Room Technicians	18	27
Auxiliary Health Workers	21	31
Other Health Personnel	4	19

(Numbers in parentheses indicate the number of respondents with teaching or training responsibilities.)

When asked whether they work with anyone who had been trained under the same program, 81% of all respondents gave an affirmative reply. Most, 83%, also felt that

Table III.B.5

PERCENTAGE OF APS RESPONDENTS FROM THE PHILIPPINES WHO HAVE TAUGHT
OTHERS CONCEPTS OR TECHNIQUES LEARNED IN THE COURSE, BY TYPE OF
CONCEPT OR SKILL TAUGHT AND PROFESSIONAL ROLE OF RESPONDENT

Concept or Technique Taught *	Professional Role of Respondent		Total (45)
	Physician (22)	Nurse (23)	
High-risk Pregnancy	64%	52%	58%
Anatomy and Physiology	73	43	58
Management of Infertility	59	22	40
IUD Insertion	59	30	44
Laparoscopic Tubal Ligation	82	74	78
Minilaparotomy	68	61	64
Provision of Other Birth Control Methods	68	61	64
Diagnostic Laparoscopy	68	74	71
Tubal Reanastomosis	5	5	4
Other	14	0	7

*Note: Concepts or techniques listed were not necessarily included in the material covered during the courses offered in the Philippines.
(Numbers in parentheses indicate the number of respondents who taught others concepts or skills learned in the course and are the numbers in denominator of each percentage.)

the course helped them work more effectively with other health professionals. Only 21% of respondents reported that there had been any changes since the course in the way responsibilities are shared among the health professionals with whom they work. Furthermore, 63% reported that they felt there had been a greater emphasis on patient counseling since the course.

Respondents gave very positive ratings about the course on their surveys. They felt that reproductive health topics were covered well in the course and they were even more enthusiastic in their ratings of the material 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, most 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 also reported that they were still able to dismantle, clean, and assemble laparoscopic equipment at the time they filled out the survey.

Conclusion

In their overall rating of the course, 90% of respondents reported there had been improvements in their professional activities which they attributed to their participation in this program. These individuals also demonstrated through their responses that they had utilized the concepts and skills learned to expand upon and improve their roles as reproductive health care providers. Many had shared the course material with others. The majority found that they were able to work more effectively with other health professionals after participating in the course. Thus, these responses to the Annual Participant Survey provide one indication of the success of the Philippines in-country training program in meeting its objective of institutionalizing the practice of laparoscopy in the country.

III.C. SELECTED FINDINGS FROM ANNUAL PARTICIPANT SURVEY
RESPONSES FROM BRAZIL

Introduction

The "Centro de Pesquisas Assistencia Integrada a Mulher e a Crianca" (CPAIMC) has been founded in Brazil with the goals of improving the care of pregnant women and ensuring the birth of healthy children, promoting comprehensive maternal and child health care through both outreach and clinical services, and promoting family health and family planning by offering comprehensive fertility and infertility management services. JHPIEGO has been engaged in a collaborative agreement with CPAIMC since fiscal year 1980 in order to assist them in attaining these goals. Specifically, JHPIEGO supports this organization's efforts to develop its capacity to extend training in the techniques of modern family planning and endoscopy to ob/gyn surgeons, nurses, and anesthetists from major institutions throughout Brazil. The majority of the courses conducted by this program focus on reproductive health with special emphasis on the techniques of laparoscopy. Physician participants learn how to perform laparoscopy under local anesthesia, while nurse participants are trained to assist the physicians, and the physician anesthetists are instructed in techniques of local anesthesia with application to laparoscopic procedures. All participants of these courses are selected from institutions that either are designated to receive laparoscopic equipment, or which are already equipped.

By the end of fiscal 1983 the CPAIMC in-country clinical training program has trained 219 physicians, 68 physician anesthetists, and 143 nurses from Brazil. One hundred fifty-nine institutions in Brazil are represented by these trainees, 101 of which have been equipped with JHPIEGO-donated laparoscopes. The Annual Participant Survey (APS) has been sent to 326 of the participants, 177 physicians, 56 physician anesthetists, and 93 nurses, who were trained between January, 1980 and

August, 1982. This survey is one of the tools employed in CPAIMC's and JHPIEGO's efforts to obtain feedback about the effectiveness of this program. The survey was conducted by Karen Lassner, Director of Information, Evaluation and Research for CPAIMC. Of the 326 eligible participants, 193 returned completed questionnaires, and 133 did not return the survey for unknown reasons. Completed questionnaires were received from Ms. Lassner in August, 1983 by JHPIEGO for analysis. The discussion which follows in the remainder of this subsection will be concerned with the responses of the 193 participants, 122 physicians, 23 physician anesthetists, and 48 nurses, who returned completed questionnaires.

Selected Findings

Respondents reported on many aspects of their professional activities on the survey, as well as providing their opinions about selected aspects of the course they took. The findings covered in this section will focus on these reports, beginning first with aspects of the respondents' current professional activities, specifically their current position, descriptions of the clinical procedures they have performed in the year prior to returning the survey, and a discussion of the types of anesthesia they employed. Then there will be a review of the reports on the laparoscopes installed at each respondent's institution. Following the equipment discussion this report will cover the teaching and training activities of respondents. Finally, there will be an evaluation of the course as it is viewed by respondents at least six months since their participation in it.

Respondents represent 76 cities and 127 institutions in Brazil. One institution is represented by 8 respondents, a few by 5, and the large majority of institutions had only one or two responding trainees. Of the 193 participants who responded to the survey, 74% reported that they were working in the same position at the same

TABLE III.C.1

PERCENTAGE OF ALL APS RESPONDENTS FROM BRAZIL WHO REPORTED
PERFORMING, ASSISTING, OR SCRUBBING WITH SELECTED CLINICAL PROCEDURES,
BY TYPE OF COURSE TAKEN

Type of Clinical Procedure	Type of Course Taken			Total
	Endoscopy for Physicians	Endoscopy for Nurses	Anesthesia for Physicians	
<u>Contraceptive Procedures</u>				
IUD Insertion	75%	44%	22%	61%
Laparoscopic Tubal Ligation	83	69	70	78
Minilaparotomy	63	38	35	53
Family Planning Counseling	76	58	13	64
<u>Obstetric/Gynecologic Procedures</u>				
Normal Delivery	81	44	39	69
Cesarean Section	80	46	48	68
Diagnostic Laparoscopy	69	48	43	61
Tubal Reanastomosis	26	13	0	20
Other Laparoscopic Procedures	17	4	9	13

institution which sponsored them for the course. Most respondents, 93%, reported that they used skills learned during the course in their primary position, even if this position had changed since the course. Furthermore, 84% reported that there had been improvements in their professional activities which were attributable to their participation in the course.

Respondents reported on the number of contraceptive and other obstetrical and gynecological procedures they had performed, assisted, or scrubbed with in the past 12 months. Table III.C.1 shows the proportion of all respondents by type of course taken who reported performing, assisting, or scrubbing with each of the procedures listed. The majority of all respondents reported they had performed, assisted, or scrubbed with each of the contraceptive procedures listed, as well as normal delivery, cesarean section, and diagnostic laparoscopy. Note that a higher proportion of the physician respondents who took the endoscopy course reported performing or assisting with each of the procedures listed than did the nurse or anesthetist respondents. The physician anesthetists are most frequently involved with supporting procedures which require anesthesia, but some are also inserting IUDs and giving family planning counseling. Furthermore, for each type of course, more respondents reported performing laparoscopic tubal ligation than any of the other procedures listed in Table III.C.1.

Table III.C.2 and III.C.3 show the mean number of procedures performed, assisted or scrubbed with each month by all respondents who reported participating in each of the procedures listed. Looking first at the number of contraceptive procedures shown in Table III.C.2, we find that family planning counseling was the type of procedure performed most frequently each month by all types of respondents. Laparoscopic tubal ligation was performed, assisted or scrubbed with an average of 11 times per month by all respondents. Nurse respondents report scrubbing with nearly twice as many laparoscopic sterilizations per month as the physicians report performing or

Table III.C.2

MEAN NUMBER OF CONTRACEPTIVE PROCEDURES PERFORMED, ASSISTED, OR SCRUBBED WITH
PER MONTH BY ANNUAL PARTICIPANT SURVEY RESPONDENTS FROM BRAZIL,
BY TYPE OF COURSE TAKEN

Type of Clinical Procedure	Type of Course Taken						Total	
	Endoscopy for Physicians		Endoscopy for Nurses		Anesthesia for Physicians			
	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform
IUD Insertion	5.9	(92)	4.8	(20)	3.5	(5)	5.6	(117)
Laparoscopic Tubal Ligation	9.1	(103)	17.6	(33)	10.3	(15)	11.0	(151)
Minilaparotomy	2.1	(77)	3.5	(17)	0.8	(7)	2.2	(101)
Family Planning Counseling	65.0	(95)	52.5	(26)	19.1	(3)	61.2	(124)

Table III-C.3

MEAN NUMBER OF OBSTETRIC AND GYNECOLOGIC PROCEDURES PERFORMED, ASSISTED, OR SCRUBBED WITH
PER MONTH BY ANNUAL PARTICIPANT SURVEY RESPONDENTS FROM BRAZIL,
BY TYPE OF COURSE TAKEN

Type of Clinical Procedure	Type of Course Taken						Total	
	Endoscopy for Physicians		Endoscopy for Nurses		Anesthesia for Physicians			
	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform	Mean Number of Procedures	Number of Respondents Reporting How Many They Perform
Normal Delivery	17.6	(101)	25.2	(20)	15.2	(9)	18.6	(130)
Cesarean Section	5.4	(100)	7.6	(21)	12.6	(11)	6.3	(132)
Diagnostic Laparoscopy	3.3	(88)	3.8	(23)	1.3	(10)	3.2	(121)
Tubal Reanastomosis	0.3	(32)	2.5	(6)	0	(0)	0.7	(38)
Other Laparoscopic Procedures	1.8	(22)	1.2	(2)	0.3	(2)	1.7	(26)

assisting with. This may indicate that these nurses are scrubbing with several physicians who perform laparoscopy.

The mean numbers of obstetric and gynecologic procedures performed, assisted, or scrubbed with each month by respondents are shown in Table III.C.3. Most frequently reported by all types of respondents were normal deliveries with an average of 18.6 per month reported by the 130 individuals who listed how many procedures they had been involved in. Physicians reported performing or assisting with 5.4 cesarean sections and 3.3 diagnostic laparoscopies each month. The physician anesthetists reported monitoring 12.6 cesarean sections each month. Since, as shown in Table III.C.2, this group of respondents only report supporting 10.3 laparoscopic sterilizations each month, they are monitoring cesarean sections more frequently than laparoscopic sterilization. The physician respondents, however, report performing or assisting with almost twice as many laparoscopic tubal ligations as cesarean sections, and the nurse respondents report scrubbing with nearly two and a half times more tubal ligations.

Respondents reported on the types of anesthesia practiced during the laparoscopy or minilaparotomy procedures they had personally performed, assisted, or scrubbed with. When asked what the most common method of anesthesia used during these procedures was, 70% of respondents to this question replied that only local anesthesia was used. Of the remaining 31%, 23% reported general anesthesia was used, and 7% replied that both methods were used. In comparing the responses of the ob/gyn surgeons to the physician anesthetists on this question, we find that 74% of the surgeons used only local anesthesia for these procedures while 63% of the anesthetists gave this response. Most respondents, 89%, also reported that laparoscopy or minilaparotomy under local anesthesia was taught in their course. Over 95% of both the surgeon and anesthetist groups felt that local anesthesia was taught for these procedures, while only 68% of the nurse respondents recalled that this method of sedation had been discussed during the course. In fact, local anesthesia under

laparoscopy has been taught in all of the CPAIMC in-country program clinical courses covered by the survey. A total of 27% of all respondents reported that anesthesia practices used during laparoscopic and minilaparotomy procedures had changed since they took the course. Fifty-two percent of the anesthetist respondents felt these practices had changed, while smaller proportions of the physician and nurse respondents reported any changes. Very few respondents, 5%, reported any major complications from the use of local anesthesia during the laparoscopy and minilaparotomy procedures they perform, and nearly twice as many, 9%, reported major complications from the use of general anesthesia.

A relatively high proportion of respondents, 82%, reported that laparoscopic equipment has been installed at their institution by CPAIMC. Only 6% of these respondents with equipment reported that it was not working at the time they filled out the survey. Most, 89%, reported there was a staff member at their institution to clean and maintain the equipment after each use, and 36% reported they had access to a technician who could repair the equipment. Thirty-four percent of all the respondents with equipment at their institution reported that there had been some problems with its operation. Most frequently cited were bursting light bulbs, fogging and breaking of offset lamp lenses, problems with the falope-ring applicator, problems with the trocar, CO₂ leaks, problems with the fiber optic cable, unavailability of small parts, as well as a number of other problems not listed on the survey.

Only half of the respondents reported that they teach or provide supervised clinical training in obstetrics, gynecology, or fertility management. Broken down by type of course participation, 67% of the physicians have teaching responsibilities, while only 33% of the nurses and 4%, or one individual, of the anesthesia course respondents reported these activities. Table III.C.4 shows the percentage of respondents with teaching or training responsibilities who reported teaching or

Table III.C.4

PERCENTAGE OF APS RESPONDENTS FROM BRAZIL
WITH TEACHING OR TRAINING RESPONSIBILITIES, BY CATEGORY
OF HEALTH WORKER SUPERVISED AND TYPE OF COURSE TAKEN

Category of Person Supervised	Type of Course Taken *	
	Endoscopy for Physicians (82)	Endoscopy for Nurses (16)
Physicians	55%	0%
Medical School Graduates in Clinical Training	65	6
Medical Students	45	0
Nurses or Nurse-midwives	49	13
Operating Room Technicians	28	19
Auxiliary Health Workers	42	81
Other Health Personnel	5	25

*The only physician anesthetist who reported having teaching or training responsibilities is not shown on this table.

(Numbers in parentheses indicate the number of respondents with teaching or training responsibilities.)

supervising various categories of health workers. Among the physician respondents with teaching responsibilities, 55% supervise physicians, 65% supervise medical school graduates in clinical training, and over 40% also supervise medical students, nurses, and/or auxiliary health workers. In contrast, most nurse respondents with teaching or training responsibilities reported supervising only auxiliary health workers. Less than half of the nurse respondents reported supervising personnel in any of the other categories listed in Table III.C.4.

While 51% of all respondents reported they had teaching or training responsibilities, a larger proportion, 65%, reported that they had taught others the concepts or techniques learned in the course they took. By type of course taken, 74% of the physician participants shared the concepts and skills learned in the course, while only 56% of the nurse participants and 35% of the anesthetists reported they had done so. Table III.C.5 lists concepts and techniques covered in JHPIEGO-sponsored courses and the proportion of respondents who had taught others about them for each topic, although not all the topics listed are covered in the courses which make up the CPAIMC program. Among all respondents who had taught anyone the concepts or skills learned in the course, 67% had shared skills in laparoscopic tubal ligation, 63% had shared skills in IUD insertion, and 73% reported teaching others about provision of other birth control methods. Over 60% of physician respondents also reported sharing concepts of anatomy and physiology, and techniques of minilaparotomy and diagnostic laparoscopy. Note that most of the physician anesthetist respondents who taught others about the course did not share any of the concepts or techniques listed. It is likely that they shared other material learned in their course not specifically addressed on the survey.

Eighty-two percent of the respondents reported that they work with someone who was trained under the same program. By type of course participation, 96% of both the physician anesthetist and nurse respondents reported working with someone

Table III.C.5

PERCENTAGE OF APS RESPONDENTS FROM BRAZIL WHO HAVE TAUGHT
OTHERS CONCEPTS OR TECHNIQUES LEARNED IN THE COURSE, BY TYPE
OF CONCEPT OR SKILL TAUGHT AND TYPE OF COURSE TAKEN

Concept or Technique Taught *	Type of Course Taken			Total (125)
	Endoscopy for Physicians (90)	Endoscopy for Nurses (27)	Anesthesia for Physicians (8)	
High-risk Pregnancy	57%	19%	0%	45%
Anatomy and Physiology	60	41	13	53
Management of Infertility	51	33	0	44
IUD Insertion	72	52	0	63
Laparoscopic Tubal Ligation	82	41	13	69
Minilaparotomy	63	26	13	52
Provision of Other Birth Control Methods	79	74	0	73
Diagnostic Laparoscopy	60	22	0	48
Tubal Reanastomosis	16	4	0	12

*Note: Concepts or techniques listed were not necessarily included in the material covered during the courses offered in Brazil.

(Numbers in parentheses indicate the number of respondents who taught others concepts or skills learned in the course and are the numbers in denominator of each percentage.)

who was also trained by CPAIMC while only 74% of the ob/gyn surgeons reported this. Since one of the conditions for the selection of nurses and anesthetists for training is that they come from an institution with a trained ob/gyn surgeon, these figures reflect this selection criteria.

Most respondents, 97%, felt the course helped them work more effectively with other health professionals. Furthermore, 32% reported that since the course responsibilities have been shared differently among the health professionals they work with. A large majority, 83%, reported there had been a greater emphasis on patient counseling since the course. Many respondents also listed the names of other health professionals who they thought would benefit from the same kind of training they received.

Respondents gave very positive ratings about the course on their surveys. Over 90% reported that reproductive health and family planning were adequately covered in their course. Topics cited as being the most interesting by many respondents include laparoscopy, contraceptive methods, and anesthesia and analgesia. Some respondents replied that all the topics covered in the course were very interesting. They also reported that the same topics which they found most interesting were the most useful to them in actual practice.

Conclusion

In their overall rating of the course, 84% of the respondents reported there had been improvements in their professional activities which they attributed to their participation in this program. Many had shared the concepts and techniques they learned with others. They reported being actively involved in performing, assisting, or scrubbing with a variety of clinical procedures, especially laparoscopic tubal ligation under local anesthesia. Furthermore, the majority found that they were able to work more effectively with other health professionals after participating in the course.

In the aggregate, the responses to the APS from Brazil show how the joint efforts of JHPIEGO and CPAIMC have been successful in meeting some of the goals and objectives of this program. Respondents represent a large number of institutions located in many cities in Brazil. The majority of these institutions have laparoscopic equipment which is being utilized to provide voluntary surgical contraception. The techniques of modern family planning and endoscopy have clearly been extended to these respondents, and they in turn have shared them with other health professionals.

APPENDIX I. AID REGIONAL DESIGNATION OF COUNTRIES

<u>AFRICA</u>	<u>ASIA</u>	<u>LATIN AMERICA</u>
Algeria	Bangladesh	Antigua
Benin	Burma	Argentina
Botswana	Fiji	Barbados
Burundi	Hong Kong	Bolivia
Cameroon	India	Brazil
Cape Verde	Indonesia	Chile
Central African Empire	Khmer Republic	Colombia
Chad	Korea	Costa Rica
Comoro Islands	Malaysia	Dominica
Congo	Nepal	Dominican Republic
Ethiopia	Papua New Guinea	Ecuador
Gabon	Pakistan	El Salvador
Gambia	Philippines	French Guiana
Ghana	Singapore	Grenada
Guinea Bissau	Solomon Islands	Guadeloupe
Ivory Coast	Sri Lanka	Guatemala
Kenya	Taiwan	Guyana
Lesotho	Thailand	Haiti
Liberia	Tonga	Honduras
Madagascar	Vietnam	Jamaica
Malawi	Western Samoa	Martinique
Mali		Mexico
Mauritania		Netherlands Antilles
Mauritius	<u>NEAR EAST</u>	Nicaragua
Mozambique	Afghanistan	Panama
Niger	Cyprus	Paraguay
Nigeria	Egypt	Peru
Rwanda	Greece	St. Kitts
Senegal	Iran	St. Lucia
Seychelles	Iraq	St. Martin
Sierra Leone	Italy	St. Vincent
Somalia	Jordan	Suriname
South Africa	Lebanon	Trinidad
Sudan	Morocco	Uruguay
Swaziland	Portugal	Venezuela
Tanzania	Saudi Arabia	
Togo	Spain	
Uganda	Syria	
Upper Volta	Tunisia	
Zaire	Turkey	
Zambia	Yemen Arab Republic	
Zimbabwe	Yemen, Democratic	