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PROJECT HOPE
MATCHING GRANT EVALUATION

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EXECUTIVE SUMMARY

COSTA RICA

The Respiratory Therapy (RT) program succeeded in establishing a new health profession in Costa Rica, a new two year program at the University of Costa Rica (UNCR) and departments of RT in 13 hospitals. These results have been accomplished in spite of repeated failures of the Social Security Agency (CCSS) which operates all the public hospitals in the country to provide positions for two faculty members and sufficient jobs for graduates of the program. Other constraints are the lack of sufficient equipment and repair parts in the hospitals and proper organization of the RT Departments. There are studies at some hospitals that indicate some impact from the RT in reducing mortality and morbidity from respiratory causes.

As the project nears its end in June 1990, it is proposed that a new agreement be offered to the CCSS that requires a commitment to provide at least ten jobs per year for graduates, a number that constitutes the minimum size class that the UNCR will initiate. Also a commitment should be made to fund the two faculty positions needed and some added clinical educators. If these conditions are not met, Project HOPE should terminate the national component of this project.

It is recommended that the UNCR and Project HOPE study the feasibility of an international training program to educate faculty and leaders of RT in Mexico, Central America and other latin countries. If there is sufficient foreign demand and financing, then Project HOPE should help the UNCR in developing the curriculum and faculty for a Bachelor degree program.

HAITI

Laboratory Sciences Development
From Grant Report June 1, 1987 - May 31, 1989

During the first year of Matching Grant II, Project HOPE phased the laboratory sciences development program over to Haitian counterparts. Recommendations were made concerning the environment of the laboratory, reclassification of the medical technology profession through the Ministry of Health, and specific technical assistance to be considered. The University Hospital (HUEH) needs to seek funds for major equipment items and continue its support of a monthly supplies budget. They need to consider a continuing education program for technicians. Four of the five major objectives of this program were accomplished. The fifth objective of having HUEH serve as the reference lab for other government hospitals requires further work.

The total grant budget has been expended.

HONDURAS Biomedical Equipment

This Project contains four major components.

1. The attempt to create a Biomed equipment repair facility within the National Center for Maintenance in the Ministry of Health proved to be infeasible for lack of funds, repair parts and counterparts. After several years of effort, the component was abandoned by Project HOPE and the Ministry.
2. Project HOPE is attempting to build a repair facility in the Hospital Escuela, the largest hospital in the Ministry of Health. Despite the training of personnel and provision of test equipment, the hospital has 20% of its equipment in need of repair for lack of parts. This is due to lack of funds, a procurement process that takes 24 months, and scarcity of US Dollars aggravated by the devaluation of the local monetary unit. Despite an apparent need and desire to meet the objective, it is an infeasible target and should be terminated as soon as possible.
3. The Social Security Agency (IHSS) collaborates in an activity to create a repair department at its Child/Maternity Hospital, wherein Project HOPE provides training, equipment and technical assistance while the IHSS provides space, 9 technicians and funding. This project is successful thus far and there remains only the training of three more technicians in order to complete the IHSS staffing. This training could be performed by the INFOP organization described below.
4. The INFOP is sponsored by the public and private sector to provide trained technicians in a number of fields. The objective is to build its training capacity in biomed equipment repair to give continuing education. The issue is whether there is sufficient demand in Honduras to warrant establishing a program and whether such training can be utilized by the Ministry of Health when it lacks the funds, parts and stable personnel for BME repair. To deal with the constraints, it is recommended that INFOP and Project HOPE study the feasibility of establishing a regional training center in INFOP and also study the feasibility of providing a repair service and repair parts to meet the needs of the Ministry of Health and the Hospital Escuela, as well as the IHSS and the private sector. If either of these options are infeasible, it is recommended that the Project be terminated.

Several management opportunities for improvement exist including: 1) defining problems with greater realism; 2) providing more complete and realistic project plans; 3) improving project monitoring and control at each level in Project HOPE; 4) improving supervision and supply support by Project HOPE.

Other management needs are discussed under Grant Management.

HONDURAS

Learning Resources Center

This project sought to increase the knowledge of physicians serving their year of rural service because they play a key role in supervising primary health care in public health. No needs assessment was made for this project because the need was presumed evident. The design assumed that the critical need was audio-visual modules of instruction so the project focused largely on the creation of an AV production unit in the UNAH. The Unit has been successfully created with seven Honduran technicians working in the Extension Division of the University and there has been a respectable production of 17 video modules and 15 slide tapes on various medical topics. Since the end of the project, the UNAH has broadened the topics to include community health subjects such as first aid.

The project also tried to improve inter-institutional coordination for training by creating a Committee from the MSP, IHSS, Colegio Medico and UNAH. This functioned well during the active period of the project providing guidance on priority topics along with suggestions on what experts to recruit from Honduras to present the topics. Since the end of the project, this Committee has ceased to function.

Copies of the video modules and slide-tapes along with written instructions on how to use them for instruction have been provided to 19 locations mostly MSP regional centers, hospitals, IHSS hospitals, UNAH libraries and Colegio Medico offices. There is little information available on the use being made of the modules, the state of the equipment and no information on what increased knowledge has been imparted to the physicians performing rural service. This project illustrates many of the strengths and weaknesses in project planning, implementation, control and supply that are covered in more detail in the general section dealing with Grant Management.

HONDURAS

Laboratory Sciences

This program aimed at developing the educational program in parasitology at the UNAH and the Hospital Escuela. It has succeeded in establishing a successful, highly regarded curriculum in five subjects, plus the development of five lab manuals and training of five faculty members. Continuing education courses were given at the Ministry of Health's teaching hospital for 64 students plus the training of a counterpart as the head of parasitology at the Hospital. The UNAH considers the program a very successful contribution.

HONDURAS

Continuing Education Center

With the objective of upgrading the knowledge and skills of health professionals in Honduras, and the institutionalization of such a program, Project HOPE has since 1983

provided US experts, texts, videos and slide tapes to the Colegio Medico -- the National Association of Physicians.

The Colegio has successfully promoted legislation requiring physicians to receive 15 credit hours annually in order to maintain their license and has created a National Center to manage the program. Now with 37 professional societies associated, and an annual program with 52 events, the Program is institutionalized. The plan was vague on outputs desired as well as the linkage between the training events and the texts, videos and slides that were furnished. There is little information available on the impact of the program. The Colegio and the Project HOPE staff have felt that an evaluation system is needed by the National Center but no decision has been made to continue support of the Program. With ambitious plans for a future Conference Center to help defray the costs of the program, the CENEMEC is likely to find the resources to continue the program without outside help.

SWAZILAND

The mid-term evaluation of Project HOPE matching grant activities in Swaziland notes the impressive progress that has been made in the nursing education project components at the Nazarene College of Nursing and at the Swaziland Institute of Health Sciences where new curricula have been developed and taught, counterpart faculty and the host institutions have been strengthened, and targeted numbers of graduates are being produced. At the Good Shepherd School the needs assessment for the additional training required by nursing assistants has been carried out and served the valuable purpose of clarifying and highlighting important and controversial issues regarding the training and utilization of nursing assistants in the health service delivery system of Swaziland.

Plans are being made to reinitiate the important materials management component. Much of the preliminary work in organizing an improved central drug supply operation has been consolidated. With the appointment of key new staff by the Ministry of Health, this component should now proceed with a reassessment of the current situation and a plan for the computerization of the inventory system.

Finally, the component developed to improve the practices of traditional healers, bringing them into closer collaboration with the primary health care system, has made an impressive start and should be continued.

All of the Project HOPE matching grant program components are consistent with the policies and programs of the Ministry of Health and the A.I.D. Mission.

The Project HOPE team, in Swaziland and at HOPE Headquarters should be commended for their dedication, commitment, and hard work in carrying out the Swaziland program.

GRANT MANAGEMENT

The Project HOPE staff manifest impressive strengths: they are serious, dedicated, hard-working, motivated, technically competent, receptive to evaluation, reflect good relations between the field and the Country and Technical Managers, conduct a very good financial management system and have good administrative support within HC through the use of Desk Officers. Program management will improve with a state of the art system for project planning, control and evaluation coupled with a problem diagnosis approach that takes more account of the realities of developing country settings. There is already a good financial management system well integrated with project management. A sample internal audit of vouchers in the course of posting the general register may serve as a prudent check on expenditures. Fund raising increased revenues by 66% in 1989 over 1988 and helps to maintain an excellent cash flow for the entire operation.

Recommendations are made to improve the financial reporting system for use by the Program Office of A.I.D., to review whether Project HOPE is charging only 27% overhead for the A.I.D. contribution and to consider giving credit for gifts-in-kind since they represent 28% of the combined cash contributions of A.I.D. and Project HOPE. The significant variance in expenditures compared to budgeted amounts for Costa Rica, Belize and Honduras justifies Project HOPE's intent to re-program funds for the remaining years of the Grant.

Orientations for staff need more than one day at HC along with an Administrative Manual for the guidance of all. The Employee Handbook approved in May 1990 will help along with better orientation materials for adapting to life in foreign countries. An in-service training program will also help personnel increase their skills in development, institution building and management. The persistent difficulties with supply to the field requires a review of all aspects of supply management, with rapid corrective action and an executive control system to monitor its responsiveness in the future. There is a special problem with support of BioMedical equipment that requires resolution either by assigning responsibility to the Supply Unit or contracting for the service.

Program Directors as the first line of supervision need upgrading in supervisory practice, management and office administration. As they gain in experience, they should be delegated increasing authority for planning, implementation and control of operations. As a support to them, install a red alert system assuring top management attention to their problems when normal channels are not sufficient.

With the objective of speeding up decision making at HC for field supervision, the leadership should define decision making rules, delegate as much de facto authority as possible to country managers, check for work and travel overload on some individuals, make more use of staff meetings and retreats to resolve problems and be aware of the need for behavioral adjustments in relations as well as procedural changes.

INTRODUCTION

BACKGROUND

The Agreement between the Agency for International Development and the People to People Health Foundation (Project HOPE) stipulates that an external evaluation is to be made at mid-point in the Grant. This Report fulfills that obligation. The period covered by the evaluation is from June 1987 to March 1990, approximately midpoint in the Matching Grant period.

The evaluation covers programs in three countries in depth -- Costa Rica, Honduras and Swaziland -- and reports briefly on the program in Haiti that ended in year 1 of this grant. The current Grant is a follow-on phase from an earlier grant starting in 1983 that initiated many of the programs now being evaluated. Haiti is a program begun in the earlier phase and winding down early in this second phase, hence given brief treatment in the executive summary section only. Belize was not scheduled to begin until year four of this grant and is thus not reported upon.

During this evaluation period, other programs were coming to an end and others are still on-going. Those that ended include the Learning Resources Center and the Laboratory Sciences Program in Honduras which receive briefer treatment in this report. The on-going programs in Costa Rica and Swaziland receive much fuller treatment because decisions are awaiting the results of this evaluation.

PROCEDURE

The scope of work was drafted jointly by A.I.D. and Project HOPE (Project HOPE) and given to a team of external evaluators chosen jointly by the two agencies. The team represents a multi-disciplinary group:

Mr. Carlos Aboytes Clinical Engineer
Dr. Martin Gorosh Public Health and Health Management
Ms. Pamela Putney Nurse, Mid-wife and Health Management
Mr. Edward Rizzo Development Administration
Dr. Mary Watson Respiratory Therapy

The team was divided into country groups according to the nature of the projects to be evaluated:

Costa Rica > Mary Watson and Edward Rizzo
Honduras > Carlos Aboytes and Edward Rizzo
Swaziland > Pamela Putney and Martin Gorosh

Project HOPE appointed the respective Country Managers to accompany the Teams and they in fact participated in all aspects of the Evaluation although the external evaluators take full responsibility for the recommendations made in this Report.

The Country Managers participating were:

Dr. John Wilhelm for Costa Rica

Dr. David Edwards for Honduras

Dr. Carolyn Brye for Swaziland

Project HOPE also appointed Dr. Bettina Schwethelm as the coordinator for the Evaluation and point of contact for the team.

The Evaluation began with an excellent briefing given to the Team Leader, Mr. Rizzo, who was assigned the task of reviewing the HOPE Center Grant Management for the projects. The briefings began on April 9, 1990 dealing with all the management systems of headquarters. On April 12, 1990 the full team gathered to receive a program briefing for their respective projects and to coordinate the overall outline and schedule of work.

The visit to Costa Rica occurred during April 16-20, 1990; to Honduras April 26 to May 4, 1990; to Swaziland April 27 to May 10, 1990. The Team met again at HOPE Center May 17-18 to present an oral briefing to Project HOPE and representatives of A.I.D. on the overall findings and recommendations. The findings and analyses were discussed by the various teams and common patterns of management strengths and weaknesses evolved from this inductive analysis. Thus a bottom-up process helped to form the basis for the last Chapter dealing with the Grant Management at the HOPE Center.

Project HOPE provided full access to all the basic documentation of the projects and assisted in setting up interviews with relevant host agency persons in-country. Please refer to the Appendices for the list of documents and persons contacted in the course of this evaluation.

The collaboration by Project HOPE has been so outstanding that it is featured as one of the strengths of the organization. The evaluation covers fourteen components each of which has its own history, set of documents and persons to interview so that it has been an immense task to cover in the time available. The task would have been impossible without the excellent cooperation of Project HOPE.

The acknowledgments for this evaluation are so extensive that they have been placed in the Appendix. Nonetheless, we do express our gratitude to Drs. Wilhelm, Brye and Edwards for their invaluable contributions; to Dr. Bettina Schwethelm for her unfailing assistance and to the wonderful teams of Project HOPE professionals in the three countries who impressed us all with their dedication, hard work and devotion to the people they are serving.

ORGANIZATION OF REPORT

The Report provides an Executive Summary at the outset which compiles the summaries that precede each section of the Report. The key recommendations are also pulled together into one section at the front of the Report to facilitate an overview of the major recommendations. These are condensed in some instances to conserve the time of the reader.

The evaluation is presented by country and by project within each country, with conclusions and recommendations placed as close as possible to the findings upon which they are based. The last Section deals with the strengths of the HOPE Center followed by an evaluation of various systems including project planning, project control, personnel, supply and organization.

Wherever useful, reference materials have been placed in the Appendices but even this material was so voluminous that not all has been included.

KEY RECOMMENDATIONS

Costa Rica Respiratory Therapy

The Program may need to decrease the number of students entering the program (or increase the number of clinical instructors) in order to provide adequate clinical education. A faculty/student ratio of 1:2 in the ICU should be the goal.

The program needs a full time clinical coordinator to assure optimal clinical schedules, to provide assistance to clinical instructors in teaching and evaluating students and to assure that instructors receive experience in the content areas in which they are expected to teach.

Establish a new National Board and Academic Committee for Respiratory Therapy for the purpose of solving new problems and overseeing the continued growth of the profession with the functions and membership suggested in the text of this report. The establishment of these Committees should be made a part of any agreement for extension of assistance by the Project HOPE.

The medical directors should take responsibility of officially appointing a Respiratory Therapy Technical Director in each hospital. Such a leader is necessary to assure improvement in utilization of therapists and provide for the continuing growth of the profession.

An official position and job description for a Respiratory Therapy Aid should be established and a short training program be introduced. This would help relieve therapists from functions such as cleaning and sterilizing equipment and equipment delivery. There are some people currently doing these tasks but reportedly they are not all well trained.

Data related to improvement in patient care should be collected in an organized study to include all the major hospitals. This data is important to monitor the impact and benefits of this program.

A select number of interested and talented graduates should be sent to the Biomedical program in Honduras to learn about equipment repair. They will then have the knowledge to repair and maintain equipment in Costa Rica as well as to teach others who will have that responsibility.

Project HOPE should indicate its decision to renew only under the following conditions.

CCSS should adopt a five year plan in which a minimum of ten students per year are to be given posts as Respiratory Therapists in hospitals.

Three more posts are to be allocated for faculty for the RT Program: two to fill out the

present needs and one more to add for clinical instruction. The UNCR would continue to provide three faculty.

More equipment needs to be purchased and allocated for teaching purposes in various hospitals. Specific details are available from the Medical Director of the Program and the Project HOPE Coordinator.

The laboratory needs to make more time available for students in the program.

A National Committee and an Academic Committee for Respiratory Therapy should be established with the functions and membership proposed earlier in this Report.

If the CCSS agrees to the above, then it is recommended that Project HOPE provide a technical assistance coordinator for another year and whatever equipment it can donate. Assistance with translation of texts into Spanish would be helpful. An Agreement should be approved signed by the President of CCSS, the Rector of the UNCR, the Head of the CENDIESSS and Project HOPE which specifies and quantifies the various commitments for the five year period. The resident advisor from Project HOPE need not be maintained for five years but more likely for two years with some ad hoc technical assistance thereafter as needed. A possibility is to include training for some Costa Ricans at the INFOP in Honduras in equipment maintenance for RT.

If the national program is to continue, then the recommendations made in this report should be seriously considered. If the CCSS does not agree with the recommendations, it is suggested that Project HOPE terminate work with the CCSS and its hospitals and continue only with the international strategy below.

The UNCR should make a study of the potential demand for its RT courses, projected by year for several years ahead, together with the likelihood of financing for foreign students.

Project HOPE should favorably consider assisting the UNCR if it believes there is sufficient demand from foreign students.

Honduras Biomedical Engineering

Given the infeasibility of establishing a repair department in the Hospital Escuela, it is recommended that Project HOPE terminate its assistance to the organization.

A system needs to be developed within Project HOPE to spot ailing projects and to take remedial action without delay.

As soon as possible, phase over training of IHSS technicians to the INFOP and terminate this activity as a separate objective for Project HOPE. The present Project HOPE

Coordinator may then transfer both his assistance and location to INFOP.

Study the demand for continuing education of BMETs in the MSP and the IHSS to determine whether it is more cost effective for the INFOP to provide continuing training to them versus option two or providing the repair service under option three below. Careful consideration should be given to the salary and repair parts constraints existing in the MSP and whether additional training would in any way improve that service.

Study the international demand for training and continuing education of BME technicians. Again, the study should be objective and rigorous in order to justify a Project HOPE decision to change to an international strategy in helping to develop INFOP as a regional resource.

Study the feasibility of utilizing INFOP as a repair service to the MSP and the IHSS for those repairs which their own personnel cannot handle. INFOP could do on-site repairs in the various hospitals, purchase its own parts and bill the agencies on a non-profit basis.

A high priority should be given to studying these options before Project HOPE invests any more time, effort and cost in supporting the current approach. If the regional strategy appears to be most feasible, it is recommended that Project HOPE completely revamp its Project Plan for BME in Honduras by dropping the Hospital Escuela, shifting training of IHSS to the INFOP and developing a new Project Plan to assist INFOP as a regional training entity.

Honduras Learning Resources Center

A needs assessment in a specialized area such as audio-visual production and learning methodology is a necessity and it requires a knowledgeable person to participate in the project design.

Swaziland Nazarene Nursing College

Project HOPE should continue to work with the faculty, hospital and school administration at Nazarene to develop and implement increased management, administrative and evaluation skills and tools.

Technical assistance should be provided by Project HOPE to finish and implement a procedures manual which would be used in hospitals country-wide. Care should be taken in the development of the manual to complement and build-on the clinic manual already in use in the health centers/health posts.

The Kellogg Foundation should be contacted by the MOH, A.I.D./Swaziland and Project HOPE to discuss strategies for addressing the current faculty shortage crisis, precipitated by the number of concurrent fellowships the Foundation is providing for long-term overseas education in nursing.

Project HOPE should continue to provide the support of a nurse educator at the College over the next year, with the condition that the College and the MOH develop and implement effective plans to deal with the problem of tutor/staff shortages (both long-term and short-term).

Innovative strategies should be developed, including a variety of continuing education approaches, for bridging the gap between education and service provision.

Approaches for recognizing the contributions made by practicing nurses to nursing education should be developed and implemented as soon as possible.

Program evaluation, which systematically assesses the impact of the new curriculum on the provision of patient care should be carried out on an on-going basis. Findings should then be fed back to the tutors and administration for program modification and improvement.

The incorporation of innovative teaching methodologies into the teaching of the curriculum on a daily basis should be a future priority for Project HOPE staff.

Project HOPE should provide the Nazarene library with requested texts (e.g., *Helping Health Workers Learn*), as well as additional relevant international Project HOPEC and development publications.

Swaziland
Institute of Health Sciences

Project HOPE should continue to provide a full-time Nurse Educator at the Institute over the next year in order for the program to continue.

Written agreements with the MOH and SIHS should be required to insure the rapid development of permanent solutions to the chronic and serious faculty shortage. Innovative approaches such as: using administrative staff as part-time faculty, evening and weekend classes, re-hiring retired faculty and recruitment of outstanding recent Community Health Program graduates for faculty positions.

The development of increased management and administrative skills for faculty and administration at SIHS should be a priority for continued HOPE Program inputs.

In addition to increasing the time allocation for the clinical experience component in the program, the course should be expanded to include: occupational health, and working with

the large refugee population in Swaziland. Student complaints about too much time spent in the Public Health Unit and needless repetition of basic practical skills (eg; giving injections) should be addressed.

A systematic evaluation of Program graduates' performance in the field should be conducted as soon as possible with full participation of the faculty in order to institutionalize/transfer evaluation skills.

Swaziland
Good Shepherd Hospital Nursing Assistant Program

The team recommends that Project HOPE explore issues related to adding a midwifery component to the nursing assistant program with the MOH. Until these critical issues are resolved, the midwifery component of the program should be suspended.

In order to maintain continuity, the HOPE Nurse Educator should continue at Good Shepherd on a part-time basis to assist the faculty in improving the existing Nursing Assistant Program, with special emphasis on including community health, primary health care and limited birthing skills into the current curriculum.

The Nurse Educator would spend the remainder of her time in supporting other HOPE nursing activities at the Nazarene College.

Swaziland
Materials Management

Project HOPE should proceed immediately to reactivate the materials management component of the matching grant project.

Project HOPE and the MOH should jointly develop a revised program plan to serve as a guide for the provision of the agreed upon assistance to be provided.

A critical first step in the reinitiation process is to conduct a re-assessment of the current materials management situation. The team suggests consideration of a new consultant to provide a "fresh look" at issues and problems.

Moreover, to assure prompt action, the team urges Project HOPE to try to obtain consultant services from within the region.

Project HOPE should reconsider the original design which called for a long-term resident expatriate advisor in favor of a planned and coordinated sequence of short-term specialist consultants (again, focussing on regionally available experts).

The team strongly recommends close collaboration and coordination with the MSH Primary Health Care Project in the development of the central materials management operation. Any new central systems should be consistent with systems already in place in the field and draw on the extensive and successful experience of the Primary Health Care Project.

When the materials management component makes plans for the training priority, the team recommends close collaboration with MSH. MSH is highly regarded for its work in Drug Supply Management and Training.

MSH courses offered in Boston should be considered for key personnel. Alternatively, a cost-effective possibility would be to engage MSH to develop a customized in-country training program that would involve the entire Swaziland materials management team.

Training of this type, in the pharmaceutical area (as well as in other sectors) is likely to be "certificate" training. It is important to obtain concurrence from Government education and training authorities for recognition of certificate training for career development purposes.

Project Hope should assist in the assessment of the quality control component of the materials management program. The most important issue is the question of the need for an independent quality control laboratory in Swaziland.

Swaziland Traditional Healer Training

The evaluation team strongly supports a continued and expanded involvement in training and collaboration with traditional healers through the THO (Traditional Healers Organization).

Two critical areas of project management, however, must be carefully adapted to meet the unusual requirements of "doing business" with institutions such as the THO. These are project administration and evaluation.

With regard to administration, the challenge to Project HOPE is the development of innovative and adequate management systems to ensure that project activities are planned and implemented "properly."

Project HOPE, in its continued collaboration with this organization, must assume the burden of converting THO's "management systems" into the formats, reports, activity schedules that are assumed when dealing with mainstream organizations.

Project HOPE must also assume the responsibility for developing and carrying out adequate evaluation of the process and impact of this component.

Systematic observations, using pretested checklists, should be developed to record post-training practices to determine the impact of training on practice. Where possible, comparative analyses should be carried out (e.g., pre and post training practices and trained vs. untrained healers).

Swaziland-wide Recommendations

Project HOPE should work with the MOH, other Government Ministries, professional associations, and international agencies to assist in the development of improved systems for long term planning related to human resources development and allocation.

For the health sector worker shortages related to the practice of sending professionals abroad for extended periods, alternative approaches need to be explored such as evening and weekend courses taught by "administrators," use of retired professionals as working emeritus faculty, use of recent Community Health Nursing graduates as faculty tutors, distance learning, intensive programs, use of short certificate courses instead of longer degree programs, and developing some kind of university or consortium mechanism for in country education.

Project HOPE should work with GOS officials to reexamine the recognition of short certificate courses for career development purposes.

Project HOPE should assist the MOH and the individual training institutions to develop schedules to assure minimal conflict between program needs and training opportunities. Monitoring systems are needed to assure adherence to these schedules.

Project HOPE should collaborate in a reexamination of current salary and benefit packages in an effort to reduce the large numbers of trained nurses leaving Swaziland for more attractive opportunities in neighboring countries.

Project HOPE should improve coordination with other actors, e.g., The Primary Health Care project (in relation nursing curricula and to the materials management component) and high level contacts with the Kellogg Foundation (in relation to the critical issues facing all of the nursing components).

Project HOPE should initiate an effort to forge stronger links between its educational programs and the service delivery system in Swaziland.

In the nursing components, efforts need to be made to bring the nurses who were not trained in the new curriculum "on board" through innovative approaches to continuing education and recognition of the contributions of these health workers to the education of new nurses.

Also in the nursing components, curricula should be refined to reflect the progress made in the Primary Health Care program. Nurses should be prepared to work with the management information systems and drug supply systems developed for the Primary Health Care initiative.

In the nursing assistant program, curriculum should be adjusted to reflect the changing roles of nursing assistants in the field.

Just as hospital, clinic, and field workers need to be informed and involved in the new approaches to nursing education, nurse educators must also get to the field and supervise their students on-site if these educators are to provide a relevant educational experience for nursing students.

The separation of Nurse/Tutors and Nurses in Practice has strong historical roots and Project HOPE should seek to devise approaches to bring the two groups closer together.

Project HOPE should stimulate efforts to inform hospital administrators and physicians about the changes in nursing education.

GRANT MANAGEMENT

Project Planning

A new Program Management system should be developed incorporating recent state of the art project management technique and nomenclature.

The new planning process and format should attempt to introduce several suggestions noted in this evaluation, e.g., realistic appraisal of developing country contexts, better diagnosis of the problem, clear management arrangements with host agencies, scheduling, impact considerations, cost considerations, and host commitment. Where appropriate include specialists in development management and public health in the design team.

The planning process should be installed, employees trained in its use and provision made to maintain it up to date.

Project Control

The project management systems should include project reporting, monitoring and control. If helpful, engage expert technical assistance in the design of this system.

To speed up HC responses to field problems and requests, identify authority at each level of the organization for action--i.e. the Program Director, and each HC level up to the President. Delegate this authority not only on paper but in reality.

Establish an action document control system with standards for response time. Most important, enforce the standards.

Train personnel in the procedure and assign the responsibility to maintain the system.

Evaluation

The new management system should include procedures for the guidance of internal evaluation done by Project HOPE personnel. It would be helpful to obtain help from specialists in the design.

The Manual should specify a program of evaluation for projects along with procedures, methods and follow-up actions on the recommendations.

Personnel should be trained in the procedure and someone assigned responsibility for maintenance of the process. Presently one professional is named to coordinate evaluations but these appear to be external evaluations rather than internal.

Financial Management

Despite an approved overhead rate of 54.4%, Project HOPE is charging only 27.4% to the A.I.D. contribution. This practice should be reviewed to determine its accuracy.

A.I.D. and Project HOPE should consider adopting more of a program budget structure for financial reporting to the A.I.D. program office in order to convey more meaningful financial progress reports. The proposed format could be used in addition to the existing reporting structure since they serve different purposes.

Gifts-in-Kind which represent as much as 28% of the combined cash provided by A.I.D. and Project HOPE should be counted as part of the matching grant resources from Project HOPE provided that independent post-audits verify the true value of the gifts. Where such gifts are not the value represented, that part of the value will be disallowed and Project HOPE will bear the cost of transporting and distributing such gifts.

HC should undertake a sample post audit of vouchers sent in to Accounting as an internal check on the propriety of expenditures under the Grant.

Personnel Orientation

Orientations of technicians should provide adequate time to learn how to interface with HC's various systems such as supply, program planning, reporting, etc. There should be reading materials (accurate, realistic and relevant) describing the living conditions they will face and what they should take with them.

Orientation of Program Directors should provide sufficient time to become familiar with the HC systems and to train them on the new procedures for program management and administrative management. They should be advised on how to discharge their responsibility for in-country orientation and guidance of new employees.

An Administrative Manual should be issued as soon as possible for the guidance of all staff, particularly the foreign staff of Project HOPE. Part of the orientation of Program Directors should be a review of this document.

Professional Development

There should be an active in-service training program to upgrade the quality of program and administrative activities coupled with periodic workshops on topics such as the public health framework of Project HOPE projects, institution building, sustainability, technology transfer, etc.

Compensatory Time

Employees should be permitted to have compensatory time without reduction in pay when their duties require frequent work beyond the normal work day.

Supply Management

The Supply Office should have a thorough review including procedures, staffing, controls, organization, paper flow and responsiveness to operational needs in order to find the causes for the problems and to remedy them.

A procedure should be available for urgent purchases of parts for items such as those mentioned in the Costa Rican report, e.g., printer parts, wiper blades for a van, etc.

Vehicle purchases should consider the availability of local maintenance and consumable parts as a criterion of selection.

A status report should be made to the Vice President for Administration on all items delayed beyond a certain date, e.g., a 60 day period from receipt of request along with the causes for the delay. The VP should use this system to find and correct the system delays.

A standard time should be set by the HC for response to the field on inquiries regarding the status of a supply request.

The VP for International, the VP for Administration and the VP for Operations should obtain periodic reports on any items delayed beyond what they consider a reasonable time period so that they can take remedial action including correcting the underlying causes for the recurrence of such delays.

The VP for Operations should review the causes for the long festering problem on support for BME equipment, why the problem has not been resolved earlier, demand a solution in a given time period, and determine what controls he needs at his level to prevent its reoccurrence.

Program Directors

Program Directors should receive training in supervision, program planning and control, management and office administration. All these functions are vital to the success of Project HOPE in the field.

As Program Directors gain experience, they should be held accountable for the planning and implementation of projects in their country. For those fully qualified, delegate as much authority as possible keeping HC informed of changes in plans and resources.

They should be involved in the site planning, project planning, country planning, internal and external evaluations.

Reporting on progress and problems, whether monthly or quarterly or annual should involve them substantively and not as passive transmitters.

Where requests to HC for guidance remain unanswered for too long, install a red-alert system whereby the Program Director can appeal directly to the Vice President for International with copy to the VP for Operations.

Lines of authority and communication should be clarified vis-a-vis the Program Director, the Country Manager and the Technical Managers in HC so that the Program Director is not side-stepped.

Organization

With the input of this evaluation and the discussions started on role definition, HC should attempt to speed up decision making and response to the field by de facto delegation of authority to Country Managers and Regional Directors with clear delineation of those decisions reserved to the Vice President or above.

The introduction of the proposed improvements in project planning and control provide an opportunity for team building and further clarification of roles and procedure.

The addition of desk officers and new personnel should be accompanied by a careful review of the workload at HC to determine how it can be balanced with quality of management considerations.

Periodic staff meetings and staff retreats to discuss items of concern to all plus periodic workshops on many of the topics suggested in this report should help improve quality.

Consider use of an organizational development facilitator to deal with the vertical communication and delegation of authority issues since these issues are not amenable to resolution simply by formal changes in procedures or structure.

PROJECT HOPE PROGRAMS IN COSTA RICA

I. SUMMARY

The Respiratory Therapy (RT) program succeeded in establishing a new health profession in Costa Rica, a new two year program at the University of Costa Rica (UNCR) and departments of RT in 13 hospitals. These results have been accomplished in spite of repeated failures of the Social Security Agency (CCSS) which operates all the public hospitals in the country to provide positions for two faculty members and sufficient jobs for graduates of the program. Other constraints are the lack of sufficient equipment and repair parts in the hospitals and proper organization of the RT Departments. There are studies at some hospitals that indicate some impact from the RT in reducing mortality and morbidity from respiratory causes.

It is proposed that a new agreement be offered to the CCSS that requires a commitment to provide at least ten jobs per year for graduates, a number that constitutes the minimum size class that the UNCR will initiate. Also a commitment to fund the two faculty positions needed and some added clinical educators. If these conditions are not met, Project HOPE should terminate the national component of this project.

It is recommended that the UNCR and Project HOPE study the feasibility of an international training program to educate faculty and leaders of RT in Mexico, Central America and other latin countries. If there is sufficient foreign demand and financing, then Project HOPE should help the UNCR in developing the curriculum and faculty for a Bachelor degree program.

II. BACKGROUND

In September of 1982, Project HOPE and the Government of Costa Rica, through the Ministry of Health and the Caja Costarricense de Seguro Social (CCSS) and its agency, the Centro Nacional de Docencia e Investigacion en Salud y Seguridad Social (CENDEISSS), signed a general agreement outlining conditions of cooperation between the Republic of Costa Rica and Project HOPE. This agreement was renewed in 1985 for an additional five years.

At the request of the Social Security System, a formal training program in Respiratory Therapy was proposed to Project HOPE by a group of interested Costa Rican physicians, many of whom had received training in the United States and Canada and were familiar with the allied health specialty of Respiratory Therapy. This profession did not exist in Costa Rica at the time, but these physicians realized the importance of this health specialty to good patient care.

In 1965, the principal causes of death in Costa Rica were gastrointestinal problems (such as diarrhea in infants and children), and pneumonia, contagious diseases, and septicemia.

By 1985, however vaccination programs, improvement in hygiene, and public awareness of health issues had reduced the number of infections and communicable diseases. In the early 1980's, the major causes of death in infants and children were complications (such as premature births), apnea of the newborn, hyaline membrane disease, congenital anomalies, and acute respiratory disease.

Twenty-five to thirty percent of all hospital admissions of adults in the early 1980's were secondary to respiratory illness. There is a high incidence of asthma, emphysema, bronchitis (COPD), pneumonia, and bronchiolitis. Additionally, industrial lung diseases are on the rise, and there is an increased incidence of smoking in the population. The life expectancy of the population has risen to nearly seventy-four years, exacerbating the number of individuals suffering from COPD.

Project HOPE professionals observed that Costa Rica's health system was relatively sophisticated. Some state of the art equipment existed and considerable expertise in medicine was evident. However, qualified ancillary service personnel were needed to complement the level of care delivered by other professionals. Advances in the skills and knowledge level of physicians treating respiratory illnesses required many of the services associated with the delivery of modern respiratory care, including those of the respiratory therapist. This need was made more urgent by the growing youth population with an accompanying rise in respiratory illness.

Respiratory therapy equipment was largely unavailable either for teaching or direct use for patient care. In addition, personnel capable of delivering respiratory care procedures did not exist in sufficient numbers. Also, cleaning, sterilization and maintenance of respiratory therapy equipment was inadequate.

Awareness of these problems and a shift in the Costa Rica's health profile led the medical community to investigate the training of respiratory therapists. The hope was to reduce the number of hospital admissions from respiratory problems and reduce the length of hospital stay by treating pulmonary disorders more effectively and preventing hospital acquired pneumonia.

Local resources in developing this program included the sophisticated medical knowledge of key physicians at the primary hospitals and the interest and support of key organizations within the country. These organizations included the Ministry of Health of Costa Rica, the CCSS through CENDEISS, and the University of Costa Rica.

External funding and donations were essential to provide the respiratory equipment unavailable in Costa Rica. Additionally, external support was required to supply trained personnel to serve as educators, advisors, and role-models in the field of respiratory therapy.

Project HOPE's respiratory therapy training program began in 1985 and has established a separate degree granting program in respiratory care sciences at the University of Costa Rica (UCR) under the aegis of the School of Medicine.

III. APPROACH

A. Problem Analysis

According to the Program Plan, the problem for Respiratory Therapy in Costa Rica was viewed as the lack of trained technicians, a training program and equipment. This problem definition was ascribed to the Ministry of Health in Costa Rica which in fact did not manage any hospitals since they had been transferred to the Social Security Agency (CCSS). Moreover, the formal agreement signed by the CCSS and the University of Costa Rica (UNCR) in Nov. 1984 also focused on the training aspects and equipment required by each of these organizations to implement the program. No mention was made of the need to establish positions in the hospitals to hire the trained technicians and pay them adequate salaries to retain them, nor was there mention of the need to maintain and repair the equipment along with the necessary spare parts. This omission proved to be the fatal flaw in the problem analysis.

The initial survey team sent by Project HOPE to Costa Rica to investigate the need and feasibility of a program presented a detailed analysis in 1983 followed by another team report in May 1984. The reports constitute a very thorough and technically competent plan but no mention is made of the necessity for positions and adequate salaries for the new medical profession of Respiratory Therapy. The feasibility study did pay assiduous attention to many of the details of inputs such as space for the lab, office, classroom, library, audio-visual support, duplicating machines, secretarial support, postage, telephones, textbooks, student exchanges, housing for short term consultants and transportation. But no mention was made of the need for positions for technicians trained and the equipment maintenance.

The Project HOPE agreement with the MOH was a general one that served as an umbrella agreement covering all Project HOPE projects in the country. That agreement contains only a very tenuous and non-committal statement regarding the employment of the trained technicians: "The Ministry and the Social Security Agency will offer the opportunity, within their budgetary possibilities, to practice the knowledge acquired during the training programs, in the appropriate locations." Note the reference is to "practice the knowledge" and not to positions.

There was no agreement between Project HOPE and the Head of CCSS covering the Respiratory Therapy program and if there had been one in the same language of the umbrella agreement then it would have been non binding and non quantitative. This failure to secure a binding commitment by the President of the CCSS which employs all public hospital personnel in the country has plagued this project. In the beginning, the technicians

to be trained were recruited from those nurses already employed by the CCSS and thus had jobs to which they could return. Subsequent classes were recruited from young students who had no positions in the CCSS and thus there were the difficulties that will be described in greater detail later in this report.

Top management in HC explain that the decision to forego a binding commitment on the part of the CCSS was a deliberate one since they realized it would be difficult to introduce a new profession in the system. It was considered more important to gain recognition of the benefits from RT and then at a later time strive to obtain commitment to support it. During the ensuing years as the failure of the CCSS to fully maintain its commitments became evident, the President and the Vice President of Project HOPE made trips to Costa Rica to discuss the issue with the President of the CCSS. The meetings usually produced promises to fulfill CCSS commitments but no action. Thus, the top leadership of Project HOPE decided to await future events but they did reduce their faculty from the initial number of four to the one remaining now in San Jose.

Conclusion: The problem analysis was technically sound and administratively complete in terms of Project HOPE's inputs but incomplete regarding the CCSS's inputs. For recommendations on this aspect and on the lack of a specific commitment by the host organization, see the discussion in the following section and on Program Planning in the section on Program Management.

B. Strategy

The strategy had to deal with several problems simultaneously: how to introduce a new health profession into the country, how to introduce a new educational program into the University, how to introduce new positions and departments for Respiratory Therapy into the hospitals and where to link the Project HOPE assistance? By dealing with the appropriate institutions, the project strategy was successful in obtaining approval for the creation of a new medical technology dealing with Respiratory Therapy and having the UNCR introduce an educational program to train technicians. The CCSS was and is the key institution since it is almost the sole employer of RT technicians in Costa Rica and it provides the clinical setting for the training. Moreover, the CCSS has an in-service training organization (CENDIESS) which was selected to serve as the physical setting of the UNCR training program since it is located next to a hospital. It also has the laboratory facilities and most importantly it can offer higher salaries to faculty members it employs since it uses CCSS salary levels rather than university levels.

In order to coordinate the various organizations involved, the original strategy called for the creation of an overall coordinating committee in the National Respiratory Therapy Committee and an Academic Committee to coordinate the training functions. Since the original students were nurses already employed in the CCSS, the Nurse Associations formed a part of this coordination mechanism. With time, it became evident that the program and the technicians employed in hospitals should be under the direction of physician Medical

Directors and not Nurses. This created a conflict in the National Committee which resulted in the Committee becoming inoperative.

The Academic Committee suffered a similar fate resulting in several problems of mal-coordination between CENDIESS and the UNCR. Part of these problems are caused by the different objectives of the organizations involved--one academic and one an operational organization. Moreover, the differences in salary levels and benefits between CCSS employees and UNCR employees produce difficulties in recruiting faculty members from the CCSS staff and for the UNCR in retaining employees.

Another strain in the relationship is that the UNCR does not want to start a class if there are less than 10 students but the CCSS does not provide any guidance as to the number of graduate technicians it will employ. For the past few years it has actually employed less than ten per year creating a problem for the UNCR. In the last year, the CENDIESS has reviewed its mission and decided that it should not sponsor an educational program such as the Respiratory Therapy two year associate degree program because its mission is in-service training. This constitutes an issue for the new incoming government taking office in May 1990 and for the Project HOPE agreement if it is to continue.

The strategy was also marred because the umbrella agreement was with the Minister of Health and not between the Project HOPE and the President of the CCSS and the Rector of the UNCR.

Conclusion: The strategy has been successful in creating a new health profession, in establishing a new degree program at the UNCR and in establishing positions in some of the hospitals of the CCSS. But the sustainability of the program within the CCSS is doubtful. Just after a new government takes office there will be an opportunity to rethink both the strategy and the commitment by the CCSS for any further collaboration with the Project HOPE. This issue is discussed under the section on "The Program Future."

Recommendations:

- . Complex undertakings involving several functions and institutions such as this one need a comprehensive systems approach which considers all the vital actions that must take place if the program is to succeed. Focusing on training programs without attention to the utilization of the graduates will eventually make the training unattractive. A systems approach must therefore consider the effective demand for the trainees.
- . Some of these vital system components are the institutional and financial commitments by the host country. Costa Rica and many other Latin countries are undergoing economic difficulties and budgetary constraints which mandate extra precaution concerning financial commitments especially those relating to new positions and salaries. A systems approach considers these elements.

Specific agreements with both of the action agencies (CCSS and UNCR) which specify exactly what commitments are expected from them in quantitative terms is of course a requirement. In this instance it was a considered judgment to waive this requirement in the hope of introducing a new and unknown profession but commitments not honored by the host country require timely and effective resolution including the cutoff of assistance if contributions are not made as agreed.

IV. ACTIVITIES BY OBJECTIVES

A. Establish Degree Program

1. Associate Degree

Project HOPE and the University of Costa Rica have been successful in establishing an Educational Program for Respiratory Therapy. Initially, professional nurses were cross-trained as respiratory therapists. This was more practical and efficient since they required less training than personnel with no previous patient care experience. They made up the first three classes in an accelerated one year program. The first graduates were intended to serve as leaders in the profession and future instructors in the program. As of May, 1990 there have been 54 graduates of the program of whom 14 are non-Costa Ricans.

The associate degree program operating under the University of Costa Rica was designed during the first three years with the first A.S. class of 7 graduating in April 1989. A second class of 8 graduated in April 1990.

2. Bachelor Degree

The baccalaureate degree program was developed by the University of Costa Rica and Project HOPE and submitted in August 1989 to the University Medical School Assembly. There was overwhelming approval. They are currently waiting for the National Commission of Rectors to give final approval. The plan is to open the program in March 1991. There is much support from the physicians, graduates and students for the baccalaureate program.

Justification for the B.S. degree include:

- . Students want to be better educated professionally and universally.
- . They do not want to be thought of as technicians. The responsibilities of a therapist are beyond that of a technician.

- . A baccalaureate graduate is more likely to take the leadership role in expanding the scope of practice (specific examples are in areas of pulmonary rehabilitation, preventive health care, cardiac care, home care, CPR teaching for community, continuing education programs).

There is a question about going to the B.S. degree exclusively or continuing with the A.S. degree and graduating two levels of therapists. There are many considerations which should be studied before making that decision including the following:

- . Everyone can not be in a leadership position if a "leader" is defined as an educator or a department manager. Most graduates are needed at the bedside.
- . There are problems inherent in a system that has two people doing the same job who are making a different salary because of the degree earned.
- . Consider the number of jobs in each degree category that the CCSS is willing to hire each year.
- . There could be some difficulty in attempting to change the job description of current therapists if that involves not allowing them to perform skills they have been doing.
- . Consider where foreign students would fit into the program.
- . The University, students and graduates appear to support the B.S. program exclusively.
- . Potentially, there would not be any graduates for two years if the B.S. program was adopted exclusively and there was not a phase in period.
- . Continuing faculty development by Project HOPE and the University will be important as the B.S. program is initiated.

Recommendations for the Baccalaureate Program:

- . A study be done by the University and the Program Advisory Committee to determine the potential demand for the baccalaureate program.
- . A study be done to analyze what the job responsibilities will be for the A.S. and B.S. graduates as well as for the RT aid position.

B. Train Faculty and Students

1. Faculty

Project HOPE has provided many long term and short term instructors since 1985. The long term program directors had experience in Respiratory Therapy Programs as directors or clinical coordinators. They were well qualified.

The short term instructors were experienced respiratory therapists with areas of specialties such as pulmonary function, neonatal and pediatric respiratory care. They were qualified and added toward the goals of the program. The long term faculty were sent by Project HOPE to language school to learn Spanish.

The University of Costa Rica has contributed one faculty position since 1988. This is part of the plan to turn the program completely over to the Costa Ricans. The Program Director has received assistance from the Project HOPE counterpart and the media specialist in developing her teaching skills. She is also taking education courses at the University. The University has assisted by providing the Program Director and two other faculty members a course in teaching techniques. The following problems have been noted related to faculty:

- a) The program is waiting for the CCSS to establish 2 more faculty positions. It is important for the continuation of the program that this be done by July to accommodate the high teaching load. The Program Director is overworked and will not be able to handle the teaching load this summer.
- b) There will be a problem recruiting faculty if the positions come from the University and not the CCSS. The University salaries are lower therefore the nurse/therapists currently working for the CCSS will not want to change positions.
- c) The program should not be taught from the nursing perspective exclusively. Also, the A.S. graduates are believed by the nurse/therapists to be more technically trained than the one year accelerated graduates.

Recommendation(s):

If the two faculty positions come from the University, the solution might be to hire the Associate Degree graduates and with the help of Project HOPE faculty, develop their teaching skills. If two positions are provided by the CCSS, hire one graduate from the Associate Degree program.

- d) One of the nurse/therapists being considered for a full time position does not have current critical care experience.

Recommendation(s):

If the person being hired for a full time faculty position does not have current critical care experience he/she should switch positions with someone from Mexico Hospital to bring skills to a current level.

- e) The students believe that the science teachers are not aware of how they will be applying concepts learned in Science courses to respiratory therapy. This seems to result in inappropriate examples given in class.

Recommendation(s):

Improve communication between respiratory therapy program faculty and science teachers related to application of science concepts.

- f) Students feel that there are inconsistencies between what they are taught in lab/class/ clinical. The program has taken steps to improve this by developing videotapes of lab procedures and a laboratory procedure manual. The videotapes will be important to accomplish the following:

- . decrease lab teaching time,
- . remediation,
- . encourage open labs with supervision only,
- . provide a resource to students/faculty/practitioners to encourage consistency,
- . use for other Respiratory Therapy programs in the region,
- . use to teach medical students and nurses about respiratory care.

The Laboratory Procedure Manual will be important to serve as:

- . teaching aid and resource for students, faculty and graduates, and
- . serve as a base for hospital procedure manual.

Recommendation(s):

Continue providing support over the next year to complete the videotape project and the laboratory manual. Editing equipment and an Audiovisual expert will be needed for these projects.

2. Students

The program has a very selective group of students. There were 74 applicants for the last class with 20 accepted, 17 started, and no attrition. This indicates excellent interest and selectivity. The program director has some input into who is selected into the class. There is very good support by faculty and university for students having problems.

Recommendation(s):

A waiting list of qualified student applicants should be maintained up to the day classes begin. This will assure a full class each year.

3. Textbooks

The program faculty have translated much material into Spanish which has been very helpful for the students. Also, students are required to take English courses at the University to improve their ability to understand the English textbooks. However, there is still a problem with a lack of print materials in Spanish, especially textbooks. To help with this problem there may be some publishers who are willing to turn over rights to companies who will translate textbooks.

Recommendation(s):

Examine the possibility of translating major Respiratory Therapy textbooks into Spanish. Several programs do this including the A.I.D. Bureau for Latin America and the PAHO.

4. Laboratory

The program has been successful in developing a well-equipped RT laboratory with very good space. There should, however, be more time allocated for open lab so the students can take full advantage of the resources available and practice procedures. This is especially important since time for clinical education is minimal. The program will have the opportunity to make open lab time more constructive with the completion of the videotapes.

Recommendation(s):

- . Secure the laboratory for Respiratory Therapy students only and open the lab for students to practice procedures beyond the scheduled lab time.
- . Continue support of the laboratory to allow purchase of state of the art equipment. Students must be exposed to state of the art equipment and

procedures if they are expected to facilitate the development of the Respiratory Therapy Profession.

5. Clinical Education

Clinical education has been effective in that there are graduates working in the hospitals who are significantly contributing to patient care. Morbidity and mortality statistics collected from Mexico Hospital indicate that this is true and physicians in other major hospitals state similar data. However, as the program progresses the clinical education component will need to expand and improve. The following are problems related to clinical instruction and recommendations for improvement.

- a. Too many students with one instructor i.e. a ratio of one faculty member to four or five students.
- b. Not enough clinical time.
- c. Therapists must work and instruct at the same time.
- d. Needs better coordination.
- e. Some clinical instructors are good therapists but need to work on their teaching skills.
- f. Some clinical instructors are not expert in the content area (ex. instructor teaching in ICU is a geriatric therapist).
- g. Lack of equipment to use during clinical training.
- h. No clinical experience until the end of the first year. This is a problem because the students may not know enough about the profession to make an informed decision about entering the field.
- i. Inconsistent clinical evaluations among instructors.

Recommendation(s):

- . The Program may need to decrease the number of students entering the program (or increase the number of clinical instructors) in order to provide adequate clinical education. A faculty/student ratio of 1:2 in the ICU should be the goal.
- . The program needs a full time clinical coordinator to assure optimal clinical schedules, to provide assistance to clinical instructors in teaching and evaluating students and to assure that instructors receive experience in the content areas in which they are expected to teach.
- . An orientation program be set up for students being considered for the program. This should include visits to the hospital for the purpose of observing respiratory care. Such a plan would help students make a more informed decision about entering the profession.

C. Establish RT Departments in Hospitals

1. Accomplishments

Thirteen respiratory therapy departments have been set up in Costa Rican hospitals with the assistance of Project HOPE and they are continuing to develop. Project HOPE has worked with the medical managements section of CCSS to establish a management structure and job classification system for respiratory therapy departments. There are now 32 graduates working in the Costa Rican Hospitals and three hospitals are now able to provide minimal 24 hour coverage.

The input of these Departments has been important in improving the morbidity and mortality statistics. Data from Mexico Hospital indicates a decrease in the percent mortality for patients on mechanical ventilators, a decrease in the percent mortality of patients with in-hospital pneumonia, and the number of people being mechanically ventilated has increased with the percent mortality decreasing. This data is said to be similar in other hospitals and it is believed by all concerned to be in part because of the establishment of the respiratory therapy profession, the increased availability of RT equipment and better use of the equipment.

Several problems exist in the respiratory therapy departments:

- a. Therapists are very well trained but not always allowed to utilize their full range of skills by the physicians. This is in part a symptom of a new profession but can be improved with the help of the medical directors.
- b. There is much turmoil in the RT departments where there is not an officially appointed leader.
- c. The structure of the departments has not been agreed upon and there is much controversy as to what that structure should be.
- d. The therapists are in much demand. They are over-worked and there is not enough of them to carry out all functions and to provide 24 hour service in all major hospitals.
- e. There are some safety concerns in the hospitals because of equipment problems, lack of therapists and because some technicians perform cleaning and sterilization procedures inadequately.

Three graduates are employed at Children's Hospital where almost all of their work is in neonatal and pediatric intensive care. They are able to provide 24 hour service (although minimal coverage). The therapists are very active in

the neonatal ICU where they perform intubations, extubations and are often consulted by physicians to make suggestions about patient care.

The medical director of the Respiratory Therapy department at Children's Hospital has been keeping morbidity and mortality statistics and reports that they have improved since having the respiratory therapists on staff. Neonatal care is provided minimally at Mexico Hospital but it should improve if more graduates are assigned. Their goal is to have one therapist in the neonatal ICU around the clock but this is subject to establishment of the positions by CCSS.

2. National Committee For RT

The foregoing problems signal the need for a different kind of governance for the Respiratory Therapy program in Costa Rica.

The original National Committee and Academic Committee were largely devoted to overseeing the training and education aspects of the program rather than the operational ones in the hospitals. Moreover, the composition was made up mostly of representatives from nursing organizations, e.g., the Director of the School of Nursing at the UNCR, the Extension Director at the School of Nursing, the Head of Nursing at the CCSS, the Deputy Director of Nursing at CENDIESSS and still another representative of the School of Nursing at the UNCR. This left only five other representatives including the Medical Director of the Program and the Project HOPE representative.

There arose a conflict among the Nurses and others about the control of the program and the National Committee simply stopped meeting. Nonetheless, there is still a need for two kinds of coordinating mechanisms. A renewed National Board for Respiratory Therapy should be concerned with the regulation of the new profession within the CCSS including the organization and procedures within the hospitals, the projection of the demand for trained degree graduates in the CCSS for a five year period ahead as well as the kinds and number of equipment needed in the CCSS, the program for continuing education and the regulation of the job profile for RT workers. Another purpose is to oversee the in service training conducted by CENDIESSS and the collaboration with Project HOPE if the program is to continue.

The organizations to be represented on the Board could include: the Head of CENDIESSS, the Medical Director of the Respiratory Therapy Program, one or more rotating Medical Directors for RT from the major hospitals of the CCSS, the Head of the Respiratory Therapy program in the UNCR, the Head of Purchasing in the CCSS or his designee and the representative of Project HOPE.

An Academic Committee could also be reformulated with the more detailed function of coordinating the curriculum, selection of Costa Rican students for the program, selection of faculty, use of laboratory and hospital facilities for clinical education and the other functions related to the educational program.

These functions should be limited to the training of Costa Ricans and not to the international training since the latter may eventually expand in number and course duration beyond the national training component.

The membership on the Academic Committee should include the Medical Director for Respiratory Therapy, the head of the Program of Respiratory Therapy Education, the Director of the School of Medicine, the Director of CENDIESSS, the Project HOPE representative and such other persons as may be suggested provided that the membership be kept to a manageable number.

Recommendation(s):

- . Establish a new National Board and Academic Committee for Respiratory Therapy for the purpose of solving new problems and overseeing the continued growth of the profession with the functions and membership suggested in the text of this report. The establishment of these Committees should be made a part of any agreement for extension of assistance by the Project HOPE.
- . The medical directors take responsibility of officially appointing a Respiratory Therapy Technical Director in each hospital. Such a leader is necessary to assure improvement in utilization of therapists and provide for the continuing growth of the profession.
- . An official position and job description for a Respiratory Therapy Aid be established and a short training program be introduced. This would help relieve therapists from functions such as cleaning and sterilizing equipment and equipment delivery. There are some people currently doing these tasks but reportedly they are not all well trained.
- . Data related to improvement in patient care should be collected in an organized study to include all the major hospitals. This data is important to monitor the impact and benefits of this program.

D. Assist Respiratory Therapists in Hospitals

Project HOPE faculty have been very helpful to the therapists in the hospitals. They make frequent visits to the four major hospitals in San Jose and they have made several visits to

the hospitals outside the city. Project HOPE faculty assists in many areas including the following:

1. Equipment repair: Project HOPE faculty help repair equipment which breaks down in hospitals as well as the donated equipment. Attempts are also being made to transfer this knowledge of equipment repair to the therapists. Basic maintenance of equipment is covered in the program, however high level repair and maintenance requires special talent and study beyond the scope of a two year program.

Recommendation: A select number of interested and talented graduates should be sent to the biomedical program in Honduras to learn about equipment repair. They will then have the knowledge to repair and maintain equipment in Costa Rica as well as to teach others who will have that responsibility.

2. Management Problems: Project HOPE faculty have been helpful in assisting the therapists to solve management problems in the hospitals. They have helped the therapists organize and plan department structure and for securing leadership positions.

3. Positions for Graduates: Project HOPE faculty constantly work to secure positions for the graduates. This continues to be a problem because there is no written agreement indicating that the CCSS will open jobs for the RT graduates.

Recommendation: The UNCR and the CCSS should have a written agreement about the number of jobs to be created each year for RT graduates.

4. Procedure Manual: Project HOPE faculty have assisted in writing a procedure manual to be used throughout the country. There have been some problems with this project because different therapist groups cannot agree on some procedures. However, Project HOPE faculty are taking the lead in trying to move this project forward.

5. Videotapes for Laboratory Procedures: This project has been previously discussed but it should be mentioned here since completion of the videotape project can be an important step in helping to bring continuity to procedures performed by therapists throughout the country.

6. Teaching techniques: Project HOPE faculty have assisted the Costa Rican Program Director in learning teaching techniques. This will be important to continue for the new instructors if and when they are hired. In addition the clinical instructors need continued assistance from Project HOPE faculty in developing their teaching techniques.

E. Distribute RT Equipment

Much equipment has been donated to the hospitals since the beginning of the program. The four major hospitals have many mechanical ventilators which have made a significant contribution to the care of the critical care patients. However, the lack of equipment contributions continues to be a major problem for teaching in the hospitals as well as for clinical use. There is also a problem with the methods used for purchasing equipment in that the therapists and medical directors do not have a direct line of communication to the person in the country responsible for purchasing RT equipment. A recommendation related to this has been made under the topic of National Committee for Respiratory Therapy.

V. IMPACTS

At the beginning of the program planning for this project, the desired impact conditions were referred to as reducing the length of stay in the hospital resulting from respiratory illnesses and decreasing mortality/morbidity from the same causes. There were no baseline data at the time of the planning, which is a defect in project planning, but subsequent studies were made that show improvement in at least one hospital. Studies at the Mexico Hospital of the CCSS indicate reductions in both mortality and morbidity. There have been other benefits:

- . Costa Rican patients suffering from respiratory problems have and will continue to benefit by the improvement of critical care delivery in hospitals. In addition to providing respiratory care to patients, therapists now teach physicians and nurses in areas such as oxygen and aerosol therapy, airway and ventilatory management and interpretation of arterial blood gases. Courses in mechanical ventilation are presented to first year resident physicians by respiratory therapists on a continual basis.
- . Young people of Costa Rica have benefited by having a new profession available for them to enter.
- . Community groups and families have benefited from courses given by program graduates such as smoking cessation and asthma programs.
- . A respiratory therapy program has recently been initiated in Guatemala. Many of the resources developed by the Costa Rica program have been shared with the Guatemala project and the new program director is routinely advised by the Costa Rica faculty.
- . The Dominican Republic which has created its own training program sent two physicians to consult with the Costa Rica program about the professional role of therapists.

- . The Ministry of Health from Venezuela has sent a physician and a respiratory therapist to Costa Rica to review the curriculum and inquire about the resources necessary to open a respiratory therapy program.
- . The Costa Rica medical community has benefited by the interest of medical equipment suppliers who are helping to nurture the RT profession. An article about the Costa Rica program written by the Project HOPE program director and published in the professional magazine AARC Times resulted in new interest throughout the US and Canada. Many companies have come forward with promises of donations.
- . The respiratory therapy program is the first associate degree program to be transformed into a baccalaureate program. This will result in the program being removed from the medical technology division into a separate school. This represents a significant move forward for all medical technologies offered by the division.

VI. SUSTAINABILITY

A. Government Commitment

The Government of Costa Rica (GOCR) has maintained most of its commitments except for establishing posts for two faculty members and for establishing sufficient posts for the graduate of the Associate Degree course. The lack of faculty members is critical as noted elsewhere in this Report; in fact, the Program may simply stop because of the lack of sufficient faculty members. The only Costa Rican faculty member is the Program Coordinator who must also teach. She is overburdened to such an extent that she is contemplating leaving the program. Previous Costa Rican faculty have departed requiring the Project HOPE Coordinator to train and retrain counterpart faculty members.

The other major failure has been the reluctance of the CCSS to indicate in advance how many posts would be established for Respiratory Therapists. Both the UNCR and the CENDIESSS prefer not to train more persons than jobs available for them in the CCSS hospitals and they have therefore sought guidance in advance of forming classes. Moreover, the break-even point for the UNCR in starting any course is a minimum of ten persons. Despite repeated requests to the CCSS, there have been no replies and even after classes would graduate there would be up to seven months wait for appointments to be made to hospitals.

The GOCR has had a budget squeeze which has caused a freeze on new jobs. There is a reputed shortage of 700 posts for nurses and 600 posts for nurse aides. Hence, it is not surprising that establishing posts for RT graduates is very difficult.

Nonetheless, the RT Program cannot continue without two more faculty positions and assurance of at least 10 posts per year for RT graduates. If our recommendation to increase the number of clinical instructors is accepted, it would add 2 or more instructors per class of ten students. Given the outlook for the Costa Rican economy and budget, there is a grim prospect for the future of this Program. The conclusion must be that there has been insufficient commitment from the GOCR to sustain the Program.

B. Institution Building

There is a successful institutionalization of the Program within the UNCR since there is now a curriculum, an educational program, faculty, teaching materials, students and support for the expansion of the program to the bachelor level and to more foreign students.

In the CCSS hospitals there is a good beginning for institutionalization with graduates working in 13 departments of Respiratory Therapy in as many hospitals. Of course, there are shortages of equipment and parts, therapists, problems of organization and quality but the base has been established. There is agreement among all persons interviewed that the Therapists are making a beneficial impact and that more of them are needed.

There is a doubtful institutionalization for the training program within the CCSS. We were told by the Head of CENDIESSS that they have concluded that their mission is in-service training and not education. The current plan of CENDIESSS is to cut its participation in the RT training program... but the present Medical Director of the Program has noted that a new incoming government may not agree with this assessment. If the Program is transferred from the CENDIESSS to the UNCR, it would mean loss of its present lab space, and financial support for the three faculty members paid by the CCSS. Many CCSS employees would not transfer to the UNCR because of the loss of benefits and salary levels; hence, the withdrawal of the CCSS in active sponsorship and financing of the program could well cripple it.

C. Conclusions

If the CENDIESSS withdraws its support for the faculty, as well as the space it provides and pressure for opening jobs for graduates in the hospitals, the reluctant conclusion is that the program for Costa Rica is not sustainable. The only option is to expand the program for foreign students and hope that it will help to finance the course sufficiently to keep it open for national students. More on this option in the section on "The Future of the Program".

VII. MANAGEMENT

A. Project Management

1. Planning

Preceding comments noted that the problem analysis was technically sound and complete in terms of Project HOPE's inputs but incomplete regarding the CCSS's inputs. Subsequent experience confirmed that the major problems have been the lack of jobs for two faculty positions necessary for the program to continue and the difficulty of obtaining sufficient positions for graduates as therapists in the hospitals. Either of these constraints could prove fatal; for example, the shortage of faculty may cause the instruction to cease this summer and the Program Director to leave her job in the CCSS.

There was no agreement signed at the top level of the CCSS committing it to provide the faculty and positions necessary for the graduates. Project HOPE top management indicates that the decision was a deliberate one because the introduction of a new health profession was difficult enough without taking on the budgetary constraints of the CCSS. The issue is now critical for Project HOPE if it is to extend any further help to the project. See the section "The Program Future".

At the beginning of the program planning for this project, the desired impact conditions were referred to as reducing the length of stay in the hospital resulting from respiratory illnesses and decreasing mortality/morbidity from the same causes. There were no baseline data at the time of the planning, which is a defect in project planning, but subsequent studies were made that show improvement in at least one hospital. But there still is no provision to track improvements in mortality and morbidity of patients benefiting from RT.

Other elements needing to be addressed in the planning phase were cost effectiveness of the options chosen, the demand projections for students, more quantification of objectives, sustainability of the project and description of other donor inputs. These are generic needs in the planning process stemming from the kind of guidance that prevailed in the earlier Administrative Manual suspended in 1980. For a more generic discussion of the planning process and recommendations, please see the Program Planning section in the Chapter on Grant Management.

2. Monitoring

The quarterly reports and the final report of the last Coordinator are rife with issues in the project, many of them dealing with the failure of the CCSS to provide the needed positions for the graduates and the faculty. There is little if any response to

the calls for help although it was reported that the President and VP of Project HOPE visited Costa Rica on several occasions to secure cooperation from the CCSS. In those instances, they were promised that all would be well but no remedial action was taken.

It may be that the HC eventually decided that benign neglect was the best posture. If so, it was not communicated to the field staff who as recently as this evaluation were drafting and coordinating new agreements for the extension of the project to complete the four year Bachelor program at the UNCR. The Costa Rican Medical Director of the Program arrived at his own conclusion some time ago that the change in government in May 1990 would provide a time of decision and basic change in the commitment to the program. He presented to the evaluators his recommendations for the conditions under which a new agreement would be offered to the CCSS. These recommendations are basically the same as those proposed in the section "The Program Future" in this report.

Conclusions:

1. The flagging support from the CCSS which has become critical in the last year did not bring about any definitive decision by the HC regarding the program--whether to continue, terminate or propose changes.
2. The Field Coordinator was in the dark at the time of the evaluation (April 1990) as to the future of the program. Since his contract would end with the project, there was an understandable concern about a decision in time to make his personal plans. He was not aware what HC intended to do. It may be that the HC has awaited this evaluation to make its decision on the future of the program, in which case the decision may not come until June of 1990.
3. The monitoring and communication process between field and HC have reflected the above conditions with a resultant feeling of a lack of direction in the program. Obviously, this has affected morale of both Project HOPE and Costa Rican staff in the field.

B. Personnel

1. Professional Staff

The first technician hired by Project HOPE is reputed to have preferred vacationing to work. The Costa Rican Medical Director reported this to HOPE Center who took immediate action: the technician was fired in one week. To avoid a similar problem, HOPE Center then recruited a new person and the Medical Director was invited to HOPE Center to help in the selection.

The technicians who have since served on the project have all done a good job. The Medical Director has praise for the last and current Coordinators. The Coordinator who is presently on duty has been characterized as quiet, effective, committed, hard working and well organized. The evaluators share that view. He can handle the language and has adapted well to the local culture.

The short term consultants have performed well, have been given specific objectives and fit in well with the Program.

2. Orientation

The Coordinator presently on duty in Costa Rica had only one day of orientation in HOPE Center covering program aspects. He did not receive any orientation on Costa Rica and what to expect there: no country material on the culture, the amenities, what to bring or not to bring, local costs, etc. This is an important aspect for a successful adaptation to a strange country. A.I.D. Missions usually have original materials compiled into an orientation manual for newcomers. These deal with the various personal aspects of life in that country: customs, where to get medical help, places to live, sources of support during the early "camping stage" before the belongings arrive, cost of local help, and much more. If possible, such materials or their equivalent should be gathered and distributed to orientees.

Recommendation. HOPE Center should compile and make available orientation reading materials for personnel to be assigned to a particular country. It may also be helpful to provide names and phone numbers of other persons living in country who could give some advice to newcomers based upon their own experience.

3. Inputs

Project HOPE salaries are usually negotiated with each individual. The salary and benefits are evidently acceptable to the individuals or they would not be working there. The benefits are usually below those given to A.I.D. employees; for example, there is no housing allowance, no educational allowance, no transport of a personal vehicle, and employees have to buy their own appliances when moving into a local residence. There is no duty free import of personal effects. The employees nonetheless seem to accept these matters and continue to serve with dedication in often difficult situations.

The office space is modest but functional for the Coordinator. The CCSS provides a bilingual secretary, telephone and office furnishings--all adequate though modest. Project HOPE staff have noted the need for another office micro-computer but thus far have not been authorized one. If the Project is continued beyond June, 1990 there should be consideration of a another computer.

C. Supply

The supply situation leaves a great deal to be desired. For example, it is difficult to obtain parts for the Ford Van in Costa Rica. Thus, when the van needed wiper blades which are not available in Costa Rica, the staff asked a friend to buy them in the US and they were paid for by the Coordinator out of pocket since direct purchases in the US are not authorized for staff. Travel in San Jose without wipers is not safe and so the personnel here had to move quickly at their own expense rather than wait for the normal purchasing lead time. The more basic question for HC is why it purchased a Ford Van for use in Costa Rica if there is no local support for common use items.

Other examples: Project HOPE offered Nitroglycerin to Costa Rica. The Coordinator requested the drug from HC but no reply came for weeks. The Coordinator sent a telex to determine status and was told that because of a mistake Costa Rica was not chosen to receive that particular drug. Costa Rica had reduced its usual purchase of that drug in anticipation of the HC shipment and now there was a national shortage.

The five year old printer stopped working. Since the AT&T is not represented in Costa Rica, the part had to be shipped from the US. The Coordinator sent the part number to HC but heard nothing for one month. An inquiry was sent to HC and the reply came that more information was needed before the part could be ordered.

In June 1988, HC was informed of the critical need for more computers. The response from HC was to buy the used personal computer from the person leaving post. This was done but it still meant that four persons had to share that one computer. Two of the staff members had to take their personal computers from their homes and take them to work.

Recommendation(s):

- . For items urgently needed such as the wiper blades and the printer, a rapid response system should be available to meet field needs.
- . Purchases held up for 30 days should trigger an automatic response to the field indicating the delay and the reason therefore.
- . Presumed savings by limiting the purchase of computers are more than offset by the increased cost in time to the personnel and to the efficiency of operations. The Supply Office should not make these trade-off decisions; and those persons at HC that make these decisions should consider the trade-off of computer cost versus operational efficiency.
- . Purchases of vehicles which are not supported locally for repair and common items create a chronic problem of supply support and operational reliability. Criteria for purchase should include availability of local supply for common consumable items.

VIII. FUTURE OF PROGRAM

A. National Program

As indicated earlier in the section on Sustainability, the present lack of support for added faculty and a minimum of ten graduates per year makes it unlikely that the Program will continue. In May, 1990 a new government takes over and contacts with the new President of the CCSS and the CENDIESSS indicate that a more favorable attitude may prevail. If this is the case, several changes are in order. The following suggestions have been discussed with the Costa Rican Medical Director of the Program and most of the points have been developed by him.

When the present Agreement terminates in June, 1990, Project HOPE should indicate its decision to renew only under the following conditions.

- . CCSS should adopt a five year plan in which a minimum of ten students per year are to be given posts as Respiratory Therapists in hospitals.
- . Three more posts are to be allocated for faculty for the RT Program: two to fill out the present needs and one more to add for clinical instruction. The UNCR would continue to provide three faculty.
- . More equipment needs to be purchased and allocated for teaching purposes in various hospitals. Specific details available from the Medical Director of the Program and the Project HOPE Coordinator.
- . The laboratory needs to make more time available for students in the program.
- . A National Committee and an Academic Committee for Respiratory Therapy should be established with the functions and membership proposed earlier in this Report.

If the CCSS agrees to the above, then it is recommended that Project HOPE provide a technical assistance coordinator for another year and such equipment as it can donate. Assistance with translation of texts into Spanish would be helpful. An Agreement should be approved signed by the President of CCSS, the Rector of the UNCR, the Head of the CENDIESSS and Project HOPE which specifies and quantifies the various commitments for the five year period. The resident advisor from Project HOPE need not be maintained for five years but more likely for two years with some ad hoc technical assistance thereafter as needed. A possibility is to include training for some Costa Ricans at the INFOP in Honduras in equipment maintenance for RT.

If the national program is to continue, then the recommendations made in this Report should be seriously considered. If the CCSS does not agree with the recommendations, it

is suggested that Project HOPE terminate work with the CCSS and its hospitals and continue only with the international strategy as described in the next section.

B. International Training

In our interview with the Director of the School of Medicine, he announced an agreement with two Schools of Medicine in Mexico, and through them an indirect agreement with some 50 other Schools of Medicine in that country, to utilize the UNCR for education of faculty and experts in Respiratory Therapy. A similar agreement is sought with the Schools of Medicine in Central America for the same purpose. Although the details of such agreement remain to be developed, the Director believes that there will be enough demand not simply to maintain the minimum number of students for the Respiratory Therapy course but to expand it significantly. However, no study has been made of the potential demand from foreign students for either the two year or four year course.

Foreign students are likely to create a demand not only for the two year Associate Degree course but eventually for the four year Bachelor Degree since the latter will become the minimum degree for faculty and leadership positions in the medical sectors of their countries. By June of this year, the prospects for international students at the UNCR should be clarified so as to assist the Project HOPE to make plans regarding the assistance requested of it.

The anticipated income from international students should enable the UNCR to expand its faculty and move the teaching laboratory to its campus. Students from other countries will most likely need fellowship grants from international bodies such as the PAHO, etc., to cover tuition and living costs. This international strategy permits the investment of Project HOPE in the Respiratory Therapy program to achieve a multiplier effect by educating Therapists on a regional scale.

Project HOPE recently began assisting Guatemala with a RT program modeled after the one-year program in Costa Rica. The program is being designed to allow transfer into the second year at the UNCR. There are also many RT technician programs in Mexico but there are not any programs where students can receive advanced professional education and prepare for leadership positions. The UNCR can potentially attract many foreign students into the Bachelor program.

It is important to note that the RT program in Costa Rica has already been successful in attracting foreign students. The first two classes included 8 foreign graduates and the third class was made up of 6 foreign students exclusively. Reports about these graduates have been very positive in that they have assisted in setting up RT departments in Guatemala, El Salvador and Honduras. Currently there are candidates from Panama, Colombia, El Salvador and San Andres who are looking for financial assistance to attend the program. The inputs to be requested by the UNCR are development of the curriculum and training of its faculty. It is interesting to note that by going to an international training approach

the UNCR is more likely to be able to continue educating its own nationals even if the number goes below 10 CCSS positions per year.

Recommendations:

- . The UNCR should make a study of the potential demand for its RT courses, projected by year for several years ahead, together with the likelihood of financing for these foreign students.
- . Project HOPE should favorably consider assisting the UNCR if it believes there is sufficient demand from foreign students.

PROJECT HOPE PROGRAMS IN HONDURAS

BIOMEDICAL ENGINEERING

I. SUMMARY

This Project contains four major components.

1. The attempt to create a Biomed equipment repair facility within the National Center for Maintenance in the Ministry of Health proved to be infeasible for lack of funds, repair parts and counterparts. After several years of effort, the component was abandoned by Project HOPE and the Ministry.
2. Project HOPE is attempting to build a repair facility in the Hospital Escuela, the largest hospital in the Ministry of Health. Despite the training of personnel and provision of test equipment, the hospital has 20% of its equipment in need of repair for lack of parts. This is due to lack of funds, a procurement process that takes 24 months, and scarcity of US Dollars aggravated by the devaluation of the local monetary unit. Despite an apparent need and desire to meet the objective, it is an infeasible target and should be terminated as soon as possible.
3. The Social Security Agency (IHSS) collaborates in an activity to create a repair department at its Child/Maternity Hospital, wherein Project HOPE provides training, equipment and technical assistance while the IHSS provides space, 9 technicians and funding. This project is successful thus far and there remains only the training of three more technicians in order to complete the IHSS staffing. This training could be performed by the INFOP organization described below.
4. The INFOP is sponsored by the public and private sector to provide trained technicians in a number of fields. The objective is to build its training capacity in biomed equipment repair to give continuing education. The issue is whether there is sufficient demand in Honduras to warrant establishing a program and whether such training can be utilized by the Ministry of Health when it lacks the funds, parts and stable personnel for BME repair. To deal with the constraints, it is recommended that INFOP and Project HOPE study the feasibility of establishing a regional training center in INFOP and also study the feasibility of providing a repair service and repair parts to meet the needs of the Ministry of Health and the Hospital Escuela, as well as the IHSS and the private sector. If one or the other of these options are infeasible, it is recommended that the Project be terminated.

Several management opportunities for improvement exist including: 1) defining problems with greater realism; 2) providing more complete and realistic project plans; 3) improving project monitoring and control at each level in Project HOPE; 4) improving supervision and supply support by Project HOPE.

Other management needs are discussed in the general section on Grant Management.

II. PROBLEM ANALYSIS

The Program Plan for Clinical and Biomedical Engineering in Honduras states the problem as follows: a deficit of technically trained personnel in BME technology as well as the users of the equipment in hospitals, a deficient governmental policy to purchase equipment and replacement parts. In November 1989, the Technical Coordinator and Program Director in Honduras developed a revised plan which expanded the statement of the problem to include a "lack of service facilities"--meaning a lack of continuing education and career development for MSP BME technicians, budget for BME maintenance, and training in preventive maintenance.

The needs were perceived to be national in scope and therefore the major institutions designated as the beneficiaries of the project were the Ministry of Public Health (MSP) which provides health coverage to 85% of the population and the Social Security Institute (IHSS) serving 10% of the population. Within the MSP, the focus of the assistance was the National Center of Maintenance and within the IHSS it is the Maintenance Department. For both of these entities, the problem has been a lack of engineers and technical supervisors with sufficient knowledge about BME, loss of trained and experienced personnel, lack of test instruments and spare parts and inadequate budget.

The project then set about to provide some of the missing ingredients at the CENAMA and at two of the major hospitals: the Hospital Escuela of the MSP and the Child/Maternity Hospital (CMH) of the IHSS. The project plan was quite thorough in covering the various aspects of training including continuing education, audio-visual modules and a supportive training organization in the Institute for Personnel Development (INFOP) but unfortunately the real constraints for the MSP lie elsewhere.

In November 1983, a private corporation doing a review of maintenance alternatives for the A.I.D. Mission in Honduras had this to say about the MSP:

"There has been general dissatisfaction with the efficiency and standard of work of the CENAMA. Generally, the prevalent attitude is that the MSP personnel have neither the experience, training nor resources for accomplishing the medical equipment repair and maintenance tasks. Moreover, there exists the idea that the MSP will not be able to correct this situation.

"In our opinion the development of the CENAMA into an effective service center will require years as well as resources currently not available. Additionally we do not believe the MSP can develop a comprehensive rehabilitation program using foreign

expertise because of the costs and foreign exchange constraints. Therefore, the only option available to the MSP is to attempt to negotiate a comprehensive repair program with local private sector resources."

The above analysis has proven to be correct. It noted the need for training and resources but the analysis went further to consider the costs, foreign exchange constraints and the lack of resources available to the MSP. The conclusion of that problem analysis was that help to CENAMA should not be attempted but that instead a private sector option should be used. A copy of the above analysis was sent to the then Project HOPE Program Director and remains in the office files today. Why was this A.I.D. Report ignored? The predominately technical and training focus of the project design led to an infeasible project.

III. CENAMA

A. Activities

An agreement was signed in 1983 with MSP and the IHSS whose objective was to establish a model national service BME repair maintenance facility at the MSP (the National Maintenance and Repair Center (CENAMA)) to provide on-the-job training in BME equipment and to provide a functional central service capability for the MOH hospitals and clinics, including a technical library to be shared by IHSS.

Project HOPE provided \$30,000 of test instruments, a technical library and a series of technical coordinators for the project but the problems were evident from the beginning and they endured. A letter from the Chief of Training to the Chief of Maintenance of the MSP dated October 1987 alleged the following:

1. The action plan was not carried out because it lacked feasibility in the problem diagnosis, it lacked coordination among the institutions involved, realistic economic assumptions and lack of clear definition for control and responsibilities in the Agreement.
2. Project HOPE assigned three technicians for various periods which caused lack of coordination in the project and caused the project to fall short.
3. Only two courses in BME were given rather than four.
4. The audio-visual modules to be developed for training of persons in the interior were never developed.
5. The computerized programs for maintenance were not completed.

6. With the cancellation of the contract for the Project HOPE Engineer, Project HOPE cooperation with the MSP ceased. This has led to controversy with the MSP counterpart whom Project HOPE has asked be changed.

The author concluded that a new plan should be made based upon a joint diagnosis of the needs involving the counterpart organizations, using a realistic set of economic assumptions, and objective and valid evaluation criteria. Failing a new agreement, the author said that all the equipment and supplies given by Project HOPE would be the property of the MSP.

The problems were not one-sided. As late as March 1988, a letter from the Technical Coordinator from Project HOPE (the original coordinator by now was long gone) to the Minister of Health summarized the problems as follows:

1. The absence of a Chief of Maintenance and the resultant disorganization of the unit.
2. The failure by the MSP to approve the proposed plan of work.
3. The absence of a counterpart for the project.
4. The lack of MSP funds to implement the project.
5. The lack of a system to supply repair parts.

Project HOPE coordinators maintained that the failure to complete all objectives was not for lack of trying but because of the lack of a true counterpart to coordinate the MSP activities and for lack of a budget in the MSP to carry out the activities. Project HOPE files indicate that the MSP unilaterally terminated the Project and that the alleged motive was to obtain ownership of the considerable equipment and library purchased but not donated by Project HOPE. Failing to get an answer from the Minister of Health, Project HOPE staff decided to devote its efforts to work with the Hospital Escuela which is part of the MSP.

The MSP kept a total of \$21,000 of equipment, returned a computer to Project HOPE and alleged that \$3,000 of new equipment had disappeared. Despite the cutoff of formal assistance to the MSP, some persons in the Maintenance Dept. continued to ask Project HOPE for parts and technical help and on several occasions the Project HOPE Coordinator did provide them. Currently, the MSP CENAME has 7 technicians and no spare parts from abroad; it attempts to maintain equipment for 15 hospitals and can do so only for about 15% of the repairs by using repair parts obtainable on the local market in Honduras.

B. Conclusions

The CENAME activity was a failure for reasons outside the control of Project HOPE. The CENAME case is a classic study in development administration--for the obstacles that brought about the failure of this activity lie in the institutional constraints of the MSP and in the technical focus of the Project HOPE process that failed to see the warning signals. If the warning contained in the feasibility study by the private firm regarding the MSP had

been heeded there would not have been the considerable loss of resources, time and energy for Project HOPE.

Some basic questions remain and their review by Project HOPE may help avoid similar problems in the future:

1. Was the A.I.D. Report that the MSP was not a viable beneficiary of assistance ever reported to IIC?
2. As the problems became evident during 1984 to 1988, what was being reported to the Program Director and HOPE Center?
3. What remedial actions did they take?
4. Why did the activity drag on for four years without termination?
5. After the termination by the MSP of the Project HOPE agreement along with the unauthorized retention of the equipment, why did Project HOPE continue to give materials and technical assistance?
6. After the experience with CENAMA why did the project provide assistance to the Hospital Escuela which is an integral part of the MSP? Could not a similar set of circumstances be anticipated with the Hospital as occurred with the MSP?

IV. HOSPITAL ESCUELA

A. Activities

Shortly after the MSP termination of the CENAME activity in mid 1987, Project HOPE nonetheless continued to work with the Hospital Escuela. The objective is to establish a model repair BME department at the Hospital Escuela to provide on the job training for a BME equipment repair capability.

The Hospital Escuela with 1050 beds is the flagship of the MSP hospitals; it has the sole responsibility for tertiary care in the country. It has over 7000 equipments needing maintenance and 90% of these are inoperative mainly for lack of spare parts. However, the BME Maintenance Department is responsible for 1100 equipments of which 20% are in need of repair.

Nevertheless, the hospital and Project HOPE have done what they could to meet the objective. There is no question of the need for the service nor of the Hospital Director's support for the task and its high priority.

The Hospital has assigned a BME repair facility of adequate size with a desk reception area, work benches, storage shelves for incoming and outgoing equipment, an office, a service manual and reference library, an area with desk chairs and blackboard for training classes. There are five BMETs and an Engineer supervisor and counterpart to the HOPE BME coordinator.

The BMETs have a complete set of specialized tools and test instruments; records show that they were trained to use them. In general the technicians have received basic on-the-job training, they have developed skills to troubleshoot and diagnose most regular problems and are able to carry out maintenance and repair of medical equipment.

In a meeting with the technicians, they expressed their concerns mainly for the lack of support from the MOH authorities in two important areas: 1) The MOH rejected a new job classification and pay scale for BMETs. 2) The lack of spare parts to repair 90% of the medical equipment that is broken in the hospital. The Hospital Escuela General Director, Dr. Anibal Funez, expresses his frustration with the MOH procurement process which can take close to 24 months to make a purchase.

Project HOPE hired a full time technician in mid 1988 to work with the Hospital Escuela and provided several months of Spanish training while he was working with the Hospital. He was frustrated with the lack of a counterpart and disaffected Hospital employees. The Technical Coordinator said that Project HOPE has been recruiting another candidate since the summer of 1989 and has not found one yet. This in turn has posed a very heavy burden on the technical Coordinator who is left alone to handle the entire project. As of this date, there is no other person that has been found for the job. In a later interview with the Vice President of the International Division, he said that Project HOPE has not sought a second BME technician for Honduras and that there was mis-understanding on this point.

At the time of our evaluation visit, the Honduran Engineer in charge of the unit had received a job offer in Canada and was considering it seriously. She requested a salary raise of the MSP, some changes in the unit personnel and upgrading of salaries for them. The Project HOPE representatives learned that the Hospital Director concurred but he needed authorization from the Minister. The Project HOPE representatives tried to contact the Minister but were not successful.

B. Conclusions

1. Despite the obvious need for BME repairs in a hospital with a large percentage of downed equipment, and despite the serious efforts of Project HOPE and the Hospital Director, the situation is reminiscent of the same financial and procurement problems encountered with the MSP in the CENAMA activity.
2. The financial and procurement problems extend beyond the MSP to the central levels of government where budget and procurement decisions are made. The lempira devaluation has furthered aggravated the problem by making dollars scarce for purchases abroad.
3. The situation will not get better but is likely to get worse. Nevertheless, the Project HOPE staff persist in trying to meet the objective and are using their scarce resources to work in a no-win situation.

4. The solution to the Hospital Escuela crisis in equipment repair cannot be found either within the government process nor in the Project HOPE system for procurement and financing. There is a need for a non-traditional solution and neither Project HOPE nor the MSP have been able to find it.
5. Project HOPE should not have continued with the Hospital Escuela after its experience with the MSP and it should not have waited almost two years to learn that this activity is also not feasible.

Recommendation(s):

1. Given the infeasibility of the objective, it is recommended that Project HOPE terminate its assistance to the Hospital Escuela.
2. A system needs to be developed within Project HOPE to spot ailing projects and to take remedial action without delay.

V. IHSS

The activities in support of the IHSS are aimed at creating a BME repair facility in the IHSS Children/Maternity Hospital of 300 beds. The BME repair facilities are excellent in this hospital: they have a complete set of tools and test instruments, work stations and a small classroom for training, the technicians are proficient in the use of tools and test equipment, each BMET keeps a log of the on-the-job training received to date.

The IHSS provided the space and the counterpart, hired the technicians and paid for the equipment purchased by Project HOPE. The Project HOPE technician trained the staff. From the work orders completed, it is evident that these BMETs have reached an intermediate level of instruction. They can handle most of the regular repairs working independently. The BME shop has a regular stock of repair parts some of which were donated by Japan. The facilities are impressive and they rival any facility in the U.S. This operation is in stark contrast to the Hospital Escuela, demonstrating what is possible if personnel, repair parts and budgets are available.

The major work remaining here for Project HOPE appears to be the training of three more IHSS technicians. It would be preferable for this training to be done by the INFOP.

Recommendation. As soon as possible, phase over training of IHSS technicians to the INFOP and terminate this activity as a separate objective for Project HOPE. The present Project HOPE Coordinator may then transfer both his assistance and location to INFOP.

VI. INFOP

A. Activities

The INFOP is an organization sponsored jointly by the government and private organizations but funded mainly by the latter--14 Million Lempiras from private organizations versus 1.2 Million lempiras from the government. It was established to help train technicians in various industrial categories including repair of biomedical equipment. The Project HOPE objective is to establish formal cooperation between INFOP, the MOH, and IHSS in the development of a continuing education program for the BMET technicians employed by the MOH and IHSS, including establishment of curricula, clinical equipment laboratories, prerequisites for entrance, selection of trainees and staff.

The IHSS and INFOP have a formal agreement to provide training for BMETs employed by IHSS. Also INFOP and Project HOPE have a formal agreement to develop curricula, provide the equipment necessary to train BMETs and to train INFOP instructors in the US. Tuition is free for students to whom INFOP provides both short term courses for particular equipments and a two year course that includes one year in basic electronics and a second year for BME plus four months of in service training. The Project HOPE assistance program is presently hampered by the lack of a second technician. Recruitment has been difficult and has been delayed for seven months thus far. The Coordinator is attempting to apportion his time among his many duties and can give only limited time to the INFOP.

The relationship between Project HOPE and INFOP is strong and positive. The INFOP has full commitment to the BME program and with its strong financial support it provides the basis for a viable and sustainable organization. But the question that needs analysis is the demand for its services.

B. Demand for Education

It is not clear whether the demand for BME and technicians for Honduras warrants a long term training program. The country's need for BME engineers would be met with ten graduates. Based upon the number of beds in the MSP, all the hospital needs would be met by 43 technicians. The IHSS needs would be satisfied with 12 technicians nine of whom have already been trained by Project HOPE. If the total Honduran needs would be met by 55 technicians of whom an estimated 21 are on the job in the MSP and IHSS then an additional 34 would meet all public sector requirements. At the rate of 17 graduates per year, the total need could be met in about two years. This calculation assumes that there would be jobs, adequate salaries, equipment and repair parts for use by these employees.

The INFOP objective is aimed at a continuing education program for the employees of the MSP and the IHSS and yet the previous analysis has indicated that the real constraints in the MSP are adequate salaries and repair parts. The IHSS has 9 out of 12 technicians

already trained by the Project HOPE so that the extent of continuing education needed for them may not warrant the build up of INFOP. The MSP has about 7 technicians in its CENAMA and 5 in Hospital Escuela.

Even for a continuing education program there does not appear to be a strong case for the build up of the INFOP program to provide training for 21 persons. The other strategy that may be viable is to expand the INFOP capacity to meet Central American needs but this has not yet been studied to determine the demand and potential financing of students from abroad.

A third option is to consider establishing INFOP as a repair facility for the MSP. INFOP would act as a non-profit contractor using its own facilities or those of the MSP, providing the trained personnel and purchasing its own repair parts in order to avoid the drawn-out government purchasing procedures. As a quasi-public agency, it can establish an agreement with the MSP and the IHSS to provide repair services which those agencies cannot perform with their current personnel.

Recommendation(s): Although the INFOP as a training organization appears to be viable and easy to work with, it is not yet clear that there is sufficient demand for its services in continuing education for BME to warrant the Project HOPE investment.

A careful, honest and objective study should be made of three options:

- . Study the demand for continuing education of BMETs in the MSP and the IHSS to determine whether it is more cost effective for the INFOP to provide continuing training to them versus option two or providing the repair service under option three below. Careful consideration should be given to the salary and repair parts constraints existing in the MSP and whether additional training would in any way improve that service.
- . Study the international demand for training and continuing education of BME technicians. Again, the study should be objective and rigorous in order to justify a Project HOPE decision to change to an international strategy in helping to develop INFOP as a regional resource.
- . Study the feasibility of utilizing INFOP as a repair service to the MSP and the IHSS for those repairs which their own personnel cannot handle. INFOP could do on-site repairs in the various hospitals, purchase its own parts and bill the agencies on a non-profit basis.

A high priority should be given to studying these options before Project HOPE invests any more time, effort and cost in supporting the current approach. If the regional strategy appears to be most feasible, it is recommended that Project HOPE completely revamp its Project Plan for BME in Honduras by dropping the Hospital

Escuela, shifting training of IHSS to the INFOP and developing a new Project Plan to assist INFOP as a regional training entity.

If the regional and/or the INFOP repair service options prevail, then it means that assistance to the IHSS could also be curtailed and the project plan revamped. Either of these options may also reduce the need for a second Project HOPE technician and further reduce the load on the Coordinator now in Honduras.

VII. OTHER OBJECTIVES

The Program Plan has many other objectives most of which have been overcome by events. For example:

- Objective IV. Establish a training program for students enrolled in the last year of electronics at the Institute Luis Bogran. This would not be necessary if INFOP does the training.
- Objective V. Entails on the job training as a form of continuing education. This would not be necessary if INFOP provides such training in the future.
- Objective VI. Develop video training modules for use in remote areas to train BMET's. This did not prove to be feasible because it was not possible for the camera to show enough details of minute electronic parts to permit training. The objective should be dropped.
- Objective VII. Develop a user training program within two hospitals. No counterparts have been assigned so the objective should be dropped.
- Objective VIII. Establish a computer based preventive maintenance system including equipment inventory and repair parts list for CENAMA, Hospital Escuela and the IHSS. A computer plus a trained secretary have been provided and a data base has been developed for the IHSS. The MSP activities should be dropped for lack of absorption capacity and the IHSS should be continued as an integral part of the assistance program if Project HOPE finds it will continue operating in Honduras.

The other objectives have already been accomplished, some have been found to be infeasible and some are merely operational steps integral to other objectives.

VIII. SUSTAINABILITY

The question of sustainability has been discussed under each of the main objectives. By way of summary:

For the CENAMA, the program for installing a BME repair capacity never was sustainable.

For the Hospital Escuela, the BME department is not sustainable for reasons beyond the control of Project HOPE, the Hospital and even the MSP.

The IHSS is a sustainable operation in part because it has more financing, better organized counterparts and a sustained interest by the leadership in IHSS in the activity.

The INFOP is a good organizational base upon which to build a training activity and/or a repair service but the national demand for training of BME remains to be determined in terms of the cost effectiveness for Project HOPE. If there is sufficient regional demand and financing to warrant an INFOP program, it could be a sustainable operation.

IX. PROJECT MANAGEMENT

A. Project Planning

The previous discussion on problem analysis and program planning indicates basic difficulties with the present project planning process.

1. It does not take a systems view of the problem but instead tends to define the situation in terms which Project HOPE can handle--i.e. by training and supplying equipment and parts. A systems view could reveal that the real constraints in the MSP are in the budget and administration of the organization as well as commitment by the MSP.
2. Due note is taken of the MSP letter cited earlier in which the author alleges unrealistic assumptions in the planning regarding resources and the lack of clear specification of authority and responsibility among the cooperating entities.
3. The Plan for BME seemed to involve too many institutions and components to be viable with the limited resources of Project HOPE. The plan did not take into account the difficulty in finding technicians who know the language and the culture.
4. The planning format should require some attention to the cost effectiveness of the outputs. For example, what does it cost to establish a repair facility in a 300 bed hospital compared to the cost to procure repair services from the private sector?

5. The Planning should include some review of similar efforts by other agencies to learn from their experience and their mistakes. Evidently, the A.I.D. Honduras had commissioned an independent feasibility study which warned against working with CENAMA. Part of a planning format should include some review of what other organizations are doing and whether there is some complementarity with Project HOPE. For example, there are very significant Japanese investments in Honduran hospital equipment that could be complementary to Project HOPE inputs.
6. There is no current manual in Project HOPE for program planning. Technicians are asked to model their efforts on examples of past plans. The process needs written guidance to all involved in order to:
 - a. Incorporate nomenclature from the current state of the art (e.g., "methodologies" are really activities).
 - b. Scheduling of actions (not one plan has a Gantt chart or even a time phased action schedule).
 - c. The format should require some explanation of the respective responsibilities and commitments of the various entities involved. These are contained in Agreements but the Plan should explain how the project will be managed.
 - d. Assumptions made in the planning stage can be crucial to the project as is the case with CENAMA and the Hospital Escuela. A simple format can require that assumptions be made explicit and then these assumptions need to be tracked to verify them.
 - e. How will the project be monitored and who is responsible to take what actions? The counterparts should be part of this monitoring and control.
 - f. The plan should identify the beneficiaries, take some baseline measurements and indicate what impact is desired in terms of improvements for that group.

Recommendation(s): Project HOPE should develop a written manual on program planning reflecting the current state of the art in terms of nomenclature, clarification of assumptions, scheduling, a systems approach, baseline conditions at the start of the project and how the beneficiaries are to be affected by the project's impact.

B. Project Controls

The term "project controls" refers to several interdependent elements in project implementation including:

1. progress reporting;
2. monitoring of the project at the field and HC levels;
3. identification of problems and their causes;
4. remedial action at the appropriate level in Project HOPE in reasonable time;
5. remedial action by the host organization.

The BME project system has several problems:

1. Host organizational responsibilities for project control are not clear.
2. Responsibilities for remedial decision making in Project HOPE are not written. What can the Program Director in-country do? what can the Country Manager do? what can the Regional Director do? Presently, most decisions of any substance appear to be centralized at the Vice President for International Activities.
3. Reporting is done quarterly and not necessarily according to specific indicators and time phasing.
4. When problems are noted in field reports, response from the HC is either long delayed or not forthcoming.

Recommendation(s): The Project HOPE system for project control needs to be redesigned to incorporate current state of the art controls and standards of management.

C. Program Director Role

The Program Director plays a key role for Project HOPE in any given country. He/she is the first line supervisor for the projects, helps to plan projects, coordinate them with counterparts, determine the feasibility and timing of many new initiatives for Project HOPE in the country, maintain awareness of what other agencies are doing in the Project HOPE area of interest, manage the internal office functions including support staff and supply and help maintain morale in sometimes difficult circumstances.

In Honduras, there have been three Program Directors in the last three years. One Director was promoted to HC and has since left Project HOPE. Another had to leave because of an accident and he was followed by one of the Coordinators to serve as an interim Director until the third Director could report for duty.

One Director had considerable difficulty with the staff and internal office administration. A visit by the Country Manager found the following problems:

1. No central inventory of warehouse items.
2. No vehicle ledger for official/personal use.
3. Inadequate filing system.
4. Lack of understanding of Administrative guidelines.
5. Uncontrolled access to Project HOPE files, offices, vehicles, equipment.
6. Unclear administrative and supervisory structure.

The latest Director had been in another country and was given only one day orientation prior to his assignment to Honduras. A former Vice Minister and Director General of Health in his home country, he is versed in the culture, language and administrative problems of public health in developing countries. He could move quickly into programs where he has had previous experience, but he has had insufficient guidance on the

administrative and program management system of Project HOPE. By chance he found the Administrative Manual of Project HOPE which was withdrawn in 1980. Since it has not been revised, no one has guidelines to guide them in administration and program management.

In some instances, a Country Manager has arrived in country and proceeded to give commands to local staff without consultation with the Program Director. In other instances the Technical Manager communicates directly with the field technician without informing the Program Director. The Administrative Manual should clarify these relationships.

Recommendation(s):

- . Program Directors would benefit by some training in supervision, program management and office administration. All three functions are vital to the success of Project HOPE in the field and deserve high priority.
- . Lines of authority and communication should be clarified vis a vis the Program Director, the Country Manager and the Technical Managers in HC.

X. PROJECT ADMINISTRATION

A. Personnel

The selection and utilization of technical personnel for BME is difficult because of the combination of language, cultural adaptability and technical skills required--quite apart from the difficulties in dealing with counterpart organizations. The first Coordinator was let go when his contract expired because of exaggerated claims in project progress. This was a necessary and correct decision by Project HOPE.

The current Coordinator was born in Colombia, served in the US Air Force, is bilingual and very competent technically. He was recruited by Project HOPE through an ad and was sent first to China. His orientation both to China and Honduras was through country materials that were outdated and, in the case of China, described only the positive aspects leaving the individual unprepared to deal with the less positive aspects. Program briefings for Honduras were not adequate because they were done by the previous Coordinator who was disaffected and thus biased negatively.

The most recent technician recruited to work with the Hospital Escuela did not have the language skills nor the cultural adaptability and thus he had a very difficult time, although Project HOPE did give him five months of Spanish training in Honduras. The individual was also frustrated in dealing with the MSP and its array of problems: lack of a counterpart, lack of motivation on the part of the Honduran employees for reasons of salary and lack of parts. After one year, he resigned.

The current Coordinator has requested and waited for another technician for seven months but has not received an answer. Meanwhile, he is required to work with IHSS, the Hospital Escuela and INFOP. He is a dedicated, hard working individual who customarily puts in seven days a week often working 12 hour days. With no second person to help with the workload, this individual may be burned out at the present pace. If the program is cut back as recommended elsewhere in this evaluation, it should reduce the workload to a more manageable level.

B. Support

1. Supervision

The rotation of three Program Directors in three years has of course affected this Project. Some Directors were quite supportive and helpful to the Coordinator but a previous Director had a personality clash with the Coordinator. This experience helps emphasize the importance of the Director's supervisory style and administrative competence in dealing with Project HOPE employees.

2. Administrative Support

At first the present Coordinator had neither a desk, nor a secretary nor a position description but as an effective operator he made up his own duties and responsibilities. He did not receive a program plan from his predecessor so he had to work out his own with Hospital Escuela and the IHSS.

He has negotiated a large room borrowed from the IHSS which contains the entire operation, a secretary and the counterpart Engineer for BME from the IHSS. He is three floors above the Project HOPE Office in the same building and can keep in close contact with the Project HOPE staff. He also had to negotiate with the Program Director to obtain a vehicle for his work. This incident reveals the consequence of a lack of standard guidelines for use of Project HOPE vehicles by employees. The Coordinator had been told by the HC Personnel Office that he could use a Project HOPE vehicle but the Program Director said that he could not. The Program Director then consulted the Personnel Office and was told that it was permissible. Meanwhile, other employees had been told that they could not use Project HOPE vehicles to get to their places of work and they were surprised and understandably irritated that they had been denied transportation. The incident could have been avoided by written guidelines made available to the all employees including the Program Director.

3. Supply

Supply has been a continuous problem because of delays in the purchase of items. Part of the difficulty has been that parts for biomed equipment need precise

nomenclature, stock numbers, a source of supply, date of availability, etc. It requires a knowledgeable person to obtain this information and the HC supply unit claims it is not its responsibility to provide this service. The problem remains unresolved. The Supply unit comes under the Vice President for Administration while the field operation comes under the Vice President for International Operations. Evidently, the problem cannot be resolved between these two Divisions.

Another problem is the endemic delay in response to field requests for purchases and the delay in response to requests for status information. This is similar to the problems reported by other projects in Honduras and Costa Rica.

Several donated equipments sent to INFOP are faulty. For example: A Philips M0d Medio 5500 X-Ray machine is missing tupe support and the high voltage cable terminal horn. A General Electric Patient Monitor is without patient cables. A Burdick Defibrillator model DC/150 has parts missing, a service manual and it is not operating. Two automatic blood chemistry analyzers have parts missing, no service manuals, and one was shipped with liquid chemicals which spilled over the machine.

The Supply Office says that many GIK items are screened and rejected but some are sent along for repair training and parts although not meant for use in a hospital. Evidently, this area needs careful review. The Chapter on Grant Management discusses Supply problems and suggests a thorough review to resolve several problems noted in field support.

LEARNING RESOURCE CENTER

I. SUMMARY

This project sought to increase the knowledge of physicians serving their year of rural service because they play a key role in supervising primary health care in public health. No needs assessment was made for this project because the need was presumed evident. The design assumed that the critical need was audio-visual modules of instruction so the project focused largely on the creation of an AV production unit in the UNAH. The Unit has been successfully created with seven Honduran technicians working in the Extension Division of the Universtiy and there has been a respectable production of 17 video modules and 15 slide tapes on various medical topics. Since the end of the project, the UNAH has broadened the topics to include community health subjects such as first aid.

The project also tried to improve inter-institutional coordination for training by creating a Committee from the MSP, IHSS, Colegio Medico and UNAH. This functioned well during the active period of the project providing guidance on priority topics along with suggestions on what experts to recruit from Honduras to present the topics. Since the end of the project, this Committee has ceased to function.

Copies of the video modules and slide-tapes along with written instructions on how to use them for instruction have been provided to 19 locations mostly MSP regional centers, hospitals, IHSS hospitals, UNAH libraries and Colegio Medico offices. There is little information available on the use being made of the modules, the state of the equipment and no information on what increased knowledge has been imparted to the physicians performing rural service. This project illustrates many of the strengths and weaknesses in project planning, implementation, control and supply that are covered in more detail in the general section dealing with Grant Management.

II. PROBLEM ANALYSIS

A. Institutional Problem

One problem noted by the original problem statement was the lack of collaboration among Honduran institutions providing training and services. The MOH has the preponderant responsibility for services, the IHSS has only two hospitals and two clinics and the UNAH has responsibility for continuing education as does the Colegio Medico. The project proposed the creation of a Coordinating Committee with representatives of each major organization while giving the function of audio-visual production to the UNAH. That problem was correctly stated and now one year after the completion of the project the gap still exists but not as pronounced. A more detailed discussion of this aspect is contained under the Accomplishments section.

B. Learning Materials

Project designs have their origin in some perception of a need whether implicit or explicit, whether studied or assumed. At the outset of the project, the concern was with the lack of appropriate learning resources to properly carry out training of young health professionals performing their social service year in rural and peri-urban areas of Honduras. There was no needs assessment since it was believed that the need was evident and that there were so many needs that it was not necessary to analyze them. Moreover, the project was designed by the Program Director before the technician arrived although the Program Director was not versed in either educational methodology nor in audio-visual production.

The beneficiaries are a critical group since they are required to supervise directly the providers of the primary health care services. The UNAH directed the Extension Service to provide continuing support for these young people during their year of service. The project assumed that the key need for this Group was the lack of audio-visual resources rather than the adequacy of instructors, training methods and training materials. No cost analysis was done nor was there any review of the adequacy of the instructional system for which the audio-visuals was presumably a tool. Audio-visual materials are quite expensive (in the US they cost up to \$3000 per minute of finished product) and they need to be very closely related to the course content and class room use since they are not good self-learning

materials. They should be used with lesson plans and with pre- and post- teacher guidance and discussion for proper use. Moreover, they are best used for information and not for skill training or application.

For many topics and uses, written or spoken material is more cost effective than audio-visual materials. It is not the first time that persons have been impressed with Video materials and have assumed that they are appropriate instructional materials--but in reality they should be introduced only where a knowledgeable person has determined that they are cost effective for the specific application and the instructional capacity of the system involved. Having assumed the need for Audio-visual materials, it was further assumed that Video materials were the principal need rather than flip charts and slide tapes. This assumption in turn led to the conclusion that the primary need was to create an Audio-Visual Production Unit in the UNAH. Such units require very expensive equipment, considerable training of technicians in various fields such as art, photography, script writing, drafting, television production and equipment maintenance. The process requires considerable effort by a developing country not only in a technical sense but also in the sustainability of the budget, personnel, physical facilities and equipment maintenance and parts. At the outset, these factors were not present and it was a great leap of faith that they could be developed.

There still is no basis for knowing whether the problem was correctly defined. The later sections of this evaluation will indicate that the Audio-Visual production unit is sustainable but is it the needed and missing component for the instruction of physicians in their social service, are audio-visuals the most cost effective way for getting the information to them and is there an instructional system that can properly use the materials for instruction? The answers are still not available.

Recommendation. A needs assessment in a specialized area such as audio-visual production and learning methodology is a necessity and it requires a knowledgeable person to participate in the project design.

C. Agreement

It has been surprisingly difficult to find the original program plan and the original agreement with the Honduran agencies regarding this project. The copies made available include a draft copy of the 1984 draft which evidently was not the final version, a copy of a May 23, 1985 plan in Spanish and a copy of plan from September 1986 which was not signed. The May 23, 1985 plan was evidently the governing document although it was signed only by the Rector of UNAH but not by the MSP, IHSS, Colegio Medico nor by Project HOPE.

This last version of the plan fails to specify the audio-visual equipment which is an important part of this project, does not give the number of Honduran counterparts and the time phasing of the personnel and equipment. The 1986 version on the other hand does specify these requirements but was evidently not signed by the Hondurans. Needless to say, project plans are critical documents which manifest the expectations of all the parties

involved and thus are central to implementation. It is possible with the change in Program Directors in Honduras that these documents are simply not in the files. It may also be possible that the 1986 Agreement was never signed in which case it raises questions as to the internal controls in Project HOPE to assure that Agreements represent the commitment of the parties involved.

III. ORGANIZE ADVISORY COMMITTEE

A. Objective

The original plan called for the establishment of an advisory body representing the four major entities involved in training of medical personnel: the UNAH, the MSP, IHSS and the Colegio Medico. This was and is a sound objective since interorganizational coordination is difficult in any culture and especially so in developing countries. The objective correctly viewed the mechanism as an advisory body to the project in order to help indicate priorities, to make better utilization of the products and to provide the technical experts for the substantive parts of the learning materials. The Committee would also help to give ownership of the materials to the nationals and thus help with the sustainability of the process.

B. Accomplishment

The HOPE Coordinator for the Project had the responsibility to help establish the Committee. It was not easy but eventually the Committee was formed and did provide guidance to the project. The plan called for monthly meetings which eventually became burdensome for all since it did not always have an agenda worthy of the levels of persons represented on the Committee. Thus it was often difficult to obtain quorams and to maintain interest. After the HOPE Coordinator left in mid-1989, the Committee ceased to function. During the evaluation interviews with the Head of the Audio-Visual Unit in the UNAH, she said it was her intention to revitalize the Committee.

C. Institutionalization

The Committee served its purpose while the project was underway. Its institutionalization was not an objective although it is implied in the plan that it would continue to serve a purpose. It is probably not reasonable to continue meeting monthly even when there is nothing important to discuss so the Committee may be resuscitated with a more realistic agenda to meet when it has something to resolve. The project has at least opened a communication among the training providers and the key personnel are known to each other for future communication.

IV. TRAIN AV PERSONNEL

A. Objective

The plan called for planning and conducting periodic seminars and courses for the UNAH staff hired for the Audio-Visual Production Unit. This was conceived in the 1985 plan as a total of three seminars per year. In the 1986 plan this objective is enlarged to mean upgrading the technical capacity of the host counterparts and the plan called for a meeting every two weeks with one of four divisions of the Extension Unit of the UNAH.

B. Accomplishments

The final report for this project indicates that the UNAH hired a staff of seven persons who were trained by the HOPE technical coordinator. She spent an average of 15 contact hours per week or an average of three hours daily with the Honduran counterparts. The process included a one-on-one training session in which some theory was given, followed by a demonstration of the particular production technique and then actual application by the counterpart with coaching provided as needed. The personnel included a Honduran supervisor of the Audio-Visual Production Unit, a script writer, a draftsman, a photographer, two video technicians and a maintenance person.

The reality is not all captured in the documented reports. The UNAH was and has been a very politicized body with a large number of radicals both in the faculty and student body. Since the faculty and students have a vote in the governance of the University, the government some years ago decided to help offset the large radical influence by hiring more non-radical personnel in the Extension department. This was the Department in which the Audio-Visual Production Unit was to be created. The HOPE Coordinator had to fight to get the persons she believed would be most technically appropriate for the tasks. Not all the Honduran staff had the correct backgrounds for the jobs assigned. For example, the draftsman is not an artist. One individual turned out to be a radical and caused some friction and difficulties in the team.

The group began with contracts which were converted to regular employment for four of the group. Regular employment confers job security almost tantamount to tenure since few are ever discharged. What helped most of all was to move the Audio-Visual Unit to a separate building where it could be insulated from the rest of the Extension Division. When this evaluator visited the Extension Division there were several persons milling about and several seated at desks reading newspapers. By contrast, the A-V Unit in a separate building was busy working, each person with a specific job to do.

During the evaluator's visit to the Team, all were working and apparently getting along well. One indicator of the quality of the team's training is the output in the last year since the HOPE Coordinator left. They produced seven video cassettes, three audio slide modules, four flip chart presentations and started but have not completed five short videos for

illiterates. This is a very respectable quantity since it takes about 1.5 months of work to produce one video module over a five month period. The HOPE Coordinator, Jean MacGregor, accompanied this evaluator in reviewing the video productions for the last year and we both were impressed with the maintenance of quality during the last year.

V. PRODUCTION OF AV MATERIALS

A. Output

The project created the following materials during a two year period--June 1987 to June 1989.

- . A total of 17 videos representing 347 minutes of viewing time or an average of 21 minutes each. The subject matter was all medical or health related. In addition, a total of 7 videos were started but not completed during this period.
- . There were 15 slide tapes for a total of 263 listening minutes or an average of 13 minutes per slide/tape. These also were all medical or health related.

The output was achieved by seven Honduran counterparts receiving instruction from the Coordinator who was putting in about 15 contact hours a week. Considering the stage of development of the group, the production is very good. The quality ranges from average to good and the subject matter is all pertinent. The topics and presenters were suggested by the Advisory Committee and were usually provided by the Ministry of Health or the IHSS. The equipment and supplies were provided by Project HOPE; the UNAH provided the counterpart staff and the facilities.

In addition to the production of materials, the Unit was asked at times to document various activities such as the inauguration of the new Rector, or support for the Project HOPE project of Educational Resources for Health. There were a total of seven such productions in a two year period which is not an excessive amount of non-project related items.

Each of the videos and slide tapes contained instructions for their use by the speaker. This included even some pre-test and post test questions and suggestions for the level of instruction and the kind of audience that would benefit from the materials. This written guidance would accompany each module.

Conclusion: The output in terms of quantity and quality are more than adequate and responded to the felt needs of the organizations cooperating in the project. The accompanying instructions can be an excellent help to users and instructors if properly used.

B. Distribution of Materials

About 19 copies of each videocassette were made and distributed to major teaching and regional centers throughout the country. About 8 slide tape copies were made of each production and these also were sent to the various organizations. In all, 434 video copies and 4000 slide tape copies were sent out during this two year period. During the first phase of the Project (1985-1987), the appropriate equipment was sent to the recipient organizations--video viewers and slide tape viewers.

The recipients included the eight health regions of the Ministry of Health where both the viewing equipment and the modules are to be kept for the instruction of the rural service physicians. They were also sent to eight hospital libraries, and to Project HOPE programs in Guatemala, El Salvador and Costa Rica. The tapes went to the UNAH library and to the MicroBiology Dept., the IHSS and the Ministry of Health in Tegucigalpa and San Pedro Sula.

The eight regional centers of the MSP have a Continuing Education Director who is supposed to promote the AV materials. The rural physicians are presumed to visit the Center regularly to receive such training. Project HOPE organized two "Media Days" to publicize these materials and also sponsored an evaluation by users: 106 evaluations of 11 videos by the Ministry and 306 evaluations of 18 videos by the Hospital Escuela. To facilitate use, a nicely bound and attractive catalog was published.

This evaluator made a visit to the San Felipe General Hospital of the Ministry to observe the modules and equipment there. The modules and equipment were present but the slide viewer was out of action because the lamp had burned out and the Hospital lacked the money to buy another one. There is a supply of bulbs in the UNAH for their support but they had not heard of this. There was no maintenance back-up to clean and repair the equipment which worried them. Project HOPE had arranged for the Ministry to have a repair technician for the regional centers and hospitals but evidently this system is not functioning well.

There was no record of use because the library had moved and the records had been lost--but some torn pages of the records from 1987 indicate that there was some use in that year. The Hospital Director for Continuing Education said that the modules are used for the 4th and 5th year Medical classes and for some continuing education classes. He expressed satisfaction with the modules but was frustrated at the lack of maintenance and parts. The Catalog had disappeared so that users had no easy reference to the collection and some of the modules no longer had the Guidance printed materials for use by the instructors.

A visit to the MSP personnel charged with the use of these materials indicated that they consider the materials useful but there was an apparent lack of knowledge of the conditions at the San Felipe Hospital located in the same city as the Ministry. The Ministry personnel

said that they were concentrating on the eight regional centers and that the maintenance for the 8 hospital libraries was assigned to the Maintenance department. The impression derived from this interview is that there is no close follow up nor proactive interest to assure proper use of the learning materials and maintenance of the equipment provided by Project HOPE. No effort had been made by the MSP to follow up with the AV Production unit at the University to provide additional programs for them. In short, the attempt at interinstitutional coordination of AV production has ceased to operate.

VI. TRAIN AV USERS

The Technical Coordinator presented classes on the production and use of charts, graphs, AV materials and teaching methods. A total of 3368 contact hours were given--calculated as hours of classes multiplied by the number of students. An analysis of this output shows the following distribution.

<u>Organization</u>	<u>Hours</u>	<u>Students</u>
UNAH	99	126
IHSS	26	31
Others	47.5	317

The classes were usually workshops based largely on actual practice with a little theory. The classes were largely responses to demand and these requests came from largely disparate groups--mainly groups from various faculties in the University ranging all the way from librarians to health professionals. Several individuals asked for special help and received consultations. Evidently this was useful to many and may have improved general instructional quality for those who participated. The large number of students shown under the "Other" category represents a thirty minute presentation given to 300 attendees during Science Week.

The Coordinator was serving largely as a resource person for the many requests but the effort has little to do with the major objective of improving the delivery of learning materials to the physicians in their year of rural service. Most of the classes were for the University and a few for the Social Security Hospital staff but none were targeted to the instructors of the physicians in rural service. The most likely group to have provided such training would have been the Colegio Medico and the continuing education programs within the Ministry of Health. There is no record of any attempt to reach the instructors of the target group to provide these classes.

There is no indication that the supervisory levels of Project HOPE either in-country or at Project HOPE questioned or tried to aim some of this training more specifically to the target group. This may indicate lack of attention or simple oversight. The Coordinator did report that the Program Director was not supportive of travel outside Tegucigalpa and so this may have constrained the activity.

Conclusion: The training in the use of AV materials was evidently desired and utilized by a large number of individuals but there is no apparent connection between this effort and the delivery of training for the physicians in their year of rural service.

VII. CONCLUSIONS

A. Sustainability

The institution building of the AV Production Unit in the UNAH has succeeded: there is a staff of 7 individuals fully budgeted by the University, adequate space and supplies, support from the highest level of the organization, demand for its products and continued investment in the training and skills of its staff. This Unit is sustainable.

The Interinstitutional Coordination Committee from the MSP, the IHSS and the Colegio Medico is not functioning any longer and there is a remote possibility that it may be resuscitated but not probable. Its sustainability is not probable although some informal contacts may occur from time to time.

The delivery systems for the Modules in the MSP are not operating well and may not be sustainable given the problems with maintenance, parts, funds and lack of follow-up with the field libraries and continuing education programs. The Colegio Medico could be a much more stable institution for continuing education in the country but a visit to its central library in Tegucigalpa indicated that there is scant attention paid to the utilization of the modules and the library itself is so overcrowded with texts from Project HOPE that there is little room for users to utilize the viewing equipment. There seemed to be no effort to deliver the materials to the original target group of physicians in rural service.

B. Impact

The impact of this project on the target group is unknown. There was no baseline data and has been no effort to collect any information on the increase of knowledge of the target group as a result of the provision of learning materials. The impact on the AV Production unit in the University is obviously beneficial and its production of materials has widened beyond medical topics to include several community health efforts such as first aid for the rural poor and future attempts at literacy training. Thus the AV Unit may have beneficial impacts spreading wider than the original intent.

The attempt to coordinate the training of four different organizations did have a positive impact while the Project HOPE Coordinator was present but has since faded. The Colegio Medico program of continuing education may help to fill some of the void buttressed as it is by a law requiring each physician to earn 15 hours of credit per year from a variety of learning experiences.

The impact on the quality of medical practice has not been measured and thus the ultimate impact is as yet unknown.

C. Management

The management of the project can be analyzed in terms of the following aspects.

Project Planning: There was no needs assessment, inadequate diagnosis of the problem, no cost analysis of alternatives, no baseline data, no provision for gathering impact data, no complete agreement with host organizations, little recognition of complementary efforts of other assistance agencies.

Personnel: Excellent technician, outstanding work and commitment, was given language training but orientation weak (1 day at HC) especially about living conditions in Honduras, e.g., did not know what electrical appliances could take, uninformed about import of a car, etc.

Supervision: Weak, little help with social integration with counterparts, little help in fitting into operating reality of University, insufficient meetings with supervisor, unrealistic expectations by supervisor regarding quantity of Video productions.

Supply: Serious delay of 1 to 2 years for supply of some parts in support of AV equipment. Created serious drain on project and technician. For more detailed description of this problem, see Section on Supply in Chapter dealing with Grant Management.

Funding: Budget was adequate, disbursement and cash flow excellent.

Logistics: Trouble getting transportation to place of work, unclear policy regarding Project HOPE provision of transportation, adequate office space provided by Hondurans.

Project HOPE Backup: Slow or non-response from HC to requests for information on supply status of items.

LABORATORY SCIENCES DEVELOPMENT PROGRAM

I. SUMMARY

This program aimed at developing the educational program in parasitology at the UNAH and the Hospital Escuela. It has succeeded in establishing a successful, highly regarded curriculum in five subjects, plus the development of five lab manuals and training of five faculty members. Continuing education courses were given at the Ministry of Health's teaching hospital for 64 students plus the training of a counterpart as the head of parasitology at the Hospital. The UNAH considers the program a very successful contribution.

II. APPROACH

This Program focused on parasitology since parasitic disease is a major cause of morbidity for all age groups in the country. Training at all levels was deficient both in quality and quantity. In 1983, there was not one formally trained parasitologist in the country. The project therefore aimed at building up the educational program in the University, the continuing education in the Ministry and the Social Security (IHSS) and fostering research in the field. This project began in 1983 and extended to January 1988 so that only seven months of the activity occurred during the period being evaluated. Hence, this evaluation is necessarily brief.

III. PROGRAM

A. UNAH

The HOPE Educator initially undertook the teaching load for the undergraduate program at the UNAH not only because there was a shortage of teachers but also to serve as the role model for the new faculty being trained. Courses were taught in five subjects and the Educator developed the course plans for each subject, plus laboratory guides for each subject and 2500 teaching slides for the various parasites under study.

Eventually five instructors were trained and employed by the UNAH. A laboratory was created and Project HOPE provided a microscope, an overhead projector and one piece of laboratory equipment. The head of the Microbiology Dept. said that Educator did an incredibly good job in preparing the teaching materials and the Honduran faculty.

B. Continuing Education

The program with the MSP involved the Hospital Escuela which is the major teaching hospital in the country. During the last year of the project, the activity involved training of counterparts in special parasitology services as well as a teaching and conducting a research lab for medical and biology students during thesis preparation. The counterpart functions as the head of the parasitology section of the Central Lab and as an educator and supervisor of the National Lab Network service to communities. Also, five doctoral thesis were supervised for the degree and six formal courses were given to 64 students as part of their continuing education.

C. Research

The Educator started three research activities some of which are continuing with the Hospital Escuela and the Agricultural School. Some new disease agents were discovered and several publications followed.

IV. INSTITUTIONALIZATION

The program has been successful in institutionalizing the parasitology curriculum and faculty. At the time of the Evaluators visit to the UNAH, four of the faculty there were trained by the HOPE Educator. The course guides and lab manuals are still in use and serve as models for instruction. The Department Head said that thanks to Educator there is a fully functioning, excellent program at the University.

The HOPE Educator was of Honduran origin so that language and cultural adaptation were no problem. She had been an undergraduate student at UNAH but also studied in Germany and obtained a graduate degree at Tulane University. Her experience included teaching abroad in African countries so that she was well suited to her task in Honduras. The Coordinator reported no problems in support from Project HOPE though she did not receive any orientation from HOPE for her assignment. Since her husband was Project HOPE Program Director while she was on assignment in Honduras, she reported no lack of communication with her supervisor.

CONTINUING EDUCATION

I. SUMMARY

With the objective of upgrading the knowledge and skills of health professionals in Honduras, and the institutionalization of such a program, Project HOPE has since 1983 provided US experts, texts, videos and slide tapes to the Colegio Medico--the National Association of Physicians.

The Colegio has successfully promoted legislation requiring physicians to receive 15 credit hours annually in order to maintain their license and has created a National Center to manage the program. Now with 37 professional societies associated, and an annual program with 52 events, the Program is institutionalized. The plan was vague on outputs desired as well as the linkage between the training events and the texts, videos and slides that were furnished. There is little information available on the impact of the program. The Colegio and the Project HOPE staff have felt that an evaluation system is needed by the National Center but no decision has been made to continue support of the Program. With ambitious plans for a future Conference Center to help defray the costs of the program, the CENEMEC is likely to find the resources to continue the program without outside help.

II. APPROACH

A. Need

In 1983, Project HOPE signed an agreement with the Colegio Medico (the Medical Association of Honduras) and the IHSS to provide continuing education to the health

professionals of Honduras. The objective was to create a mechanism to assist professionals to upgrade their knowledge and skills and to keep up with the exploding quantity of information in the field.

More specifically, the objective was to provide materials and organize events (texts, videos, seminars and conferences and other teaching resources) to Honduran physicians to upgrade their knowledge and skills in professional practice. This was to include clinical rounds to improve health care. The hope was to provide a model for the coordination of training and service delivery among the MSP, the UNAH and the IHSS.

B. Plan

In order to carry out the objectives, the plan was for Project HOPE to identify the human resources to provide the training, to coordinate closely with the Hospital Escuela, conduct training events of 3-5 days in length in both theoretical and clinical aspects and to grant certificates to those completing programs. Part of the strategy was to use the educational activities to demonstrate the value of institutionalizing the continuing medical education (CME).

III. RESULTS

A National Center for Continuing Education

A major achievement was the passage of legislation making CME mandatory for physicians. In 1987, the Colegio Medico established the National Center for CME (CENEMEC) to organize and implement the formal program and accreditation of physicians. A minimum of 52 events are programmed per year by the Colegio Medico and the various specialized societies associated with it. The Colegio has a fund for the program from which it also subsidizes the specialized societies for their activities and the publicity, printing, correspondence and the national staff operating the program.

During this evaluation, the Program Director and the Evaluator attended a Congress of Physicians sponsored as a CME event in which various national leaders spoke about national health policy. The room was full and the panelists handled their topics well. The attendees were given a certificate indicating the credit hours granted for this event. Each physician must take 15 credit hours per year. The CENEMEC publishes a national program annually listing the various events, location, time and sponsoring society. Presently, 37 societies are sponsoring events under this program covering every specialty in the country.

B. Libraries

Libraries have been expanded or created with the contributions of Project HOPE in various participating organizations. The UNAH has texts, videos and slides along with the equipment at 8 locations. The IHSS has the same at five locations and the MSP has three such libraries. Six other libraries have been expanded for a variety of societies: dentists, nursing, veterinaries and offices of the Colegio Medico.

IV. INPUTS

Project HOPE has contributed visiting experts for short periods of time: three in 1988 and five in 1989. The subject matter varied from dental programs to infectious diseases, pediatrics and continuing education programs.

In addition, Project HOPE has given thousands of texts, audio-visual equipment to the libraries, and full sets of the videos and slide-tapes produced under the Learning Resources Center reported elsewhere in the document. A visit to the central library of the Colegio Medico revealed that the materials were there but the space was so cramped by the large number of books that it was difficult for users to use them or the visuals. The librarian complained about the lack of space but there was attempt to reduce the number of books and make space nor was there any record of usage to pass on to the Director of the program. The professional staff said that they would pay more attention to the libraries when they were informed of the cost and effort invested by Project HOPE in making those precious resources available.

V. EVALUATION

A. Plan

As is the case with several of Project HOPE plans, there was a general objective with little specification, quantification, timing or sharp focus on results desired. For example, the general objective of raising knowledge of physicians could be met by as little as three seminars for 100 persons or much more. The Project HOPE input of experts from the US has indeed been modest yet it meets the objective.

No measures exist to determine the impact nor even a clear measure of the number of persons receiving education nor the value, relevance and improvement in knowledge and skills. This lack is felt by the Colegio and they have requested Project HOPE help in establishing an evaluation program to determine the results of their program. No decision has been made by Project HOPE.

B. Outcomes

The major success is the institutionalization of the CEMEMEC with the legislation to back it up and the funding they receive from the dues of the physicians. An interview with the original leader of this effort revealed ambitious plans to build a Center with sufficient space to rent out for offices and conferences as a means to raise money. The plans have been made and the land selected but they are awaiting more funds to begin. The major need for the Program is full time paid staff since the effort is now carried out by physicians elected to the post who serve as volunteers about two hours a day.

C. Current Status

The Project HOPE inputs have been at a standstill the last year in part because of other priorities and in part because no decision has been made for continuation of the effort. Staff views are divided among those who wish to continue support and those who see the project ended. If the Project were to be continued, the 1983 plan has already been overcome by events and should be updated in the light of the current needs and opportunities afforded by the CENEMEC. If continued, the Program clearly would benefit from technical assistance in establishing an evaluation system. If not continued, the Program will probably have enough money and support from other sources to succeed.

The Project HOPE activities have been coordinated by the Program Directors stationed in Honduras as a part time task. The current Director would have the time to continue if desired by HC. This evaluation does not make a recommendation regarding the continuation or termination of the activity since it depends on the larger framework of the Project HOPE country plan and priorities for the country.

PROJECT HOPE PROGRAMS IN SWAZILAND

I. EXECUTIVE SUMMARY

The mid-term evaluation of Project HOPE matching grant activities in Swaziland notes the impressive progress that has been made in the nursing education project components at the Nazarene College of Nursing and at the Swaziland Institute of Health Sciences where new curricula have been developed and taught, counterpart faculty and the host institutions have been strengthened, and targeted numbers of graduates are being produced. At the Good Shepherd School the needs assessment for the additional training required by nursing assistants has been carried out and served the valuable purpose of clarifying and highlighting important and controversial issues regarding the training and utilization of nursing assistants in the health service delivery system of Swaziland.

Plans are being made to reinitiate the important materials management component. Much of the preliminary work in organizing an improved central drug supply operation has been consolidated. With the appointment of key new staff by the Ministry of Health, this component should now proceed with a reassessment of the current situation and a plan for the computerization of the inventory system.

Finally, the component developed to improve the practices of traditional healers, bringing them into closer collaboration with the primary health care system, has made an impressive start and should be continued.

All of the Project HOPE matching grant program components are consistent with the policies and programs of the Ministry of Health and the A.I.D. Mission.

The Project HOPE team, in Swaziland and at HOPE Headquarters should be commended for their dedication, commitment, and hard work in carrying out the Swaziland program.

II. BACKGROUND

A. Evaluation Team and Methodology

After a three day briefing at Project HOPE Headquarters, the evaluation team, Dr. Carolyn Brye, Director of Nursing at Project HOPE and Swaziland Country Manager, Dr. Martin Gorosh, Professor of Clinical Public Health and Director of International Training Programs at the Center for Population and Family Health of Columbia University's School of Public Health, and Pamela J. Putney, a nurse-midwife/Project HOPEC expert and Senior Associate at Initiatives, Inc., travelled to Swaziland between April 27th and May 10th, 1990.

The extensive briefing documents prepared by headquarters and field staff provided a rich and valuable resource for the team. All project component sites and counterparts were visited, in addition to other collaborating institutions. Other contacts included

A.I.D./Swaziland, the Ministry of Health, the MSH (Management Sciences for Health) Primary Health Care Project, and the Pathfinder Fund. Dr. Maggie Makhubu, Chief Nursing Officer, MOH, provided valuable background and insights into the nursing scene in Swaziland. Mr. Alan Foose, HPN/A.I.D. Swaziland and Mr. Jay Anderson, Assistant HPN/A.I.D. Swaziland, participated extensively in discussions with the evaluation team and in field visits to project sites.

B. Historical Overview of Project HOPE Involvement in Swaziland

In 1983, the Government of Swaziland adopted a National Health Policy which emphasized primary health care as a strategy for achieving "Health for All by the Year 2000." In collaboration with A.I.D./Swaziland, in 1984, the Ministry of Health began a five year, multi-million dollar national primary health care project under the direction of MSH/Boston. A major constraint to the project's success was the fact that the majority of health professionals who staffed the health posts, health centers and hospitals (primarily nurses and nursing assistants) lacked the necessary skills to carry out their new responsibilities as providers of effective primary health care.

In response to this problem, in 1984, with assistance from A.I.D., the MOH established the Swazi Institute of Health Sciences and began revising the nursing curriculum at the Nazarene Nursing College, to improve the education and training of health professionals. At this time the MOH requested assistance from Project HOPE to develop and strengthen its educational programs.

Since 1984, Project HOPE's involvement in Swaziland has continued to grow. Currently, nursing programs with HOPE input are responsible for one half of the nursing training in the country. In addition to: textbook programs at the Nazarene Nursing College, the Swazi Institute of Health Sciences and the Good Shepherd Nursing School; a Pediatric Medical Technical Assistance Program at Raleigh Fitkin Memorial Hospital (1988); a Hepatitis B Vaccine Program for Health Workers (1989); and a Fracture Casting Materials Program at Mbabane Government and Raleigh Fitkin Memorial Hospitals, Project HOPE'S on-going programs have been as follows:

- 1984 ♦ General Nurse Education Program at Nazarene Nursing College
- ♦ Materials Management Program at MOH Central Stores (suspended since February 1986)
- 1986 ♦ Community Health Nursing Program at Swazi Institute of Health Sciences
- 1989 ♦ Biomedical Engineering Program at Swaziland College of Technology

- ◆ Nursing Assistant Midwifery Program at Good Shepherd Nursing School
- ◆ Traditional Healers Education Program at Traditional Healers Headquarters Siteki
- ◆ Prevention of HIV/AIDS Project

III. PROJECT HOPE PROGRAMS IN SWAZILAND

A. Cross-Cutting Themes

Three cross-cutting themes have been identified by the evaluation team; all of which have a direct impact on the nursing and nursing assistant programs in Swaziland. These issues also have the potential to affect the course of the other matching grant program components.

1. Nursing/Tutor Shortage

The first important theme is the critical shortage of faculty at all three nursing programs. Numerous factors contribute to this shortage, including: the Government of Swaziland practice of sending key counterparts for long periods of post-graduate training abroad (and the extent to which the recent Kellogg Foundation initiative has magnified this practice); and, the increasing migration of trained and experienced nurses to other countries in the regions where salary and benefits are often more than double the levels in Swaziland. These factors contribute to severe and often unpredictable shortages of key counterparts at critical moments in project life-cycles.

2. Weak Links Between Education and Service Delivery

The second theme concerns the weak link between education and training to service, i.e., newly educated workers or existing workers who are retrained to carry out new skills are often unable to practice in settings that are receptive to and supportive of their preparation. A broader, programmatic restatement of this theme concerns the relationship between project outputs to the needs of the Ministry of Health Primary Health Care initiative. Matching grant program components are unevenly and incompletely integrated into the health services delivery system of Swaziland.

3. Management and Evaluation

The third theme is management and evaluation. Matching grant project components do not have the types of management systems to plan, schedule, coordinate, and monitor activities. Further, as the three nursing components and the traditional healers initiative move into their next phases, plans are needed for their systematic evaluation. Appropriate qualitative

and quantitative evaluation tools must be developed and pretested to assure that outcome and impact evaluation proceeds smoothly and produces results that will be useful for program improvement.

These themes, singly or in combination, have produced an environment of uncertainty in the Nazarene, SIHS, and Good Shepherd educational and training programs. The traditional healers component, while demonstrating extensive coordination with other programs, requires new management and evaluation approaches. The materials management component, when reinitiated, must carefully develop systems that build on the considerable progress made in drug supply and logistics in the Primary Health Care Program. The BME component must plan astutely to avoid the sudden shortages of human resources that have affected the nursing components.

B. The Programs

1. Nazarene Nursing College

Background: The Nazarene Nursing College is located at the Raleigh Fitkin Memorial Hospital, a 292 bed facility built by Nazarene Missionaries in the 1920's. Initially, the hospital was funded and administered solely by the missionaries, however, gradually the financial responsibility has shifted to the MOH. At the present time, 80% of the current budget is underwritten by the Swazi government.

Although the College has a separate budget, the administrative control remains with the hospital administration, with the nursing faculty being responsible to the Matron (who is under the direction of the Medical Superintendent). This administrative structure has led to conflicts between nursing education and the realities of managing busy hospital wards, where the occupancy rate averages 86% and an acute shortage of staff exists (currently 15-20 vacancies out of a staff of 76). Nursing tutors are often relieved of their educational duties to act as staff nurses, leading to discontinuity in training and creating an atmosphere of uncertainty.

Prior to the creation of the SIHS in 1980, the College was the sole training program for nurses in the country. The basic diploma nursing curriculum requires three years to complete, with an option to continue in a post-graduate, one-year midwifery course. Students are admitted annually in June. Two classes have graduated under the new Project HOPE curriculum (total 27 students). Full tuition, room and board, books, uniforms and a E300 stipend (approximately \$120 dollars US) are provided by the Government through the Ministry of Education to all nursing students in Swaziland. At Nazarene, students are expected to carry a significant proportion of the workload on the hospital wards and despite efforts to reduce their ward responsibilities for educational time, they continue to constitute the main work force at the hospital.

The average number of full-time faculty available to cover the general nursing and midwifery program is ten, three of which are currently expatriate. The full number of faculty is fourteen to seventeen, however at any given time an average of five are absent due to educational leave abroad, home leave (expatriate staff) and retirements (mandatory at age fifty-five).

Project HOPE's involvement at the College began in 1984, with a request from the MOH to improve the basic nursing curriculum, with an emphasis on strategies for upgrading the community health and MCH content areas. In addition, the midwifery curriculum was revised with assistance from Project HOPE. In 1985 there were three full-time HOPE nurses assigned to the Nazarene program. By 1989 this number was reduced to one, as planned.

Program Objectives: The overall objective of the Project HOPE program at the Nazarene is to improve the quality of the basic nursing and midwifery education in order to prepare diploma level nurses to meet the primary health care needs of families in Swaziland, with a focus on MCH interventions where the majority of mortality and morbidity occurs.

The major objectives are:

1. Revise the basic nursing curriculum.
2. Revise the midwifery curriculum.
3. Provide assistance to the faculty in developing additional skills in curriculum development, planning, implementation and evaluation.
4. Incorporate current innovative teaching methodologies into the curricula to be used by the faculty to facilitate student learning.
5. Strengthen supervision and evaluation of the students in the clinical areas.
6. Strengthen the faculty's ability to write multiple choice questions and to set and grade student examinations.
7. Provide assistance to the College in developing improved administration and management skills.
8. Collaborate with the Swazi Institute of Health Sciences, the MOH and Nazarene College in developing in-service workshops and training programs for faculty and staff nurses.

Inputs and Outputs:

Objective # 1: Revision of Nursing Curriculum

The basic curriculum has been revised and developed in stages, with each section under going evaluation and modification following implementation. The complete curriculum is fully utilized by the faculty and two groups of graduates have finished the new program, which emphasizes primary health care concepts.

Some outstanding accomplishments within this objective are:

1. The incorporation of physical, family and community assessment skills into the basic curriculum. The emphasis in training has shifted from "curative" to a more preventive and promotive primary health care approach to patient care in all settings (hospital, health center, health post and community).
2. The new curriculum demands more active involvement in the learning process on the part of the students and encourages them to think more creatively and independently.
3. In 1986, WHO sponsored a Primary Health Care workshop for tutors from Lesotho, Botswana and Swaziland with the active participation of Project HOPE staff.

Objective # 2: Revise the Midwifery Curriculum

The midwifery curriculum has been completed, revised, printed and in use since 1988.

Objective # 3: Increase Faculty Skills in Curriculum Development, Planning, Implementation and Evaluation

A number of activities have been carried out in this area and faculty skills are continuing to be developed to meet this objective.

Achievements in this area include:

1. In 1985 a three day orientation program which included: teaching methods, curriculum, philosophy, Swazi customs and the use of audio-visual aids, was held for new tutors.
2. Between 1985 and 1986, individual faculty members assumed responsibility for regular in-service education programs which included sessions on: curriculum development, the nursing process, innovative teaching methodologies and the use of audio-visual materials.

3. HOPE staff have worked with the faculty on an on-going basis to develop faculty skills in developing course objectives and content, including evaluation techniques.
4. A student course evaluation tool was developed and used by the faculty in 1989.

Objective #4: Incorporation of Up-dated Teaching Methodologies into the Curricula by Faculty

Traditionally, classes have been conducted using the lecture format, with the students required to spend hours copying notes from transparencies. Teaching materials (including audio-visuals) were inadequate.

Accomplishments towards this objective include:

1. Teaching methodologies such as: role playing, team teaching, case presentation, student research for seminars and field trips, have been introduced to the students and faculty.
2. A system which requires the students to identify their learning needs for revision and encourages them to assist each other in learning has been instituted.
3. Project HOPE has made extensive contributions to the College's library and teaching materials collection (including audio-visuals) for use by the faculty and students.

Objective # 5: Strengthening of Supervision and Evaluation of Students in the Clinical Area

This objective has been difficult to achieve due to the shortage of nursing tutors available to supervise the students on the wards and in the clinics, in addition to resistance from the staff nurses to "new" concepts in the improved curriculum. This in part has been a result of a lack of adequate in-service to familiarize the staff nurses with the new curriculum, which would allow the older nurses to incorporate these "new concepts" into their experience.

Accomplishments toward this objective include:

1. In 1986 and 1988, second level students were given extra days on the ward, during which time faculty provided supervision.
2. A clinical evaluation tool was developed for use by students and faculty.
3. Faculty supervise students on field visits during their community health experience.

4. Nursing care plans are required of students in all clinical areas, with the exception of mental health.
5. A skills book, requiring supervisors' signatures, to assist in the evaluation of students' ability to carry-out procedures was developed.

Objective # 6: Strengthen Faculty Skills in Writing Multiple Choice Questions and the Setting and Grading of Examinations

The standard testing method throughout the Southern African region continues to be essay type examinations. Efforts have been made to collaborate with the Swaziland Nurse-Educators Committee, the Swazi Institute of Health Sciences and the Nursing Council on this issue.

Achievements towards this objective include:

1. In 1985, a half-day workshop was held to assist Nazarene tutors with test construction.
2. Over 200 questions were collected to form a "bank" for student examinations from the tutors at Nazarene and SIHS.
3. Swazi tutors have been involved in setting internal examinations, in addition to those for the Nursing Council, the University of Swaziland and the Nursing Examination Board of Botswana, Lesotho and Swaziland. In 1990 a Swazi tutor took over responsibility for setting the community health nursing exam from a HOPE tutor.
4. Swazi tutors use check lists to assess student performance during home visits.

Objective # 7: Improve College Administration and Management Skills

A number of management and administrative issues at the College have been addressed with assistance from Project HOPE. However, further skill development in this area among faculty and administration is warranted.

Accomplishments in management and administration include:

1. The revision of student rules and regulations.
2. The institution of a number of Ad Hoc Committees, including a Library Committee and In-Service Evaluation Committee.
3. The institution of weekly faculty meetings and a Swazi faculty coordinator.

4. Affiliate Status of Nursing Programs with the University of Swaziland was accomplished and students wrote the first examinations in May of 1989.
5. Additional secretarial help was acquired for the College through the Hospital Administration.

Objective # 8: In-Service Programs for Faculty and Staff in Collaboration with SIHS and the MOH

The Primary Health Care Project in 1985 identified the fact that for over 17 years, no staff nurses in the hospital, health center or health post levels had received in-service education. Although emphasis in strengthening this important area needs to be continued, Project HOPE has made efforts with the faculty at the Nazarene to achieve this objective.

Accomplishments towards achieving this objective include:

1. A Project HOPE Nurse-Educator participated in teaching physical assessment skills to nurse-practitioners.
2. A seminar in Human Sexuality was planned and implemented in collaboration with a HOPE Nurse-Educator.
3. Workshops on the Nursing Process, Management and HIV Infections were held by an In-Service Education Committee which was formed with the assistance of HOPE staff.

Observations and Findings: In general, the Project HOPE program at the Nazarene Nursing College is functioning successfully and appears to have made the important contribution of sensitizing tutors and students to their community and meeting community needs. HOPE staff have worked hard with both students and tutors to develop their leadership and management skills. The majority of problems still facing the program (eg; critical staff shortages) are due to factors largely outside the control of the HOPE staff.

After reviewing relevant documents and conducting interviews with College students, tutors and Administration, the following are the major observations and findings of the team regarding the Nazarene program:

1. The library/learning resource center developed by Project HOPE appears to be making a valuable contribution to the students' educational development and is utilized extensively by both students and faculty. More copies of specific basic texts have been requested (eg; *Helping Health Workers Learn*).
2. The revised curricula in basic nursing and midwifery are functioning with the full support of the College and the MOH. All components have been strengthened,

including community health and MCH. Students interviewed reported that they felt "confident" and "well prepared" to function as staff nurses. The majority of students expressed a desire to continue their education (eg; midwifery, orthopedics, health education).

3. Clinical experiences for students have been expanded and the community health component is considered by students and faculty to be a major strength of the curriculum.
4. The newly appointed Director of the College (late 1989) needs continued support, particularly in the areas of management and administration, in order to function effectively in her new role.
5. Two faculty positions will be vacant during the coming school year due to individuals being sent abroad for further education. The two positions are in the midwifery program and as a result, in all probability, there will be no midwifery class admitted for the coming year. This has serious implications for the MOH Project HOPEC Program in Swaziland due to the shortage of midwives country-wide. The situation will be exacerbated by the fact that the Nazarene Mission plans to phase out expatriate staff by 1992, leaving further gaps in faculty positions.
6. The Kellogg Foundation has a large responsibility in creating this current crisis by providing fellowships in excess to the number of faculty positions the country is able to replace in order to carry-out its education programs.
7. The critical shortage of staff nurses at the hospital results in:
 - a. Inadequate clinical supervision of students and graduates.
 - b. A high frustration level among recent graduates due to their inability to function in their role of providing high quality nursing care.
 - c. Decreased job satisfaction and low staff morale.
8. Relationships between education and service provision need to be strengthened. The current lack of a "working partnership" with a common goal results in often conflicting policies and differences in the provision of patient care, among other things. At the present time, no procedure manual is being used in the hospital setting, although a draft manual is in preparation (a clinic manual was developed and implemented by the Project HOPEC Project).
9. Evaluation of the program is in the initial stages and warrants further emphasis on the part of both Project HOPE and the faculty. The program would be strengthened by an evaluation of graduate performance (including supervisors) in the clinical

setting. This evaluation should be carried out through a systematic collection of relevant qualitative and quantitative data through the use of appropriate and pre-tested tools. Swazi staff must participate in this process if the evaluation findings are to be fed back into the system for program improvement.

10. There continues to be a lack of basic administrative and problem solving skills on the part of the Hospital and College Administration and faculty.
11. Faculty continue to rely predominantly on traditional teaching methodologies (lecture format) in the nursing program.
12. Students and recent graduates of the program (10 from last year's class were hired by the hospital) expressed frustration at the lack of support for using their "new skills". "We are constantly required to make short-cuts in giving patient care," was a frequent complaint. Male students expressed the need for male tutors and role models.

Conclusions and Recommendations:

1. Project HOPE should continue to work with the faculty, hospital and school administration at Nazarene to develop and implement increased management, administrative and evaluation skills and tools.
2. Technical assistance should be provided by Project HOPE to finish and implement a procedures manual which would be used in hospitals country-wide. Care should be taken in the development of the manual to complement and build-on the clinic manual already in use in the health centers/health posts.
3. The Kellogg Foundation should be contacted by the MOH, A.I.D./Swaziland and Project HOPE to discuss strategies for addressing the current faculty shortage crisis, precipitated by the number of concurrent fellowships the Foundation is providing for long-term overseas education in nursing.
4. Project HOPE should continue to provide the support of a nurse educator at the College over the next year, with the condition that the College and the MOH develop and implement effective plans to deal with the problem of tutor/staff shortages (both long-term and short-term). The current faculty shortage has created obstacles to entering into the planned "phaseover" period, which was to focus on program evaluation, fine-tuning and curriculum review.
5. Innovative strategies, including a variety of continuing education approaches, for bridging the gap between education and service provision (eg; one-on-one clinical preceptors, educators working regularly in the hospital/clinics/community as part of

their job description) need to be developed and implemented at both Nazarene and SIHS to ensure that practicing nurses on the wards and in the clinics know what the nursing students are being taught. This will increase the effectiveness of the nurses in supervising students during their clinical assignments and enable these experienced nurses to work more effectively with graduates of the nursing school in their new professional positions.

6. Approaches for recognizing the contributions made by practicing nurses to nursing education should be developed and implemented as soon as possible (eg; adjunct faculty status, award dinners, special pins for supervisors).
7. Program evaluation, which systematically assesses the impact of the new curriculum on the provision of patient care should be carried out on an on-going basis. Findings should then be fed back to the tutors and administration for program modification and improvement.
8. The incorporation of innovative teaching methodologies into the teaching of the curriculum on a daily basis should be a future priority for Project HOPE staff.
9. Project HOPE should provide the Nazarene library with requested texts (eg; Helping Health Workers Learn), as well as additional relevant international Project HOPEC and development publications.

2. Swazi Institute of Health Sciences

Background: The SIHS was created as an educational institution for nurses, dental hygienists and health inspectors, with the facility being constructed in 1980 with funds from A.I.D./Swaziland. Programs at the Institute in nursing include: a three year basic diploma program, and post basic programs in midwifery, community health nursing, community mental health and a nurse-practitioner program.

Administratively, the SIHS principal is directly responsible to the UnderSecretary in the MOH. Funds for the Institution's programs come directly from the Government, in addition to various donors (eg; Project HOPE, WHO).

Project HOPE's involvement with the Institute began in 1986, with the development of the one year post graduate Community Health Nursing Program. Students are chosen from their posts as staff nurses (generally clinic/health center based) in the field throughout the country and are expected to return to their former jobs upon graduation. The first curriculum was approved in 1987 and the third class is about to graduate. The SIHS has an extensive library, which has been expanded by Project HOPE, including teaching and audio-visual materials.

Program Objectives: In the past, nurses in Swaziland were educated in a system which emphasized "curative", rather than preventive and promotive care. These nurses were sent to work in clinics, often in remote rural areas where they received little or no supervision, without adequate public health/primary health care training to carry-out their responsibilities to the community. The overall objective of the Project HOPE SIHS Program is to assist the faculty to develop and implement a post graduate community health nursing program to prepare public health nurses to effectively meet the primary health care needs of families in Swaziland.

The major objectives are:

1. Complete, evaluate and revise a one year post graduate community health nursing curriculum.
2. Strengthen the clinical component of the community health nursing curriculum in order to meet the overall course objectives.
3. Upgrade and evaluate community health components in other SIHS programs.
4. Collaborate with faculty and the MOH to develop in-service workshops in community health nursing for faculty and staff nurses in Swaziland.
5. Institutionalize the community health nursing course by June 1990.

Inputs and Outputs:

Objective #1: Complete, Evaluate and Revise a One Year Post Graduate Community Health Nursing Curriculum

The one year curriculum was developed in 1987 and approved by the Swazi Nursing Council at that time. Evaluation of the curriculum has been on-going and appropriate revisions have been made, including the consolidation of the number of courses from twenty to sixteen. A fully revised curriculum was introduced to the third class in June of 1989.

Some outstanding accomplishments within this objective are:

1. A comprehensive assessment regarding the requirements for a community health nursing curriculum appropriate to the identified health needs of Swaziland was carried out prior to the development of the program.
2. An orientation and delineation of administrative and technical policy issues which impact on the community health nursing program was conducted with faculty.

3. Excellent useful and innovative teaching materials for both students and faculty were developed and adapted for use in the program curriculum. (see Appendices for selected samples of materials developed)

Objective # 2: Strengthen Clinical Component of the Community Health Curriculum

The clinical component has been given full course status as part of the curriculum. Emphasis has been on developing appropriate clinical experiences for the students to "test" and internalize their new skills in primary health care. Students interviewed stated that their clinical experience was an invaluable part of the program and requested that more time for clinical practice skill development in appropriate settings be given during the course.

Objective # 3: Upgrade and Evaluate Community Health Components in Other SIHS Programs

Project HOPE Nurse Educators have worked extensively to improve the community health components in the: basic nursing, nurse practitioner, dental hygienist and health inspector programs at the Institute.

Some outstanding achievements in this area include:

1. A Community Health Team, with members from all the programs at SIHS and the Public Health Services, was organized to identify and address key community health concepts, resource persons and materials for the inclusion of a community health component in all Institute programs.
2. Key faculty were identified and collaborated with in all the programs to implement the community health component.

Objective # 4: The Development of In-Service Workshops in Community Health Nursing

The HOPE Nurse Educator has worked with the SIHS faculty and the MOH in developing in-service programs, workshops and refresher courses in community health nursing for faculty and Swazi nurses.

Accomplishments towards this objective include:

1. HOPE Nurse Educator provided consultation for a primary health care workshop in a continuing education project.
2. Orientation sessions were conducted with faculty on the nursing process, nursing care plans, clinical assessment and the tutor's role in evaluating students' performance.

3. The Basic Nursing Program Coordinator received on-going assistance from the HOPE Nurse Educator in: objective writing, Nursing Theory, preparation of course Philosophy and continuous assessment.

Objective # 5: Institutionalize the Community Health Nursing Program by June 1990

Progress towards this objective has been on-going. Seven out of ten courses in Term I were taught by Swazi tutors with HOPE assistance. By Term II, Swazi tutors were teaching all courses, with input from the HOPE Educator. Plans for a total phase out of Project HOPE input need to be assessed, however, in light of the recent faculty shortage precipitated by a number of tutors being sent abroad for long-term education by the Kellogg Foundation.

Observations and Findings:

1. The evaluation team heard frequent moving testimony from graduates, staff nurses and other health care professionals on the positive impact the HOPE Community Health Nursing Program has had on the provision of effective primary health care in Swaziland. Comments were made regarding the development of skills in: health education, community assessment, counselling, school health, epidemiology of disease and their prevention and clinic management. A 1988 graduate of the program stated that with the skills acquired during the program she: can organize her work now, carry-out community assessment and diagnosis to mobilize the community, collaborate with the rural health motivators and traditional healers, perform more effective outreach and share her new knowledge and skills with professional colleagues.

The third and most recent graduating class made the following statements about the program when asked to write an anonymous response to the following question:

"Upon completion of the Community Health Nursing Program, when you return to your post, what will be the first new approach you will try to implement?"

"I will ask permission from my Supervisor to allow me to follow-up the cases who need help at their homestead. This will enable me to involve my staff, my community, and other sectors."

"I will encourage my health team to do home visits. I will emphasize the importance of health education. I will encourage our health team to collaborate with other sectors. I will encourage community participation."

"Share my new knowledge and its importance with the nurses at my clinic, especially on attitudes towards clients, the need to identify the problems together with the people in the community and in families. Stress the importance of primary prevention with regard to personal hygiene and environmental sanitation when conducting health education sessions."

"I will ask permission from the Sister in charge to tell my colleagues about what I have gained in this course so that I can work hand in hand with them in away that they can understand what I will be doing. After I have gained their confidence, I will be able to implement my new skills."

"Have a meeting with my colleagues and tell them what I have learned and that we have to do it. Draw up a schedule for our work. Set objectives for ourselves and work according to these objectives. At the end of each week we evaluate ourselves to assess our strengths and weaknesses. Where we failed, we find other means or solutions. Evaluation is very important in whatever you do."

"Write down my own work schedule. Have meetings with the staff. Discuss current problems in the clinics. Find solutions and involve everyone in the programme. Educate staff about the importance of home visiting and its effects. Do home visits with the staff. Discuss factors which might contribute to some of the problems. Collaborate with other sectors."

"Since many nurses do not know about the meaning of Primary Health Care, I intend to explain this during meetings with them. I will involve the parents and teachers when planning school health programmes. Have monthly meetings at the clinic to evaluate our work. Encourage home visiting."

"To let the other members of the staff know the importance of community health nursing. To encourage others to do home visits to the nearest homesteads and the whole catchment area to carry out family assessments. Do community diagnoses thoroughly. Try to identify community development projects especially for women and make appropriate referrals. Counsel clients appropriately and try to bridge the gap between community members and nurses concerning attitudes. Try to make the services more accessible to the community through health education."

"Improve nursing standards by applying the new skills learned in training. Share knowledge gained at the institute with co-workers. Collaborate with other ministries in implementing the primary health care program. Identify health problems of my catchment area and manage them well. Apply nursing process to individual patients and see that objectives are met. Make all services available to the community regarding time, distance, and culture."

"Report to my supervisors about what I benefited from the course. Change my behavior, especially when giving health education. Home visits. Manage resources so as not to be wasteful." "Collaborate with other sectors in the community. Practice primary health care and involve patients and clients. Solve problems as a team through brainstorming and develop solutions. Do observations, especially when attending community meetings, in order to be able to assess the community."

2. The curriculum has been completed, evaluated and revised as scheduled, with further adaptations and revisions to be on-going as necessary.
3. Due to the current faculty shortage, created by the Kellogg Foundation's plan to send a number of tutors overseas for long-term training, the faculty are operating on a crisis mode. The Community Health Program may have to be suspended next year due to the faculty shortage. Three positions will be vacant, including the key position of Principal because the current Principal has been appointed acting CNO.
4. Some evaluation of the curriculum has been carried out, however a systematic evaluation of graduate performance in the field through the use of appropriate pre-tested tools needs to be conducted.
5. Adequate planning, problem solving and administrative skills among the faculty and administration do not currently exist. This merits further program inputs and emphasis.
6. The need to increase the time spent on clinical experience was a universal observation/request among the program graduates and students. This should be implemented as soon as possible.

Conclusions and Recommendations:

1. Project HOPE should continue to provide a full-time Nurse Educator at the Institute over the next year in order for the program to continue.
2. Written agreements with the MOH and SIHS should be required to insure the rapid development of permanent solutions to the chronic and serious faculty shortage. Innovative approaches such as: using administrative staff as part-time faculty, evening and weekend classes, re-hiring retired faculty and recruitment of outstanding recent Community Health Program graduates for faculty positions.
3. The development of increased management and administrative skills for faculty and administration at SIHS should be a priority for continued HOPE Program inputs.

4. In addition to increasing the time allocation for the clinical experience component in the program, the course should be expanded to include: occupational health, and working with the large refugee population in Swaziland. Student complaints about too much time spent in the Public Health Unit and needless repetition of basic practical skills (eg; giving injections) should be addressed.
 5. A systematic evaluation of Program graduates' performance in the field should be conducted as soon as possible with full participation of the faculty in order to institutionalize/transfer evaluation skills
3. Good Shepherd Hospital Nursing Assistant Program

Background:

The Good Shepherd Hospital is a 115 bed facility (with average of 150 deliveries per month), located in the Lubombo Region, bordering Mozambique. Its Governing Board consists of representatives of the local community, the Catholic Church, the MOH, and Good Shepherd administrative staff. The hospital is supported financially by the MOH and fees for service, in addition to other donations by church groups.

The Good Shepherd Nursing School, which has had a nursing assistant program since 1973, is an affiliate of the hospital. Initially, the program was one year, however, in 1975, the Swazi Nursing Council recommended that the program be extended to eighteen months and be modified to include increased emphasis on preventive and promotive care. In 1979, on the recommendation of the MOH, the program was expanded to twenty-four months, at which time the curriculum was again revised and standardized. Since 1989, 316 nursing assistants have graduated from the Good Shepherd Program. Currently there are three full-time and seven part-time faculty at the School.

Nursing assistants in Swaziland work in a variety of health care delivery settings, including hospitals, Public Health Units (clinics), health centers and health posts. In the rural areas, due to a shortage of registered nurses, they are often left with the sole responsibility of staffing the health centers and health posts.

The recommendation to expand the program to include midwifery training and community health skills was first proposed in 1978 by tutors and students. In 1985, a study tour of enrolled nurse midwifery programs in Kenya, Zaire and Zambia was conducted by the Principal Tutors of the Good Shepherd School and the SIHS. Following the tour, recommendations were made to the MOH to initiate a similar program in Swaziland.

Project HOPE received a request from the MOH to assist in the development and implementation of the new program and in June of 1989 a Project HOPE Nurse-Midwife

Educator arrived in Swaziland to begin the initiation of the program. The projected time-frame for Project HOPE's involvement in the program was three years.

Program Objectives: The overall objective of the program is to incorporate key primary health care and midwifery skills into the Good Shepherd Nursing Assistant Program.

The major objectives are:

1. Assess factors influencing the program, in addition to its requirements and needs and secure approval for the program.
2. To develop the curriculum and create an Advisory Committee to provide guidance.
3. Strengthen the midwifery and community health components of the existing nursing assistant curriculum.
4. Evaluate the curriculum.
5. Institutionalize the program by 1992.

Inputs and Outputs

Objective # 1: Assess Factors Influencing Program, Determine Requirements and Secure Program Approval

Project HOPE's Nursing Educator conducted a needs assessment and curriculum design following HOPE's agreement to work with the Nurses Assistant program to improve the ability of nursing assistants to carry-out primary health care, community health and selected maternity care interventions. Over the past six months, the Educator's inputs have greatly facilitated efforts by the MOH and other key players (including the evaluation team) to focus on the critical issues facing the program, as well as understand a complex set of often conflicting strategies.

Part of the motivation for upgrading the capabilities of Nursing Assistants is based on the assertion that they are often faced with emergency obstetrical cases in situations where they must function without supervision. The Project HOPE assessment cast doubt on this assertion, as nearly 70% of nursing assistants are assigned to hospitals and public health clinics; settings in which they would rarely be called upon to do unassisted deliveries. The actual percentage may be less than 70%, as nursing assistants may be assigned temporarily to sites where they may be called upon to deal with emergency situations. It is possible that the intention for the proposed upgrading was to confer additional status, rank and pay for this category of health worker.

The one year curriculum developed for the program, as well as the increased rank proposed for its graduates, created numerous points of contention and resistance involving the Swaziland Nurses Association, the Swaziland Nurse Educators' Committee, the Nursing Council, and the Ministry of Labor. From the Government's point of view, the new level of Nursing Assistant to be produced by the new training program did not exist and would have to be subject to all procedures associated with the creation of a new category of posting. The Nursing Educators' Association raised numerous questions related to credentials and qualifications for entry into the proposed new position.

An ad hoc committee of nurse educators, administrators, health service delivery providers and nursing assistants met in March of 1990 at the request of the MOH to further explore the issues and develop recommendations concerning the proposed nursing assistant program. This committee put forth a compromise it hoped would meet most objections. However, the compromise appears to further confuse the issues and create more problems than it solves in that it calls for: a two year program toward a diploma in midwifery, including completion of the first year of the basic nursing program at SIHS; in addition to the option of a one year "maternity nursing program" at the Good Shepherd School. The Nursing Council plans to issue its decision regarding the program in the near future.

Major accomplishments towards meeting this objective include:

1. A training needs assessment questionnaire was designed and implemented in collaboration with the Principal Tutor of Good Shepherd. Twenty-six rural health facilities were visited in the four regions, with one hundred and thirty Nursing Assistants interviewed.
2. Appropriate teaching materials, reference and text books to be used in the program were identified and approved for purchase with support from Project HOPE.
3. Meetings were held with various "key players" in getting approval for the program, including the Nursing Association and Nursing Council.

Objective #2: Develop the Curriculum and Create and Advisory Board for Guidance

Attempts to create an Advisory Board failed due to the work demands of its members. However, a draft curriculum has been completed and submitted to the Nursing Committees for approval (pending).

*Objectives # 3, 4 & 5 are pending the resolution of constraints identified in Objectives # 1 & 2.

Observations and Findings

1. After extensive discussion and deliberation, the evaluation team seriously questions the rationale for deciding to add a full year of midwifery preparation to Nursing Assistant training, as proposed by the Nursing Council. The team also questions the validity of a one year midwifery program which does not include extensive community health and primary health care components. Further, the team has reservations regarding the ability and desirability of Nursing Assistants completing one year of a basic nursing program. In effect, those who would go on to successfully complete the midwifery year will no longer be "Nursing Assistants," as they will have qualifications similar to nurse-midwives in Swaziland. This has merit as a career ladder, however, it goes well beyond the original intention of upgrading Nursing Assistant skills.
2. In anticipation of smooth sailing for the proposed Nursing Assistant training program, Good Shepherd cancelled its November 1989 intake of trainees, and unless a decision is forthcoming in the near future, the School faces a similar cancellation of the November 1990 intake.

Conclusions and Recommendations

1. The team recommends that Project HOPE explore the above issues with the MOH. Until these critical issues are resolved, the midwifery component of the program should be suspended. The MOH needs to decide and put in writing: what needs are to be met by Nursing Assistants in Swaziland; what roles are they to play in the health service delivery system; what combination of long-term training and continuing education should be considered; and what new levels of status, rank and pay should be set for Nursing Assistants. When these issues are resolved and put in writing, reinitiation of the midwifery portion of the project may be considered.
2. In order to maintain continuity, the HOPE Nurse Educator should continue at Good Shepherd on a part-time basis to assist the faculty in improving the existing Nursing Assistant Program, with special emphasis on including community health, primary health care and limited birthing skills into the current curriculum. The Nurse Educator would spend the remainder of her time in supporting other HOPE nursing activities at the Nazarene College.
4. **Materials Management**

Background: Project HOPE support in pharmaceutical management began in February, 1985 and continued through February, 1986 during which time a Project HOPE Pharmacist Educator was placed at the Central Medical Stores in Matsapha. This was one year short of the projected two years of technical assistance to be provided. The goal of the program was to develop a materials management system that would provide effective inventory

control; improve security and efficiency of operation; reduce procurement costs; and establish a management training program that would provide qualified personnel to make the system work. This is outlined in detail in Dr. David Kuhl's program plan of April, 1985 which was approved and signed by the Permanent Secretary of the Ministry of Health on July 1, 1985.

Accomplishments included:

1. Successful move to a new Central Medical Stores
2. Design and maintenance of a new manual inventory control system in anticipation of computerization
3. Improved security procedures
4. Reinitiation of the Drug Supply Action Group and National Formulary Committee
5. Expired items inventoried and removed
6. Provision of monthly reports to MOH Statistics Unit on drug expenditures
7. Reassessment of essential drugs list for clinic nurses completed

Numerous obstacles to progress, primarily of a personnel nature in the Central Medical Stores and MOH, led to considerable frustration on the part of the Project HOPE Pharmacist Educator, who elected in February 1986 not to renew his contract for a second year. During the first year, these issues were brought to the attention of the MOH by Project HOPE and A.I.D., but were not addressed.

The issues included:

1. The lack of a Chief Pharmacist since 1982 to provide effective leadership and decision-making authority
2. Insubordination on the part of the accountant and storekeepers at CMS towards their Pharmacist supervisor
3. Failure of all CMS personnel to comply with security procedures
4. Lack of telex capability for making orders

Following discussions with the MOH and A.I.D., Project HOPE support for pharmaceutical management was put on hold at this point, though numerous options were explored. The MOH appointed a Commission of Enquiry at the time of Minister of Health Chief Shongwe, but there was no known action taken. In the meantime, Project HOPE included pharmaceutical management in the preparation of the Matching Grant for 1987-92 during mid-1986.

Project HOPE has maintained regular contact with the MOH concerning the status of this sector and has worked together with A.I.D. towards the resolution of the issues. In September, 1987, Project HOPE sent an external consultant, Milton Skolaut, former Chief Pharmacist at Duke University, for a two week site visit to assess the environment for HOPE's re-entry into pharmaceutical management.

His recommendations included:

1. The position of Chief Pharmacist, MOH, must be filled. At the time, the general impression was that there were no suitable or experienced candidates in the country.
2. That Project HOPE re-establish the program at the Central Medical Stores once this had been accomplished.
3. That the CMS was ready for and would benefit from computerization of the inventory system.
4. That a telex system needed to be installed to eliminate partial deliveries.

The report was presented to and discussed with the MOH and A.I.D.. Numerous follow-up discussions concerning reinitiation were held with the MOH by both Project HOPE and A.I.D. separately and together. In March, 1988, the Program Director conducted an evaluation of nursing prescribing practices in collaboration with the MOH and the Project HOPEC Project Clinic Management Advisor to assist in the development of a training program for clinic nurses. In March, 1989, Project HOPE submitted a Memorandum of Understanding to the MOH outlining the proposed steps to take for reinitiation. These steps (outlined in Attachment 2 of the Project HOPE written response to Mid-Term Evaluation Questions) called for the MOH to:

1. Appoint a Swaziland pharmacist to the position of Chief Pharmacist within the Ministry with the authority to carry out the implementation of a Nationwide Centralized Pharmaceutical and Materials Management System throughout Swaziland.
2. Assure the continuing appointment of a Pharmacist at the Central Medical Stores.

3. Identify the key counterparts with whom Project HOPE personnel will work in order to facilitate and assist with the establishment of a Nationwide Centralized Pharmaceutical and Materials Management System.
4. Secure the approval of all Swaziland officials necessary to fully support and implement a Nationwide Centralized Pharmaceutical and Materials Management System.

At the May, 1989 WHO Assembly Meeting in Geneva, the MOH and Project HOPE further discussed collaboration in the pharmaceutical sector.

Observations and Findings: The key finding of the evaluation team is that the conditions set forth in March 1989 have been essentially fulfilled and that a "positive environment" for reinitiation of this component has been created. The team recommends that reinitiation of the project be undertaken at once.

In February, 1990, the MOH appointed Mrs. Thulie Sibiya, Senior Pharmacist at CMS since 1987, as Chief Pharmacist in the MOH. She will move to Mbabane into new offices adjacent to the Public Health Unit and will be replaced at CMS by Ms. Emmina Madonsela, Pharmacist at Hlatikulu Government Hospital. The vacant post at the Government Hospital will be filled by a newly recruited Zambian Pharmacist who was being oriented at CMS during the period of the evaluation team's visit.

Recommendations made earlier have been implemented regarding manual inventory and purchasing systems.

Priorities have been established as follows: computerization of inventory, purchasing, distribution, and related systems at central stores and regional supply sites; development of approaches to quality control; staff training; and, revision of the Pharmacy Act of 1929.

Conclusions and Recommendations: The evaluation team visited the new central stores facility, observed its operations, and had lengthy discussion with the Chief Pharmacist. Based on these observations and discussions, and the high priority attached to this activity by both A.I.D./Swaziland and the Ministry of Health the team recommends the following:

- . Project HOPE proceed immediately to reactivate the materials management component of the matching grant project. Project HOPE and the MOH should jointly develop a revised program plan to serve as a guide for the provision of the agreed upon assistance to be provided.
- . A critical first step in the reinitiation process is to conduct a re-assessment of the current materials management situation. The team suggests consideration of a new

consultant to provide a "fresh look" at issues and problems. Moreover, to assure prompt action, the team urges Project HOPE to try to obtain consultant services from within the region. Further, the team recommends that Project HOPE, pending the outcome of the assessment, reconsider the original design which called for a long-term resident expatriate advisor. An effective alternative, given the different skills required to meet the materials management priorities, would be to utilize a planned and coordinated sequence of short-term specialist consultants (again, focussing on regionally available experts).

- . The team strongly recommends close collaboration and coordination with the MSH Primary Health Care Project in the development of the central materials management operation. The Primary Health Care Project has made important contributions to drug supply and management at the clinic level in all regions of the country and it is imperative that any new central systems are consistent with systems already in place in the field and draw on the extensive and successful experience of the Primary Health Care Project.
- . When the materials management component makes plans for the training priority, the team recommends close collaboration with MSH. MSH is highly regarded for its work in Drug Supply Management and Training. Their courses offered in Boston should be considered for key personnel. Alternatively, a cost-effective possibility would be to engage MSH to develop a customized in-country training program that would involve the entire Swaziland materials management team, including Chief and Assistant Chief Pharmacists and Central and Regional staff. Training of this type, in the pharmaceutical area (as well as in other sectors) is likely to be "certificate" training. It is important to obtain concurrence from Government education and training authorities for recognition of certificate training for career development purposes.
- . The proposed assessment called for above should address several issues related to the quality control component of the materials management program. The most important issue is the question of the need for an independent quality control laboratory in Swaziland. With less than 150 items on the current list of drugs, the cost-effectiveness of a laboratory in Swaziland must be compared with the use of regional laboratories established by the World Health Organization or private sector laboratories offering quality control services.

5. Traditional Healer Training

Background: Support for traditional healer training began in April 1989 in response to a request from the Traditional Healers Organization (THO) in November, 1988. Subsequently, Project HOPE and THO, in collaboration with the MOH, NGOs, and the community,

conducted seven training workshops between April to December, 1989 for more than 600 traditional healer participants.

The majority of Swazis utilize the services of the estimated 8000 traditional healers for the prevention and treatment of illnesses and for consultation concerning domestic and personal issues. Healers are readily accessible and available to both rural and urban populations. There is approximately 1 traditional healer for every 100 Swazis compared to a physician/population ratio of 1:10,000. The healer is able to explain an illness, event, or other issue in a manner that is culturally relevant to the Swazi traditional belief system. The population using traditional health care crosses all socioeconomic lines in the country. In addition to having credibility with the Swazi, through which positive health interventions could potentially be channeled, traditional healers also engage in numerous harmful practices which contribute to infant and child morbidity and mortality.

Though the MOH lacks a formal policy concerning collaboration with the traditional healers, they were supportive of these training sessions and peripheral workers participated fully in spite of numerous other demands on their time. The last formal training for the healers had been during 1984 under the CCCD project and the Health Education Unit, MOH with respect to control of diarrheal diseases. The traditional healer is included as a key figure in A.I.D./Swaziland's health program strategy statement for 1990 to 1995.

Numerous organizations participated in conduct of this project, including: Ministry of Health, Coordinating Assembly of NGOs, Health Education Unit, Raleigh Fitkin Memorial Hospital, Control of Diarrheal Diseases Program, Nazarene Nursing College, EPI, Emkhuzweni Health Center, Health Inspectorate, Good Shepherd Hospital, A.I.D.S Control Program, Family Life Association of Swaziland, Public Health Units, Ministry of Agriculture, Regional Health Management Teams, Ministry of Justice, Speech and Hearing Services, Judicial Commissioner, Central Medical Stores, Members of Parliament, Manzini Town Council, Tinkhundla.

Project HOPE and THO collaborated in contacting the appropriate institution or organization for planning the specific activity under the workshop agenda. Opening speeches were presented on behalf of the Minister of Health by the TB Control Officer, on behalf of the Minister of Agriculture by the Principal Secretary, and by the Minister of Justice. The protocol used was for THO to make the initial contact to the MOH Regional Health Management Teams (RHMT, the decentralized decision-making body at the regional level for health) requesting their participation followed by support to facilitators from Project HOPE in terms of preparation of presentations, logistics, and educational materials and equipment. Working through the RHMTs proved to be an effective approach, though regions were at different stages of development in the decentralization process. THO spent considerable time with the process of notification of local leadership and sending out messengers to notify the appropriate traditional healers.

Program Objectives: THO requested training of traditional healers in the following areas and Project HOPE had the following objectives, which are consistent with MOH policy, for providing this support:

PRIMARY HEALTH CARE

Objectives

1. To educate healers on the components of the MOH strategy
2. To examine ways in which the healers can be supportive of the MOH strategy

DIARRHEAL DISEASES, CONSTRUCTION, REFUSE PITS

Objectives

1. Practice prevention in terms of latrine construction, refuse pits and hand washing
2. Administration of ORT (SSS, home fluids, continued feeding)
3. Referral of severe cases
4. Reduction of harmful traditional practices

RESPIRATORY INFECTIONS

Objectives

1. Check immunization cards/refer
2. Home management of mild cases
3. Referral of significant ARI

IMMUNIZATIONS

Objectives

1. Check immunization cards/refer

2. Know the immunizable diseases

NUTRITION

Objectives

1. Check growth charts
2. Be able to identify a good, very good and dangerous growth curve/refer
3. Promote breastfeeding and sound infant feeding practices

STD/A.I.D.S

Objectives

1. Identify STDs and refer
2. Understand HIV transmission
3. Understand prevention of HIV transmission
4. Know how to use a condom

MODERN MEDICINE

Objectives

1. Understand how modern drugs are made
2. Discourage use of modern drugs by traditional healers

MODERN CLINIC

Objectives

1. To know the services that are available at the various levels of health facilities
2. Promote referral of patients to the clinic/hospital

In addition, THO made regular presentations to participants with the following implicit objectives:

THO

Objectives

1. To explain the organizational structure
2. To promote membership and registration
3. To recruit Traditional Healer Promoters of THO
4. To introduce THO Field Officers

TRADITIONAL CLINIC STRUCTURES

Objectives

1. To promote the upgrade of traditional clinic structures, including water storage and latrines
2. To standardize patient charges
3. To identify "specialists" for referral among healers

It should be noted that family planning was not included in the training program because of planned training from the Family Life Association of Swaziland for traditional healers.

Inputs and Outputs: Training materials included extracts from the Rural Health Motivator Training Manual (developed with support from UNICEF), Health Education Unit posters, individual presentations developed by facilitators, extracts from the MOH nutrition manual and other MOH publications, films, and materials provided by Project HOPE. These included slide sets from Teaching Aids At Low Cost, slide projector, and the growth chart flannelgraph, which had been purchased for Project HOPE's nursing educational programs. In addition, Project HOPE negotiated with counterpart institutions for traditional healers to tour their health institutions.

Each participant was provided with a folder containing largely pictorial information on nutrition, immunizations, SSS preparation, latrine construction, and a sample of referral cards developed by THO. Though some of the script was in English, it was THO's impression that somebody in the individual's homestead would be able to read it to the participant, which made it feasible to use existing materials.

Training methods used included: verbal presentations, folders, posters, slides, flannelgraphs and practical demonstrations.

During each 5 day session, traditional healers divided into discussion groups concerning questions put to them by modern health worker facilitators and THO. Out of these groups, workshop recommendations were formulated and included in the report. Role plays were conducted at the end of most workshops for participants to demonstrate what they had learned.

Time, financial, and personnel constraints precluded the conduct of an appropriate baseline survey of traditional healers with respect to the areas in which THO requested training. In addition, in the beginning Project HOPE did not yet have a trusting and working relationship established with THO on which to base such a request. A follow-up evaluation of traditional healers who participated in the training workshops is planned during the next phase of Project HOPE support for this sector.

Lessons learned from the initial phase include:

1. While THO does not have membership of all traditional healers in the country, it represents a viable organization with which to collaborate in order to reach this sector.
2. Traditional healers are accepting of preventive measures towards diarrheal disease control and the use of SSS.
3. Traditional healers are reluctant to accept ORS packets at this point because of uncertainty concerning contents and the lack of a reliable supply line.
4. Traditional healers are aware of Child Health Cards and will check them for nutritional and immunization status.
5. While they are willing to refer patients to modern clinics, they also expect modern clinics to refer patients to them.
6. THO promotes non-integration of traditional and modern health systems, though there are those who want integration.
7. THO has a potential supervisory mechanism through its Field Officers.
8. The majority of healers are not familiar with condoms, but are accepting and they could serve as a distribution point to reach the community in HIV/AIDS control.
9. Most do not understand the asymptomatic HIV carrier state.

10. Many feel because they have been treating infectious diseases that may occur in the patient with A.I.D.S, that they have therefore been treating A.I.D.S.
11. They are interested in alteration of traditional health care practices that may transmit HIV.

The proposed next phase would concentrate on training of THO Field Officers in supervision of traditional healers with respect to the training objectives of the first phase. The Field Officers are secondary school leavers, who are not themselves healers, but are daughters or other relatives of healers. THO would also use them to link traditional healers in the field with the organizational headquarters. THO has adequate conference and accommodation space at their headquarters for conducting regular training sessions for its membership. Project HOPE support would include technical assistance, training costs, and the provision of educational materials and equipment to THO.

Observations and Findings: The Traditional Healers component of the matching grant represents an important, innovative, and exciting strategy to target difficult to reach and high risk populations through an extensive network of trusted, accessible, and frequently used "private sector" practitioners. An estimated eighty percent of the population of Swaziland routinely seek the services offered by traditional healers. To date, this component has provided training to some six hundred healers on A.I.D.S and key child survival interventions including the use of ORT, immunization, referral, and basic sanitation and hygiene. The component proposes to expand to include other elements of Primary Health Care and Child Survival and to reach out to greater numbers of healers.

The evaluation team met with the President of the Traditional Healers Association, and one of the key trainers in the 1989 workshops. The evaluation of the workshops and the changes in traditional healer attitudes and practices following the workshops, while positive and enthusiastic, has been entirely anecdotal, e.g., upon completion of training, traditional healers referred so many clients to the hospitals that the hospitals were overloaded and had to request a cut back in referrals. However, data on numbers of referrals, conditions, and outcomes were not available.

The evaluation team concurs with the importance of the traditional healers component in the expansion of primary health care service delivery in Swaziland. The Project HOPE program has had a major impact on the Ministry of Health policy regarding traditional healers. The shift in policy represents recognition of the position of healers in society in general and their importance in the health sector in particular.

While the focus of future work with traditional healers is to equip them with the knowledge and skills needed to incorporate contemporary primary health care interventions in their practice, it also affords an excellent opportunity for a better understanding of traditional practices and may offer insights into useful approaches to influencing those practices known

to be harmful (e.g., withholding of fluids during periods of diarrhea, use of incense and intensive heat in enclosed spaces and in close proximity to sensitive body parts leading to severe burns and harmful smoke inhalation).

Conclusions and Recommendations:

1. The evaluation team strongly supports a continued and expanded involvement in training and collaboration with traditional healers through the THO (Traditional Healers Organization). Two critical areas of project management, however, must be carefully adapted to meet the unusual requirements of "doing business" with institutions such as the THO. These are project administration and evaluation.
2. With regard to administration, the challenge to Project HOPE is the development of innovative and adequate management systems to ensure that project activities are planned and implemented "properly." There is a strong oral tradition and intuitive approach in the THO's conduct of its affairs. Project HOPE, in its continued collaboration with this organization, must assume the burden of converting these modes of operation into the formats, reports, activity schedules that are assumed when dealing with mainstream organizations.
3. Similarly, the burden will be on Project HOPE to assume the responsibility for developing and carrying out adequate evaluation of the process and impact of this component. Systematic observations, using pretested checklists, should be developed to record post-training practices to determine the impact of training on practice. Where possible, comparative analyses should be carried out (e.g., pre and post training practices and trained vs. untrained healers).

C. FUTURE DIRECTIONS

Future directions concern the remaining two years of the current matching grant and the period in the future beyond the completion of the grant. For the final two years of the current grant, Project HOPE will be completing some activities according to plan, initiating some new and expanded activities, and setting the stage for future activities.

The Nursing Education programs at Nazarene and SIHS are to enter a period of evaluation and fine tuning of curriculum. The Nursing Assistant program at Good Shepherd is to enter a period of strengthening the existing program and reassessing the need for major changes. In all nursing education programs it will be important for Project Hope to try to meet demands for filling in faculty gaps to avoid losing the momentum of progress made to date. At the same time Project HOPE must firmly convey the message that filling gaps cannot go on indefinitely and that improved planning systems are needed. The Materials Management component will be re initiated shortly and the Traditional Healers activity is scheduled to continue in an expanded manner. As these components are implemented over the

remaining years of the matching grant it is increasingly important to build into them management systems and tools and evaluation designs and methods to improve their effectiveness and sustainability.

Along with the continuation of these activities over the next two years, Project HOPE should consider steps to assist in the resolution of some of the major issues noted in this report: the nursing shortage, the relationship between education and service, the appropriateness of the Kellogg initiative, the impact of the affiliation initiative, and coordination and integration of Project HOPE activities with the larger health system.

The following activities will be likely areas for continued programming following the completion of the matching grant: Biomedical Engineering, Materials Management, Traditional Healers, Continuing Education and In-service Training Programs in Nursing, Assistance to Good Shepherd in Nursing Assistant training, and consideration of assistance in the development of baccalaureate nursing programs. The initiation of any baccalaureate nursing program in Swaziland should have as its focus the preparation of nursing leaders with advanced skills in primary health care service delivery and health care management. In addition, care needs to be taken to design a program which meets the health care needs of Swaziland and the Region, rather than imposing a standard "Western" nursing model.

D. CROSS-CUTTING RECOMMENDATIONS

In addition to the conclusions and recommendations made for each of the matching grant components, a number of cross-cutting recommendations have been developed during the evaluation team's analysis and assessment. These recommendations are grouped under the headings of: Contextual Recommendations, Matching Grant Component Improvement Recommendations, and Management Recommendations.

1. Contextual Recommendation:

Project HOPE and the Nursing Tutor Shortage: Project HOPE should work with the MOH, other Government Ministries, professional associations, and international agencies to assist in the development of improved systems for long term planning related to human resources development and allocation. For the health sector worker shortages related to the practice of sending professionals abroad for extended periods, alternative approaches need to be explored such as evening and weekend courses taught by "administrators," use of retired professionals as working emeritus faculty, use of recent Community Health Nursing graduates as faculty tutors, distance learning, intensive programs, use of short certificate courses instead of longer degree programs, and developing some kind of university or consortium mechanism for in country education.

Project HOPE should work with GOS officials to reexamine the recognition of short certificate courses for career development purposes. At numerous times during site visits,

the suggestion that certificate courses would be appropriate was met with the observation that they were not recognized for professional advancement.

Project HOPE should assist the MOH and the individual training institutions to develop schedules to assure minimal conflict between program needs and training opportunities. Monitoring systems are needed to assure adherence to these schedules.

Project HOPE should collaborate in a reexamination of current salary and benefit packages in an effort to reduce the large numbers of trained nurses leaving Swaziland for more attractive opportunities in neighboring countries. The good derived from Project HOPE nursing education effort is diminished by the exodus of graduates.

Project HOPE and Coordination with Other Programs: Project HOPE should improve coordination with other actors, e.g., The Primary Health Care project (in relation nursing curricula and to the materials management component) and high level contacts with the Kellogg Foundation (in relation to the critical issues facing all of the nursing components).

Project HOPE and the Need for Better Links Between Education and Service Delivery: Project HOPE should initiate an effort to forge stronger links between its educational programs and the service delivery system in Swaziland. In the nursing components, efforts need to be made to bring the nurses who were not trained in the new curriculum "on board" through innovative approaches to continuing education and recognition of the contributions of these health workers to the education of new nurses. Also in the nursing components, curricula should be refined to reflect the progress made in the Primary Health Care program. Nurses should be prepared to work with the management information systems and drug supply systems developed for the Primary Health Care initiative. In the nursing assistant program, curriculum should be adjusted to reflect the changing roles of nursing assistants in the field.

Just as hospital, clinic, and field workers need to be informed and involved in the new approaches to nursing education, nurse educators must also get to the field and supervise their students on-site if these educators are to provide a relevant educational experience for nursing students. The separation of Nurse/Tutors and Nurses in Practice has strong historical roots and Project HOPE should seek to devise approaches to bring the two groups closer together.

Project HOPE should stimulate efforts to inform hospital administrators and physicians about the changes in nursing education. The evaluation team observed that new graduates were perceived as spending less time in patient care and more time on administrative matters. On probing, administrative matters turned out to be important applications of the new training program, such as accurate charting of patient care and extensive pre-discharge counseling.

2. Matching Grant Component Improvement Recommendations

Project HOPE and Matching Grant Component Management: Project HOPE should continue to assist in the development of approaches to improve management and use of simple management tools at matching grant project component levels. Management of the nursing programs would benefit greatly from use of tools such as simple formats for assigning faculty to courses, activity schedules that would flag important milestones and allow for appropriate lead time, and faculty training schedules that would facilitate dealing with projected shortages.

Project HOPE and Matching Grant Component Evaluation: Project HOPE should assure that evaluation design and evaluation methodology expertise is available to produce rigorous findings that will be useful for program documentation and program improvement. This is particularly important for the nursing components which are scheduled to begin "phaseover" activities in which evaluation is featured prominently. Evaluation approaches to date (the follow-up survey of graduates at Nazarene and the measures used to assess progress in all nursing programs) have been weak and largely lacking in useful quantitative and qualitative dimensions. Evaluation expertise from HOPE Center or from consultants should be sought.

Project HOPE and the Employment of Swazi Professional Staff: Project HOPE should consider increasing the participation of Swazi nationals in Project HOPE staff positions. Opportunities currently exist in the materials management, community health nursing, and the traditional healers programs. This would be an appropriate course of action during the closing phases of the matching grant to enhance the prospects for sustainability.

3. Management Recommendations

Project HOPE and Management and Development Training and Orientation for Staff: Project HOPE should consider additional preparation or qualifications for matching grant staff. While project staff are technically qualified to carry out their roles, the evaluation team noted gaps in preparation with respect to management and development skills. Given the important contextual issues noted throughout this report, the team recommends that technical staff be prepared through intensive short courses and workshops to meet the managerial, development, and Public Health issues that must be dealt with if progress and eventually success is to be achieved in technical areas. Project HOPE should also expand the hiring qualifications for technical staff to include management and development experience and training in Public Health.

Project HOPE and Centralization vs. Decentralization and Delegation: Project HOPE should reexamine the extent to which decision-making is centralized and consider greater decentralization and delegation of authority to the field and to Country Managers when in the field. In numerous instances, the evaluation team observed the need for project staff to refer to HOPE center for decisions. The team also observed that this produced the

image that project staff were functioning as "middle men" and were not empowered to act authoritatively and decisively.

Project Hope and Workloads for Program Directors, Country Managers, and Technical Directors: Project HOPE should undertake a reassessment of the current and likely future workloads of staff to assure that responsibilities can be carried out effectively. Of particular note are the workloads of two professional staff members involved in the Swaziland project. The Director of Nursing/Country Manager has a workload of 18 to 20 nursing projects in her role as Director of Nursing and an additional (sometimes overlapping) responsibility for four countries as country manager. Beyond this, she is often called upon to take the lead in preparing new proposals for funding. The Program Director, has also experienced increased responsibilities and expanded roles. Since his arrival in Swaziland he has undertaken new activities such as the BME, traditional healers, and HIV/AIDS projects in Swaziland and the Safe Motherhood, Child Survival, and HIV/AIDS initiatives in Malawi. These examples are not unusual in projects of this nature and in organizations such as Project HOPE; however, they need to be monitored carefully and periodically reviewed to assure staff effectiveness and to avoid staff "burnout."

Project HOPE and Professional Staff Issues: During the course of the site visit to Swaziland a number of issues were raised by the professional staff members assigned to the matching grant project. These issues are reported here as they were repeatedly raised by staff and Project HOPE is urged to consider approaches to improve the conditions which cause staff members concern. Orientation to Swaziland and to the matching grant project was uneven. Staff also noted the lack of a formal policy regarding such matters as sabbatical leaves for training, and procedures for continuing education and attendance at professional meetings. Staff were concerned about uneven practices such as free shipment of journal subscriptions for the Program Director but not for other professional staff members. Finally, the issue of overzealous time accounting was raised. Professional staff invariably work more than eight hours per day, five days per week and resent being asked to account for all time and being charged for leave when they had clearly put in excess time in carrying out their responsibilities.

Project HOPE and Local Staff Issues: Project HOPE should consider requests made by local staff during the evaluation team's visit. These included increasing staff benefits to the same level as A.I.D. local staff. Currently, matching grant local staff receive a thirteenth month salary as their only benefit. They would request consideration of health and educational benefits as well, in recognition of the uncertainty of a long term future with Project HOPE. Local staff also noted the recent pay raise given to all Ministry workers and requested consideration of a similar increase. The final item raised with respect to compensation packages was the question of loans and salary advances from Project HOPE.

Local staff also raised issues of additional training to improve job performance and to equip them for future advancement. Specific training was requested in computer applications (word processing and use of spread sheets) and vehicle and equipment maintenance.

Local staff have the impression that they were hired to work on the matching grant and expressed a desire to be remunerated for work they considered to be outside the scope of the grant, e.g., HIV/AIDS and various Malawi initiatives. Project HOPE should clarify the scope of work and assignments to local staff.

GRANT MANAGEMENT

I. SUMMARY

The Project HOPE staff manifest impressive strengths: they are serious, dedicated, hard-working, motivated, technically competent, receptive to evaluation, reflect good relations between the field and the Country and Technical Managers, conduct a very good financial management system and have good administrative support within HC through the use of Desk Officers.

Program management will improve with a state of the art system for project planning, control and evaluation coupled with a problem diagnosis approach that takes more account of the realities of developing country settings. There is already a good financial management system well integrated with project management. A sample internal audit of vouchers in the course of posting the general register may serve as a prudent check on expenditures. Fund raising increased revenues by 66% in 1989 over 1988 and helps to maintain an excellent cash flow for the entire operation.

Recommendations are made to improve the financial reporting system for use by the Program Office of A.I.D., to review whether Project HOPE is charging only 27% overhead for the A.I.D. contribution and to consider giving credit for gifts-in-kind since they represent 28% of the combined cash contributions of A.I.D. and Project HOPE. The significant variance in expenditures compared to budgeted amounts for Costa Rica, Belize and Honduras justifies Project HOPE's intent to re-program funds for the remaining years of the Grant.

Orientations for staff need more than one day at HC along with an Administrative Manual for the guidance of all. The Employee Handbook approved in May 1990 will help along with better orientation materials for adapting to life in foreign countries. An in-service training program will also help personnel increase their skills in development, institution building and management.

The persistent difficulties with supply to the field requires a review of all aspects of supply management, with rapid corrective action and an executive control system to monitor its responsiveness in the future. There is a special problem with support of BioMedical equipment that requires resolution either by assigning responsibility to the Supply Unit or contracting for the service.

Program Directors as the first line of supervision need upgrading in supervisory practice, management and office administration. As they gain in experience, they should be delegated increasing authority for planning, implementation and control of operations. As a support to them, install a red alert system assuring top management attention to their problems when normal channels are not sufficient.

With the objective of speeding up decision making at HC for field supervision, the leadership should define decision making rules, delegate as much de facto authority as possible to country managers, check for work and travel overload on some individuals, make more use of staff meetings and retreats to resolve problems and be aware of the need for behavioral adjustments in relations as well as procedural changes.

II. INTRODUCTION

A. Overview

This evaluation is the first one done by an outside group since 1983 when the Matching Grant was initiated. The scope of work for this evaluation includes a review of the management of the Grant by HOPE Center. Thus, in addition to a field review of 14 projects and their components, special attention was given to the array of management and support activities at headquarters.

Following a three day general briefing on the central management systems employed in the Grant, the team members visited the several sites of the projects and looked at the strengths and issues at the operational levels. From these came the specific observations which permitted the team to arrive at some general issues of management that involve the HC as well as the field. The surprise to the evaluators was the amazing convergence (over 90%) of findings in the three countries and 14 projects. These findings became the basis for the overall management presentation by the team in HOPE Center on May 18, 1990 and for the general issues summarized in this section of the Report.

Before dealing with the issues, it is useful to note the strengths of the organization since they are numerous and impressive.

B. Strengths

High Motivation

All personnel interviewed in the field and at headquarters are committed, dedicated, hardworking individuals who believe in what they are doing. Some are working 50 hours a week as a matter of course, some work 12 hours a day almost every day. In one country, a Coordinator no longer working for Project HOPE returned to check on her counterpart and to warn him to maintain his efforts in support of the project. Another Technician uses his spare time to help Hondurans repair hospital equipment in another city because he cares. In one country, the counterpart complained that the Coordinator was not working seriously; the man was fired and out of the country in one week. The counterpart was invited to HC to help select the replacement.

The interest and personal effort is a sign that the staff believe in the vision and mission of the organization -- help to others -- and are willing to sacrifice for it beyond the call of the

position description or the remuneration. Employees are not paid for overtime but they work these long hours anyway. This motivation is a main strength of the organization and helps Project HOPE to do far more with much less.

Technical Competence

Every staff member interviewed was technically competent in his or her field. They had the necessary education, training and experience for their work. They were respected by their counterparts and sought after for much more than was required of them in the project. For example, the Bio Med equipment Technician in Honduras is requested by the Ministry of Health to help with repairs even though that component of the project is no longer active. The Technician for audio-visual materials in Honduras was frequently requested by faculty of the University for coaching and classes on how to make and use audio-visuals in their respective classes. In Swaziland, the Project HOPE staff in all components of the program were sought out for advice by their counterparts and other members of the professional community. The Project HOPE Nurse Educators in Swaziland were asked to assist with revisions of the nurse practice act and the development of national nursing registration examinations. The Project Director, a pediatrician provides medical services on his own time at a hospital in Manzini.

Rapid Response to Opportunity

As opportunities arise for improvement, changes or new activities, the staff respond with alacrity. In Costa Rica, as the respiratory therapy program completes the two year program at the University, efforts were already underway to develop a four year program. In Honduras, as activities in support of the Ministry become more difficult, the staff found a private sector training organization (INFOP) as a base to provide training for repair of biomed equipment. In Swaziland, there was a rapid start of the traditional healers activity because of the enthusiastic response by the Country Manager and other HC staff to the initiative of the Program Director.

Receptivity to Evaluation

There was a surprising welcome to this evaluation team at every level of the organization. There was a sincere and genuine desire to benefit from an objective examination of what they are doing. It has been said that two common lies by the subjects of evaluation are: we're glad you came and we're sad you are leaving. The evaluators and their counterparts in Project HOPE got along so well that they were integral to the evaluation. One test of this receptivity was the amount of time given to it as well as the cooperation and candidness of the Project HOPE staff. It was common to have working breakfasts, lunches, dinners and after dinner work sessions, plus Saturdays. In Swaziland, the Project HOPE staff prepared an extensive briefing document that contained the history and progress of each of the program components. This effort greatly facilitated the evaluation process. This receptivity

program components. This effort greatly facilitated the evaluation process. This receptivity is a signal of remarkable personal and organizational maturity.

Supportive Country & Technical Managers

Elsewhere in this Report mention is made of the lack of response to many of the requests from the field but there was almost unanimous high regard by the field staff of the particular country and technical managers with whom they worked. This was true of Dr. Wilhelm, Dr. Weed, Dr. Brye and Dr. Edwards. Swaziland staff indicated a unanimous desire for more frequent visits from the Country Manager. The staff looked upon these persons as helpful and understanding.

Good Financial Management

In no country did the evaluators find that funding was slow or inadequate. Cash flow is not a problem for Project HOPE. Part of this is due to the excellent budgeting, financial management and the expanding donor base which is diversified so that no single donor variation can cause serious fluctuations in operations.

Desk Officer System

The introduction of desk officers to help relieve managers from the many time-consuming administrative chores has been most helpful to an overworked central staff. With the possible addition of two more desk officers, there is the likelihood that there will be more relief for both the field and the headquarters. We observed that coordination and communication among the desk officers and the managers is very good and constructive.

C. Areas of Improvement

Despite the considerable strengths referred to above, a number of areas for potential improvement were identified during this evaluation. These include project planning, project control, project evaluation, budget structure, post-audits, personnel orientation, in-service training, supply management, role definitions, delegation and communication. Each of these areas are discussed in the following sections together with recommendations.

III. PROJECT MANAGEMENT

A. Planning

i. A Systems View

There is a pattern to the difficulties confronted by Project HOPE in many of its projects. Consider: in Costa Rica the major constraint is the lack of jobs for the faculty and the graduates of the RT training; in Honduras the Ministry of Health project for BME repair fell because of the lack of funds, parts and counterparts; the same is happening in the Hospital Escuela; the INFOP may not be feasible if there is insufficient demand for student training; the Learning Resources Center assumed that the key problem was the lack of audio-visual materials without determining if that was the real need versus an instructional system. In each case, there is apparent a failure to consider the real life constraints of working in underdeveloped countries, particularly the public sectors.

The problem analyses that precede the selection of objectives have a technical focus--e.g. need for training and equipment--overlooking the interdependence of other factors such as those mentioned in the above paragraph. The consequence is predictable--infeasible or failed projects. The problem is not caused by Project HOPE nor is it always the counterpart organization but the constraint is nonetheless fatal. For example, in Costa Rica and Honduras the culprits are often the scarcity of foreign exchange, the nonresponsive procurement systems of central procurement agencies above the Ministry of Health, the freeze on jobs and the cutbacks on budgets. But since these factors are common knowledge in those countries, why would anyone be surprised to find them impeding Project HOPE projects?

There is some explanation for overlooking these factors if the organization is new, but what could explain a repeated failure to recognize these constraints? In Honduras, the BME experience with the MSP was painful yet the project turned immediately to a member hospital of the same Ministry only to find the same syndrome. Until this evaluation, it was the consensus of the Country Manager and Technical Coordinator that the help should continue--with no lesson learned from the MSP.

A systems view helps in considering all the relevant factors that must be present for a project to succeed--some of them beyond the control of Project HOPE or its counterpart. The administrative, financial and political context is usually the source of most project failures and not the technology. Here are common conditions confronted in public sectors of developing countries and factors which must be considered:

- . economic and foreign exchange scarcity, even crisis.
- . budget and job scarcity, even freezes.
- . low salaries, poor supervision, and low morale.
- . inadequate support, facilities, supplies and procurement.

- . poor coordination and communication among agencies or offices.
- . little attention to prevention or maintenance of anything.
- . differences about the value of time, agreements, commitments, productivity, efficiency and deadlines.
- . orientation to one's functions rather than results or service to the public.
- . political change and instability in leadership resulting in turmoil and turnover of counterparts.
- . short time frame since the future is uncertain.
- . lack of planning and vision about impact of change.

A new procedure should be adopted for project design, one that uses a wider mental lens and that permits learning more quickly from experience. Project HOPE emphasizes the technical expertise in planning but overlooks a discipline that specializes in development-development management. When appropriate, include persons with such backgrounds to assist in the early, formative and delicate stage of project design. Some of the suggestions for an improved planning process follow.

2. New Guidance

Project HOPE is essentially a project management organization in that its unit of management is the project. Its very name contains the concept. Yet it is strange that it has no written guidance on project preparation. The last guidance was contained in an Administrative Manual suspended in 1980 pending revision. It has not yet been revised. That means that old and new staff are given samples of previously written projects and told to use it as a model. Moreover the inadequacies of the 1980 version are carried into current practice via the samples that are used. Project HOPE explains that they went through a cycle in the 1970's in which great emphasis was placed upon thorough project plans but that there was at times resistance from technicians who balked at writing objectives and methodologies and indicators, etc. Meanwhile, Project HOPE has been revising its policies, has issued the Employee Manual and has not yet gotten to the Project Planning Guidance.

There is a need for a new project management system that takes advantage of the current state of the art in planning development projects. It is urged that such a system be available as soon as possible incorporating the following suggestions.

- . expand the problem analysis to take into account the economic, political, administrative and institutional context of the project. Require that a broad systems view be taken when defining the problem.
- . identify the critical negative factors that could stop the project and arrange for monitoring those factors.
- . consider the host capacity to support the project and the likelihood that it can sustain it after the project terminates.
- . identify the baseline condition of the beneficiary group and develop the impact indicators and process to gather data on the impact of the project.

- . define and train personnel in the proper statement of objectives, activities and indicators.
- . simplify and reduce the number of objectives to those manageable within the time and resource constraints.
- . spell out the arrangement for the management of the project by the host and by Project HOPE.
- . consider cost effectiveness of the alternative options.
- . schedule the activities (called "methodologies" by Project HOPE).
- . require that the counterpart agencies participate in the planning and commit themselves in writing to the project.

Recommendations:

1. A new system should be developed, tested and written incorporating recent state of the art project management technique and nomenclature.
2. The new planning process and format should attempt to remedy the several weaknesses noted in this evaluation, e.g., realistic appraisal of developing country contexts, better diagnosis of the problem, clear management arrangements with host agencies, scheduling, impact considerations, cost considerations, and host commitment. Where appropriate, include specialists in development management and public health in the design team.
3. The planning process should be installed, employees trained in its use and provision made to maintain it up to date.

B. Project Control

1. Findings

The term "project control" refers to several functions during the implementation phase of projects: reporting from the project level to higher echelons, identification of progress and problems, decisions to take remedial action. The review of the field projects reveals several areas of concern.

- . many problems reported by Coordinators do not spark the necessary remedial actions at the level of the Program Director or at the Country and Technical Manager levels. The experience with the Costa Rica RT project, the CENEMA and Hospital Escuela project in Honduras indicates long drawn out difficulties with no resolution.
- . the difficulty with the MSP over CENAMA followed by a repeat performance with the Hospital Escuela was not caught by the headquarters control process lack of attention to past experience.

- . supply problems persist with delays lasting many months or years and no resolution.
- . requests for action are not acted upon in reasonable time as in the request for approval of an extension of an agreement with INFOP which took almost 12 months to change one word.
- . the field staff report that relatively minor items are resolved speedily by Country managers but most questions are referred upward in HC and answers are delayed. The problem here involves delegation, decision rules, workload of the headquarter staff as well as the control system.

2. Recommendations

- a) The Project Planning system referred to should also deal with the Control process incorporating the following features:
 - . design of reporting formats to tie in with the milestone events and schedules called for in the planning format.
 - . definition of the monitoring responsibilities at each level of the review chain--Program Director, Country Manager, Technical Manager, Regional Director and Vice Presidents. One Program Director reported that he did not realize that he was more than a transmission belt for Coordinator reports and that he could add his own judgments about progress, problems and proposed remedies.
 - . definition of what can be decided at each level of the review chain and delegation of that authority to those persons. This is necessary to unplug the decision making and speed up response to the field.
 - . establish an action document control process so that field requests for decisions are tracked and all responses delayed beyond a certain time come up for review at the proper level of the organization. The procedure is alleged to exist but this evaluation indicates it is not functioning well enough.
 - . establish standards for reasonable time periods to respond to field requests and use these as controls in monitoring headquarter actions.
- b) Develop, test and eventually write a procedure for project reporting, monitoring and control. If helpful, engage expert technical assistance in the design of this system.
- c) To speed up HC responses to field problems and requests, identify authority at each level of the organization for action--i.e. the Program Director, and each HC level up to the President. Delegate this authority not only on paper but in reality.

- d) Establish an action document control system with standards for response time. Most important, enforce the standards.
- e) Train personnel in the procedure and assign the responsibility to maintain the system.

C. Evaluation

1. Frequency

It was observed in each country and project reviewed that evaluation is generally absent. The only evaluations conducted are those required by the Matching Grant and these are scheduled at mid point or about 2.5 years in the cycle and at the end of the Grant. In this particular Grant, the previous evaluation occurred at mid point of Phase 1 in 1986 and now at mid point of Phase 2 in 1990 but no evaluation occurred at the end of Phase 1.

The Grant is of such proportion, namely fourteen projects or components in three countries (not counting other projects terminated in Belize and Haiti) that an overall evaluation is a major project in itself as this report manifests. Moreover, some components were completed making it difficult to locate files and departed technicians while some components have not been examined in several years. Generally, the organization benefits from evaluations during mid point in a project since it helps to make corrections while there is time. End point evaluations help more as sources of lessons learned for the benefit of future designs.

Evaluations may be staggered to take advantage of site visits by HC managers. These internal evaluations provide the opportunity to examine projects in process and deal with issues while corrections can be made. Some complex projects of longer duration could utilize a combination of external and internal evaluators at some mid-point in the project cycle. Simpler projects such as the Continuing Education Project and the Laboratory Science Project in Honduras could be evaluated at time of termination again by internal or external evaluators. The formal external evaluation required by the Grant could then simply serve as a wrap up with sample observations of those evaluations already completed and more intensive review of those that are ongoing or more difficult.

Recommendation:

A.I.D. and Project HOPE should consider the staggering of evaluations according to the project length and complexity using combinations of internal and external evaluators. The formal external evaluations for the Grant would then build upon those evaluations and focus more on issues or projects in need of an evaluation.

2. Need

The interest in evaluation expressed by Project HOPE personnel and the receptivity to it is a sign of professionalism. Good professional practice requires learning from experience, seeking excellence and objective answers to the question: what can we do better? The previous Administrative Manual suspended in 1980 did not deal with evaluation. The new program management system define a procedure for internal evaluations. Again, external help from specialists in this field can assist both in the design of the system and in training personnel.

Evaluation should be done by the field coordinators for their own work, by Program Directors and by headquarters personnel particularly the Country and Technical Managers. This is already happening in the form of site visits and could easily be improved with some basic concepts, methods and training. When evaluation is seen as learning, then it follows that the persons who should benefit from it are the Project HOPE personnel themselves and not the external evaluators.

Recommendations:

1. The program management system should include guidance for internal evaluation done by Project HOPE personnel. It would be helpful to obtain help from specialists in the design of the system.
2. The system should specify a program of evaluation for projects along with procedures, methods and follow-up actions on the recommendations.
3. Personnel should be trained in the procedure and someone assigned responsibility for maintenance of the process. Presently one professional is named to coordinate Evaluations but these appear to be external evaluations rather than internal.

IV. FINANCIAL MANAGEMENT

A. Expenditures

The matching grant budget for A.I.D. and Project HOPE, shown in Table 1, reflects a total of \$5.5 million over a five year period, shared equally on program elements and procurement but with a greater share borne by Project HOPE for indirect costs. In addition, A.I.D. provided \$85,000 for project evaluation.

**TABLE 1
COMBINED FIVE YEAR BUDGET**

	PROJECT		
	A.I.D.	HOPE	COMBINED
Programs	1,693,548	1,693,548	3,387,090
Procurement	416,575	416,575	883,151
Evaluation	85,000	0	85,000
Indirect Costs	<u>389,877</u>	<u>827,993</u>	<u>1,217,870</u>
Totals	2,585,000	2,938,111	5,523,111

Expenditures for the period June 1987 to February 28, 1990 reflect a considerable range of expense rates for the various country programs. See Table 2. The Belize program did not plan to expend any funds until the fourth year but in the meanwhile the host country has proceeded with another agency so that the budgeted funds are awaiting possible reprogramming to Costa Rica. The Costa Rican program originally assumed the cost for only one resident technician but actually went to three persons at its height. Moreover, that program was planned for only three years and may now extend beyond June 1990 for one or more years.

The Haiti increase over the estimate was caused by the need for a long-term person instead of the short-term person. Honduras expenditures were affected by phasing over the Laboratory Project in year 2 instead of year 5 and the Learning Resources Center was phased over in year 3 instead of year 5.

**TABLE 2
COMBINED FIVE YEAR BUDGET**

PROGRAMS	BUDGET	EXPENDED
	1987-92	June 1987-90
Belize	141,083	0
Costa Rica	192,718	492,115
Haiti	8,920	39,645
Honduras	1,654,164	720,639
Swaziland	1,390,205	739,997
Procurement	883,151	384,454
Evaluation	85,000	1,381
Indirect Costs	<u>1,217,870</u>	<u>652,806</u>
Totals	5,523,111	3,031,037

Even if the funds for Belize are transferred to Costa Rica they will not be sufficient to cover the approximate \$300,000 spent over the budgeted amount for Costa Rica. Thus, funds will have to be transferred from other programs such as the Honduran program to cover spending over the budgeted amounts in Costa Rica and Haiti. Given the program adjustments suggested in this report plus the early phase-overs, funds may be available from the Honduran program.

B. Overhead Rates

The rate for indirect costs is 54.4% of personnel costs but there is only a 27.4% rate applied to the personnel costs of the A.I.D. share versus a 58.3% proportion for the Project HOPE share. See Table 3. The HC staff explain that a decision was made to overmatch A.I.D. funds in order to execute the programs in a quality manner. This overmatch does not explain why an approved rate of 54.4% was not applied to the A.I.D. portion. In the interests of fairness, both Project HOPE and A.I.D. may wish to review this practice in their budgeting. The current practice may result in an underfunding for Project Hope.

TABLE 3

	A.I.D.	HOPE
Direct Program Costs:		
Personnel	1,420,669	1,420,664
Other direct costs	689,454	689,454
Evaluation	85,000	0
Indirect Costs	<u>389,877</u>	<u>827,993</u>
	2,585,000	2,938,111

Recommendation: Despite an approved overhead rate of 54.4%, Project HOPE is charging only 27.4% to the A.I.D. contribution. This practice should be reviewed to determine its accuracy.

C. Budget Structure

The budget structure used for reporting to A.I.D. was stipulated in the Grant Agreement. See Table 1. Note that the structure is a combination of country budgets with procurement broken out along with evaluation and indirect costs. The reporting structure may serve the needs of the contract and financial office but it does not well serve the needs of program review. For the latter purpose, it would be preferable to show budget and expenditures by project, by country with procurement shown as an integral part of each project so as to provide sufficient detail to follow program trends. The proposed budget structure would still

break out evaluation and indirect costs. The suggested approach is illustrated in Table 4 below.

**TABLE 4
PROPOSED FINANCIAL REPORTING FORMAT**

	Cumulative To Date	
	Budget	Expended
Country Program I	xx	xx
Project A.	(y)	(y)
Project B.	(y)	(y)
Country Program II	xxx	xxx
Project A., etc.	(yy)	(yy)
Evaluation	zzz	zzz
Indirect Costs	<u>www</u>	<u>www</u>
 Totals	 0000	 0000

Recommendation: A.I.D. and Project HOPE should consider adopting more of a program budget structure for financial reporting to the A.I.D. program office in order to convey more meaningful financial progress reports. The proposed format could be used in addition to the existing reporting structure since they serve different purposes.

D. Gifts in Kind

Project Hope provides a significant amount of resources in the form of gifts in kind from donors. These gifts may include books, equipments, parts, medicines, medical supplies, services, etc. During the period from June 1987 to Feb. 1990, Project HOPE provided an additional \$846,743 of gifts-in-kind. See Table 5.

**TABLE 5
EXPENDITURES 1987-FEB.1990**

A.I.D. Matching Grant	1,365,017
Private Cash	1,577,433
Host Cash	<u>88,587</u>
 Total Cash Expenditures	 3,031,037
 GIK Private	 846,743
Host GIK	<u>236,203</u>
 Total Expenditures	 4,113,983

These gifts represent an additional 27.9% of the total cash expenditures during that period. A.I.D. policy excludes counting such gifts as part of the matching funds provided by the PVO yet these resources represent bona fide efforts by Project HOPE to solicit, review, transport and distribute these gifts. The A.I.D. policy is said to be based upon skepticism about the true value of the gifts in kind. Nonetheless, our evaluation indicated that the materials--whether books or equipments, etc.--were donated to recipients and that they are bona fide, usable resources of consequence to the project's success. A fair middle ground may satisfy both A.I.D. and Project HOPE if the gifts are credited as a matching resource subject to post audits to verify that the gift is the value represented and that it is in working order--if it is equipment. The post audits can be part of periodic evaluations or be a part of any other objectively verifiable post audit performed by an independent party. Where these audits indicate that the gifts are not as valued by Project HOPE, their value would be disallowed as part of the matching grant resulting in Project HOPE bearing the cost of the transport and distribution.

Recommendation. Gifts-in-Kind which represent as much as 28% of the combined cash provided by A.I.D. and Project HOPE should be counted as part of the matching grant resources from Project HOPE provided that independent post-audits verify the true value of the gifts. Where such gifts are not the value represented, that part of the value will be disallowed and Project HOPE will bear the cost of transporting and distributing such gifts.

E. Budget Process

The HC has a well planned and executed budget process. The planning begins in January of each year with a call to field offices to present their requirements for the fiscal year beginning in July. The country program needs are presented as requirements in physical terms without costing. The International Division at HOPE Cente does cost estimates and studies the plans in concert with Country and Technical Managers, Regional Directors and Desk Officers under the coordination of the Director of Program Administration. Recommendations are submitted by the Vice President, International to the Vice President, Operations, and then to the Budget Committee. The final review and approval is by the Board of Directors.

The process is assisted by a very good accounting base which is computerized to facilitate a detailed review and consolidation according to project, country, funding source and type of cost. Once approved, the budget triggers several implementing actions including recruitment, funding of field programs, purchasing, supply, fund raising, etc. The US dollar payments to field staff for salaries, benefits, etc., is done centrally from HC while local currency expenditures are handled via an imprest fund by each Program Director. As country funding needs are communicated to HC, the funds can be sent within 24 hours thus assuring cash flow without interruption. No delays in payments were reported by field personnel either for dollar payment or for local currency payments. The disbursement system is working well. A.I.D. is accurate and timely in reimbursing Project HOPE and no problems are reported in the cash flow to Project HOPE.

During the execution phase, the budget is reviewed quarterly, analyzed for variances and coordinated among the various Country Managers and Program Administration. Where necessary the budget is changed or the program modified. There is close coordination between the Program Administration Branch which coordinates the project budgeting and control and the various Country and Technical Managers. The financial management system is more evolved than the program management system but despite this the funding process does not seem to predominate over program decision making. A balance is maintained between program and financial considerations.

F. Fiscal Control

1. Audits

An audit is conducted every two years, the minimum period required by OMB regulations. There was an external audit for the period ending June 1989 but the report is delayed almost one year and was not available for review in this evaluation. It is noted that field expenditures are reported to HC and that there is no sample post audit of any expenditures. Since there is a two-year wait for external audits, it would be prudent to make a sample audit of the incoming vouchers in the form of a post audit by HC. One possibility is for the accountants posting the general register to scan the vouchers as they come in for conformance to regulations.

Recommendation. HC should undertake a sample post audit of vouchers sent in to Accounting as an internal check on the propriety of expenditures under the Grant.

2. Overhead

The overhead rate charged by HC is 54% of the base salaries. Overhead rates are audited by an independent agency and are negotiated with A.I.D. so that the rate is not properly a part of this evaluation. Nonetheless, it was noted in the review that the overhead rate is considerably above that charged by other PVO's; however this could be because of the way it is calculated. The Vice President for Finance said that the rate is under review and consideration is being given to broaden the base by including salaries for consultants.

G. Fund Raising

The HC has a Development Office of 12 persons devoted to fund raising year round. The Office has a well rounded, dynamic and successful program. Total revenues for the entire organization went from \$33.4 million in fiscal year 1988 to \$53.2 million in fiscal year 1989. Of that amount, the predominant share was from the private sector--\$39.4 million or 74%. The US Government grants and contracts amounted to \$12.2 million or 22.9%. At the direction of the Board of Directors, Project HOPE has accumulated a fund designated to

function as an endowment fund, of \$7 million from its own revenues. For fiscal year 1989 Project HOPE realized an excess of revenue of expenses of \$420,000.

This impressive performance is based upon a diversified base of supporters. Corporate donors provide both cash donations and gifts-in-kind. Direct marketing programs, including direct mail campaigns of more than 6 million pieces per year and outbound telemarketing to lapsed donors, provide a consistent revenue base while acquiring new donors. Currently, Project HOPE enjoys support from approximately 150,000 loyal active House List donors. The HOPE News is issued quarterly to nearly 150,000 persons and generates contributions of more than \$50,000 per year. Project HOPE also receives support from foundations, groups and volunteer committees, special events, International Service Agencies, miscellaneous mail, planned giving and bequests.

As an example of the continuous effort to organize support, the alumni of Project HOPE have periodic meetings and their Board of Directors were meeting while this evaluation was underway. We learned of it because the Board was at our breakfast table one morning.

V. ADMINISTRATION

A. Personnel

1. Selection and Orientation.

The orientation for new employees is normally planned for a duration of one day at HOPE Center and about one week for Program Directors. There was a general view among Coordinators that the HC orientation of one day was insufficient to give them a grounding on how to work with the various systems such as supply and insufficient regarding the country of assignment. The latter aspect caused several difficulties: one individual said that what little he was given to read regarding his country presented only favorable aspects so that he was totally unprepared for the less pleasant aspects. Another person said that she was given no information about the country and also incorrect information as to what she could bring in terms of electronic items (for example TV). Persons were unprepared for the fact that rental of an apartment does not include the appliances we expect in the US such as refrigerator and stove so these became expensive add-ons to the cost of living.

There was no Employee Handbook that explains the policies regarding benefits, leave, pay procedures, performance evaluation and services available. A Handbook was approved for release on May 18, 1990 which deals with this basic information but during the period being evaluated there was no such guidance. The absence of this information did produce problems. In one country or example a recently arrived technician asked for transportation to the various offices he had to deal with and was told by the Program Director that it was not allowed. The technician said the Personnel Office told him it was allowed so the

Program Director checked with HC and found that the technician was right and he was misinformed. Meanwhile, the other technicians at post had been told by the Program Director that transportation was not allowed and were now understandably miffed at the fact that one of them had transport but they did not. The lack of written guidelines and the insufficient orientation of the Program Director was the direct cause of this friction among the staff.

One Program Director was transferred from one country to another and had only one day orientation. He had never heard nor seen the Administrative Guidelines which were suspended in 1980 and it was only by chance that one day he found a copy in the bookshelf of his office. This superseded guidance was all that was available to him. No wonder then that problems have arisen in administering programs and personnel. Along with the Program Manual there is needed an Administrative Manual for the guidance of all staff. This also should be issued as soon as possible. Program Directors should be given enough orientation time at HC to familiarize themselves with basic systems, the new Program Manual and Administrative Manual to be prepared.

The orientation in country for technicians has obviously been deficient on the administrative side for lack of any written guidance. Now that it is available in partial form in the Employee Handbook it should be distributed to all current employees and made available to new personnel. On the aspect of living conditions, A.I.D. has excellent Post Reports that provide personnel with the necessary information to prepare for life in a particular country. These Post Reports or their equivalent should be standard hand-outs for each country assignment.

The program orientation has been of varied quality depending on country and circumstance. In Costa Rica, the technician had a good overlap with the previous Coordinator and was well briefed. In Honduras, one technician had good background briefing but little guidance for the first six months. Another technician was briefed by his predecessor but it was done poorly because the predecessor was disaffected. The international development experience has proven that the orientation and supervisory guidance for the first six months of a technician's entry to a country are crucial to the success of the venture. This emphasizes the importance of both orientation and guidance during this critical early period. Program Directors should be told how to handle this orientation since they will bear the responsibility for this phase of the process.

Recommendations:

- 1) Orientations of technicians should provide adequate time to learn how to interface with HC's various systems such as supply, program planning, reporting etc. There should be reading materials (accurate, realistic and relevant) describing the living conditions they will face and what they should take with them.

- 2) Orientation of Program Directors should provide sufficient time to become familiar with the HC systems and to train them on the new procedures for program management and administrative management. They should be advised on how to discharge their responsibility for in-country orientation and guidance of new employees.
- 3) An Administrative Manual should be issued as soon as possible for the guidance of all staff, particularly the foreign staff of Project HOPE. Part of the orientation of Program Directors should be a review of this document.

2. Professional Development

During the 1970's, Project HOPE had a person responsible for maintaining the program planning system and training newcomers in the procedure. This stopped by 1980 when the Administrative Manual was suspended. One of the urgent measures needed after the new procedures are developed (program and administrative management systems) is systematic in-service training for employees to upgrade the quality of both functions.

Presently, there is no continuing education for the staff although Project HOPE is an enthusiastic supporter of such education for its client organizations. The only instance that has come to our attention is an educational sabbatical for a nurse educator in Swaziland to complete a masters degree in Health Education. The Project HOPE personnel are excellent technicians but there is more to development than a given technology. The evaluation team noted gaps in staff preparation regarding management and development skills. Personnel could be assisted by intensive short courses and workshops on the developmental process, the process of institution building, the art of project planning, modern techniques of evaluation, the art of transcultural assistance and technology transfer, the public health framework for Project HOPE projects, etc. The Washington area is a particularly rich area for resource persons in these topics and it should be easy to find specialists who can provide workshops, seminars and technical assistance on these topics. Project HOPE should also expand the hiring qualifications for technical staff to include management and development experience and training in public health.

Recommendation:

There should be an active professional development program to upgrade the quality of program and administrative activities coupled with periodic workshops on topics such as the public health framework of Project HOPE projects, institution building, sustainability, technology transfer, etc.

3. Compensatory Time

As noted earlier in this Report, the personnel of Project HOPE work long hours as a matter of course. Some routinely put in 50 hours a week, some much more. No overtime is paid so that the professionals are doing this work because they want to do a good job. The present time reporting procedure requires each person to state the number of hours worked per day. Thus if a person takes an afternoon off to compensate for having worked an extra day or extra long hours the night before, the person's pay is reduced for the hours not worked that one afternoon. The Employee Manual is silent on the matter of compensatory time and yet it should be permitted especially for persons in overseas jobs that entail recurrent overtime. Field staff resent being charged for leave when they put in overtime on their jobs.

Recommendation:

Employees should be permitted to have compensatory time without reduction in pay when their duties require frequent work beyond the normal work day.

4. Local Staff

There are opportunities to increase the participation of local national staff in Project HOPE activities. In Swaziland, there are opportunities in materials management, community health nursing and the traditional healers program. There is a significant burden on the Coordinators to follow up on administrative and supply matters, sometimes requiring a considerable amount of time to track the status of supplies not received. Just as the HC has found it efficient to establish administrative positions, so it may be more efficient to assign administrative support functions to local nationals in Project HOPE field offices to permit the technical staff more time for their duties. Because of relatively low salaries, the increased utilization of nationals may also help to reduce costs.

Recommendation:

Increased utilization of local nationals in Project HOPE field offices will help reduce costs, provide administrative support for professionals and may help provide training for local staff who can help sustain programs after technicians depart.

The Project HOPE local staff noted several concerns regarding their needs. They requested increasing their benefits to the same level as A.I.D. local staff. Currently, local staff receive a thirteenth month salary as their only benefit. They request consideration of health and educational benefits as well in recognition of the uncertainty of a long term future with Project HOPE. In Swaziland, the local staff noted the recent pay increase for the Ministry and requested a similar increase. They also wish consideration of loan and salary advances

for locals. In Central America, the 100% devaluation of the local currency has led the local staff to request consideration of maintaining their salaries on the dollar equivalent basis.

Local staff also raised questions about additional training to improve job performance and to prepare them for advancement. Specific training was requested in topics such as computer applications and vehicle and equipment maintenance. The Swaziland staff have the impression they were hired to work on the matching grant and expressed the desire to be paid for work they consider to be outside the scope of the grant, e.g. HIV/AIDS and Malawi initiatives. Project Hope should clarify the scope of work and assignments for the local staff.

B. Supply

1. Case Study

The issue of late supply came up in every country and project where supply was an input to the project. To obtain a clearer definition of the problem, several examples of the delays were recorded. Following is the record of late supplies for the Learning Resources Center Project in Honduras which required several equipments and parts for the Audio-Visual Production unit being established at the University of Honduras.

Date	Memo to HC	Items not Received
July 1986	Status request	10
Nov. 1986	Status request	29
Feb. 1987	Status request	7
Aug. 1987	Wrong lens	1
Oct. 1987	Status of Mar. 1986 request	6
July 1988	Status request	15
Nov. 1988	Status request	6
Jun. 1989	Resubmit request Nov. 1988	6
Dec. 1989	Status request	13

Please note that the problem endured over a 2.5 year period, certainly not a transitory issue. The number of items is significant--up to 29 items involved in one instance.

For another set of examples, please refer to the supply section of the report on Costa Rica.

In the case of the BME project in Honduras the supply problem was aggravated by the technical nature of the equipments and problems. The equipments often need parts from the original suppliers or manufacturers who in turn need precise nomenclature and stock number before they can give price and availability. For some items, the staff in Honduras

number before they can give price and availability. For some items, the staff in Honduras needs someone in the US to provide this information or to find it. This is especially the case where service manuals may not be available, or when the manuals are insufficiently detailed to provide nomenclature and stock numbers. Thus, there has been a running argument for years with the Supply Unit over who should provide this information with the Supply Unit stating that it is not its function to provide this information.

The BME persons have even experimented with having the Technical Manager provide this information but he is the Dean of a School in another location and it is not feasible for him to provide this service as a routine matter. Thus the problem has festered for years without resolution. The supply function is under the Vice President of Administration while the BME is under the Vice President, International Division. Evidently, there is inadequate executive control over these two functions since the problem is long standing and evidently chronic. Obviously a solution can be found and is long overdue. For example, the function can be provided by adding staff in the Supply office or contracting the service outside the HC. The fact that the problem has not been resolved is indicative of some underlying issue at HC that must be remedied or a similar situation may arise.

2. Recommendations

- 1) The Supply Office should have a thorough review including procedures, staffing, controls, organization, paper flow and responsiveness to operational needs in order to find the causes for the problems and to remedy them.
- 2) A procedure should be available for urgent purchases of parts for items such as those mentioned in the Costa Rican report, e.g., printer parts, wiper blades for a Van, etc.
- 3) Vehicle purchases should consider the availability of local maintenance and consumable parts as a criterion of selection.
- 4) A status report should be made to the Vice President on all items delayed beyond a certain date e.g. a 60 day period from receipt of request along with the causes for the delay. The VP should use this system to find and correct the system delays.
- 5) A standard time should be set by the HC for response to the field on inquiries regarding the status of a supply request.
- 6) The VP for International, the VP for Administration and the VP for Operations should obtain periodic reports on any items delayed beyond what they consider a reasonable time period so that they can take remedial action including the underlying causes for the recurrence of such delays.
- 7) The VP for Operations should review the causes for the long festering problem on support for BME equipment, why the problem has not been resolved earlier, demand a solution in a given time period, and determine what controls he needs at his level to prevent its re-occurrence.

VI. MANAGEMENT

A. Overview

On paper, the role definitions for country and technical managers as well as desk officers and program administration is rational and should work well. But it does not. Many problems in project plans are not caught, problems that occur during implementation are not resolved and requests sometimes not answered or even acknowledged in reasonable time. The previous sections on program plans and project control describe the syndrome in more detail.

The causes for the problem are not clear. They seem to involve a complex of factors: unclear expectations as to who can make what decisions, lack of de facto delegation, clear role definitions, what should be referred to the Vice Presidential level, what are the groundrules to guide decision-making, overload of staff on too many projects, absence of clear rules for good planning and control, insufficient training in development and management, and personal styles of decision making.

The treatment of such a complex must include both structural and behavioral aspects. The first place to begin is at the first supervisory level--the Program Director in the field. This aspect is discussed in the following section.

B. Program Director Role

The Program Director plays a key role for Project HOPE in any given country. He/she is the first line supervisor for the projects, helps to plan projects, coordinate them with counterparts, determine the feasibility and timing of many new initiatives for Project HOPE in the country, maintain awareness of what other agencies are doing in the Project HOPE area of interest, manage the internal office functions including support staff and supply and help maintain morale in sometimes difficult circumstances.

The Program Director role needs to be strengthened in the planning, control and administration of projects. If the Program Director is properly selected, oriented, trained, supported and motivated then many of the HC problems can be prevented or resolved early. Hence, high priority should be given to this level of the management chain.

Recommendations:

1. Program Directors should receive training in supervision, program planning and control, management and office administration. All these functions are vital to the success of Project HOPE in the field.
2. As Program Directors gain experience, they should be held accountable for the planning and implementation of projects in their country. For those fully

- qualified, delegate as much authority as possible keeping HC informed of changes in plans and resources.
3. They should be involved in the site planning, project planning, country planning, internal and external evaluations.
 4. Reporting on progress and problems, whether monthly or quarterly or annual should involve them substantively and not as passive transmitters.
 5. Where requests to HC for guidance remain unanswered for too long, install a red-alert system whereby the Program Director can appeal directly to the Vice President for International with copy to the VP for Operations.
 6. Lines of authority and communication should be clarified vis-a-vis the Program Director, the Country Manager and the Technical Managers in HC so that the Program Director is not side-stepped.

C. Organization

The HC International Division has been growing in size and sophistication. Signs of this are the introduction of the Desk Officers which has greatly relieved the Managers of administrative support tasks permitting them to focus more on program management. Two more desk officers are planned bringing the total to four. The Program Administration Unit works closely and well with the Managers in linking financial and program management.

The role of Regional Directors is not clear. The LA Regional Director is presumably in the chain of command between the Country Managers and the Vice President for International Operations yet he feels unsure as to what decisions he can make. As a result, most subjects for decisions are passed on to the Vice President causing further delays and clogging the workload for the VP. The Regional Director for Africa was not present at the debriefing on the evaluation of Swaziland nor was his input to the project alluded to in any discussions with other staff involved in the project.

The same uncertainty as to decision-making prevails with the Country Managers. They believe that all decisions of any significance must be referred to the Vice President. There are no groundrules, written or oral, for what decisions can be made by them or the Regional Directors. Again, the process tends to delay responses to the field and to clog the Vice President's available time. When the VP is away for travel or attending to other matters, the decision-making process bogs down.

Country Managers should be permitted at least two site visits per year to the locus of their projects but these visits are often delayed because of workload and HC priorities. The HC budgets at least two visits per year and the Country Managers should be given more leeway in deciding the frequency and duration of their site visits in accordance with the project needs. Regular site visits are essential for program monitoring and they provide a mechanism for spotting and solving problems before they are critical. Moreover, the site visits are important to staff morale and as a support to the Program Director and technical coordinators.

Technical Managers work closely with Country managers to bring technical focus on the projects and to guide field personnel. A number of technical managers are also country managers so that both functions are merged in the same person. This is the case with the Nursing Technical Manager who is the country manager for six countries including Swaziland. The Regional Director for Latin America is also a country manager for several countries so that it is customary for individuals to play several roles at HC. The staff is small and professional so that communication and coordination horizontally appears good.

Workload is high and in some cases may be a factor in the slow response from HC and also in the infrequent site visits by country and technical managers. The Director of Nursing is technical manager for 18 to 20 projects and a country manager for four countries. In addition, she is also requested to participate in preparing proposals for funding.

At the field level, it was noted that the Program Director for Swaziland has also experienced increased responsibilities. Since his arrival in country, he has taken on new activities for BME, traditional healers and HIV/AIDS in Swaziland and the Safe Motherhood, Child Survival and HIV/AIDS efforts for Malawi.

As workload mounts and time is limited, some organizations turn to fire fighting. Staff turns from crisis to emergency, barely able to meet one deadline when faced by the next one. Then operational emergencies block out planning and even time to think and evaluate results. The consequences are many: stress on the staff, delays in responses, lowered quality in planning, slow response to emerging problems in implementation, less time to reflect and evaluate lessons learned and even less time to plan the improvements in management and operations. Some of these symptoms are appearing.

The International Division has no regular staff meetings. Meetings of the staff are rare and deal with a particular topic. This fact plus the travel schedule of the staff make it difficult to deal with many issues as a group. There is a behavioral aspect to the issue. The staff on their own have requested and started a dialogue to clarify their roles and authority for decision making. The timing of this evaluation and the changes among staff are converging to make it propitious for HC to tackle the issue of delegation and role definition now.

Two key persons are leaving requiring the replacement of a Regional Director and a Country Manager. In addition there is a plan to establish a new position of Director of Professional Affairs. Hence the addition of new persons plus the introduction of new program management processes as recommended by this evaluation gives HC an opportunity to establish clearer lines of delegation, decentralization and authority to speed up HC responses.

Recommendations:

1. With the input of this evaluation and the discussions started on role definition, HC should attempt to speed up decision making and response to the field by de facto delegation of authority to country managers and Regional Directors with clear delineation of those decisions reserved to the Vice President for International Operations or above.
2. The introduction of the proposed improvements in project planning and control provide an opportunity for team building and further clarification of roles and procedure.
3. The addition of desk officers and new personnel should be accompanied by a careful review of the workload at HC to determine how it can be balanced with quality of management considerations. Time should be made available for Country Managers to visit their projects at least yearly.
4. Periodic staff meetings and staff retreats to discuss items of concern to all plus periodic workshops on many of the topics suggested in this Report should help improve quality.
5. Consider use of an organizational development facilitator to deal with the vertical communication and delegation of authority issues since these issues are not amenable to resolution simply by formal changes in procedures or structure.

APPENDIX A.

ACKNOWLEDGEMENTS

A report of this magnitude could not have been produced without the cooperation of a large number of persons. We acknowledge the excellent cooperation received from the Hope Center starting with Vice President for International Operations, Mr. Donald Weaver, Dr. Bettina Schwethelm --Project HOPE coordinator for the Evaluation Ms. Carol Fredriksen -- Director of Program Administration Dr. John Wilhelm -- Regional Director for Latin America Dr. David Edwards -- Country Manager for Honduras Dr. Carolyn Brye -- Country Manager for Swaziland Ms. Linda Furcho -- Production Secretary for this report

We are grateful also for the unsurpassed hospitality and warmth extended to us all by everyone at Hope Center during our stay at the Educational Center.

COSTA RICA

*In Costa Rica we were greatly assisted by:
Mr. Kenneth Watson -- Technical Coordinator of the project.
Dr. Guillermo Rodriguez -- Medical Director of the project.
Ms. Roseta Bolanos -- Director of the project.
Ms. Jean MacGregor -- Educational Specialist.*

HONDURAS

*In Honduras, the team was greatly assisted by:
Dr. Gerardo Mariona -- Program Director for Project HOPE
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SWAZILAND

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APPENDIX B.

SCOPE OF WORK

February 12, 1990

Mid-term Evaluation SCOPE OF WORK

Purpose:

To evaluate Project Hope's headquarters performance in providing oversight and support to Matching Grant-funded activities in Costa Rica, Honduras and Swaziland; and to assess the field impact of health activities in these countries. Their performance and progress will be measured against the goals and objectives established in cooperative agreement OTR-0285-A-00-7124 (from 6/87 to 5/92).

Objectives:

1. To assess HOPE's progress towards and effectiveness in carrying out the health education projects specified in the grant, which are aimed at enhancing the ability of a target country to provide health care for its populace through the improvement of its child and health care infrastructure.

(Note: Though all country projects will be examined, technical assessments will be completed only for the following country programs:

Costa Rica - ARI program
Honduras - Bio-Medical Engineering program
Swaziland - Three nursing programs
2. To analyze and evaluate the effectiveness of Project Hope's headquarters in providing technical, financial, policy and programmatic oversight and support to field activities in all Matching Grant recipient countries.
3. To assess Hope's major accomplishments and organizational capacities, as well as to determine what, if any, problems and constraints are preventing them from reaching the goals outlined in the cooperative agreement with FVA/PVC.
4. To develop specific recommendations for Project HOPE regarding technical modifications to field implementation and headquarter-centered responsibilities, including field backstopping, reporting, administrative procedures, and staff development.

5. To determine what has been the impact of HOPE's projects on the project beneficiaries they are serving (specifically, are beneficiaries better off as a result of HOPE's activities?)
6. To assess whether activities complement health programs and policies of A.I.D. and the host governments.
7. To examine what steps are being taken to institutionalize projects in order to assure the sustainability of benefits.
8. To examine whether HOPE's recommendations for future program directions (as found in their December 1989 annual report) are appropriate for each country.

Evaluation Outputs:

The evaluation will produce the following outputs:

1. A final written report of HOPE's progress towards the goals of the Grant Agreement.
2. An evaluation of HOPE's performance and effectiveness in the countries selected for evaluation, as well as the problems and constraints that are influencing progress towards the established goals.
3. Recommendations to AID/PVC for actions to support future progress of HOPE.
4. Recommendations to HOPE for actions to support their future progress.

Scope of Work:

The evaluators will make their recommendations based on the following:

1. HOPE Matching Grant Agreement.
2. HOPE Matching Grant Annual Reports.
3. Prior internal and external evaluations of field operations and headquarters (if available).
4. Other documents considered relevant by both parties.
5. Interviews with HOPE staff, host country technicians and government representatives, etc.
6. Interviews with and/or surveys of project beneficiaries (if deemed relevant by both parties)
7. HOPE responses to previous evaluations (if relevant).

Schedule:

- 4/9-4/11 Headquarters evaluation in Millwood, VA.
- 4/12-4/13 Team holds evaluation planning meeting at Project Hope headquarters.
- 4/16-4/20 Field evaluation in Costa Rica.
- 4/23-4/27 Field evaluation in Honduras.
- 4/30-5/9 Field evaluation in Swaziland.

Evaluation Questions and Issues: Described below are questions and issues that FVA/PVC/CSH has developed to direct the evaluator(s) during the course of the evaluation. Some questions are more relevant for the field than headquarters, and vice versa. The evaluation team should use these questions as a guide; it is not expected that each will be separately addressed in the final report.

- Ability of project design and implementation procedures to meet project objectives
 - What strategies has the project management taken to improve training and health status/awareness? Do strategies seem appropriate?
 - Do field guidance, training materials and promotional materials reflect state-of-the-art health knowledge and sensitivity to cultural constraints?
 - Has training and education been targeted to particular groups? If so, do groups seem appropriate? Has targeting been effective?
 - Are HOPE's program activities consistent with the focus of the grant agreement?
 - Is there evidence that project beneficiaries have benefitted from HOPE's involvement in subject communities?
- Relationship between field and headquarters
 - How does headquarters (HQ) support field efforts?
 - What is the relationship between staffing patterns at headquarters and field activities?
 - What is the turn-around time between field requests for

information, technical assistance, etc. and responses from headquarters?

- What is the typical means of communication (phone, FAX, mail)? Does HOPE have standard operating procedures identifying what types of requests are handled in specific manners?
- Do headquarter's funding mechanisms promote smooth project implementation?
- Are the separate functions of the Administrative and Program staffs as they relate to field operations clear cut and understood by both?
- How many trips (on average) have headquarter's staff made to field sites? What has been the nature of the visits (i.e.- to provide technical assistance, monitor status of project, etc.)?
- Is technical assistance from headquarters to field typically initiated by HQ, field, or either?
- To what extent, if any, does Headquarters provide policy and program guidance to field staff?
- What type of staff support does headquarters need to effectively do its job? Has such support been sufficient?
- Does headquarters tend to employ technical staff, or to hire consultants as needed? What have been the effects of using the approach that they employ?
- Has headquarter's technical capacity increased in recent years? Has headquarters developed any new backstopping strategies?

Financial Management/Tracking

- What is the turn-around time between field expenditure requests and money sent from headquarters?
- On what financial system/information does the field base its planning?
- Is there a system that keeps everyone up-to-date?
- Is there typically enough cash on hand to meet requests from the field?

- What is the relationship between activities and expenses?
- Is there an implementation plan or time line that relates activities to expected expenses? If so, how far into the future does it calculate?
- How do planned and actual expenditures relate?

Project Focus and Use of Funding

- Listed below are activities (as described in the cooperative agreement) for which HOPE has received funding in recipient countries:
 - (a) Nursing Education, including both basic and post-graduate nursing degrees, to prepare nurses to better meet the basic health needs of rural and urban populations;
 - (b) Building Laboratory Capacity to support the diagnostic and treatment needs of both primary, secondary and tertiary health care levels and preparing laboratory personnel to perform required laboratory tests;
 - (c) Establishing a Regional Training Center for the preparation of respiratory therapists to treat and prevent respiratory diseases and to form departments of respiratory therapy in selected health care institutions;
 - (d) Developing an Audio-Visual Resources Production Center to prepare materials for the training of young professionals and paraprofessionals of those diseases most prevalent in their practice areas;
 - (e) Training Technicians to repair and maintain medical equipment at different levels of health care institutions;
 - (f) Providing Continuing Education for members of health teams serving in rural and peri-urban areas in order to deliver improved health care among poor populations, and
 - (g) Develop and Implement a Drug and Supply Management System that will improve the procurement, inventory, storage, distribution and dispensing of medical supplies.

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- Have other activities (other than those planned for each country) been initiated?
- Has HOPE changed their focus since they started working in subject communities? How and for what reason?
- Does HOPE have a "model approach" they try to use in all communities? If so, describe?
- Has HOPE expanded to new communities and/or introduced new health/training interventions into project since they first started working in area?
- Is the focus of their activities consistent with the terms of the grant agreement?

Organizational Development in the Field

- At each level, does the field staff have the training and skills necessary to perform project functions?
- What type of training is available/has been provided to staff who need assistance? Is there any type of training provided to all staff?
- If training has occurred, do staff feel it was appropriate and have they incorporated skills into their job responsibilities?
- Are expatriate or host country nationals performing administrative, training, evaluation or health service activities?
- Has any training been provided by the MOH, National Universities, local NGOs, or other organizations in the host country?

Project Monitoring and Evaluation

- What type of system has each project site developed to monitor and measure costs, progress and the effectiveness of activities?
- Who is responsible for data collection and analysis? Do these individuals have the training and skills necessary to do the job?
- Have findings been used by field level managers to redirect resources and staff time?

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community?

- What are the indicators of progress in program activities?

Training/Supervision of Grass-Roots Workers and Local Partner Organizations

- How do planned and actual training sessions relate?
- Has HOPE made any attempts to establish partnerships with non-governmental local partner organizations? If so, how successful have they been?
- How appropriate are training materials for countries and participants? Has training been tailored to meet specific needs of trainees?
- Do health workers have adequate supervision? Are they provided refresher courses, if necessary? How is their competence measured?
- Has technical staff been sensitive to local abilities to absorb new information?
- What is the nature of the training materials used in different countries and activities? Have materials been field tested? Who developed them?

Relationship with Host Government, Community and other organizations in country

- What has been the involvement of the MOH, universities local institutions, or other PVOs in terms of project design, financial support or staff development?
- Have changes occurred in the PVO's relationship with the government and other organizations?
- Has this project contributed to, or otherwise impacted, government activities in the health sector?
- How many training programs are successfully functioning? How many were planned to be functioning at this time?
- Do projects complement policies and programs of host government and A.I.D.?

Sustainability

- What financial and organizational strategies have been implemented to promote project's sustainability?
- How successful has HOPE been at establishing revolving funds and other cost recovery mechanisms?
- What efforts are being made to phase out of certain activities/areas, and to turn responsibility over to the community/host government?
- Do communities and/or local institutions believe that project meets their health needs?
- Does HOPE plan to leave communities/countries at any specified point? If so, do host governments or other institutions demonstrate commitment/ability to sustain project benefits once HOPE's support ceases?

Changes made in response to lessons learned and previous evaluations

- Has headquarters or field made any significant changes in response to prior (internal or external) evaluations? If not, why? If so, what has been the result of their changes?

Country Specific Questions

Costa Rica

- 1) Has hospital ARI care improved as a result of HOPE program?
- 2) Is University of Costa Rica assuming responsibility for program's operations?

Honduras

- 1) Has deterioration of equipment been prevented as a result of biomedical engineering program?

Swaziland

- 1) What is the likelihood of the MOH meeting their commitments in the HOPE pharmacy program? Should funds for this program be re-directed to other activities?

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- 2) What progress is being made in HOPE's education program for traditional healers? Should amendments be made to cooperative agreement that would permit them to fund activities through matching grant?

APPENDIX C. GLOSSARY

HOPE CENTER

<i>A.I.D.</i>	<i>Agency for International Development</i>
<i>HC</i>	<i>Hope Center</i>
<i>ph</i>	<i>Project HOPE</i>
<i>VP</i>	<i>Vice President</i>

COSTA RICA

<i>A.S.</i>	<i>Associate in Science degree</i>
<i>AARC</i>	<i>American Association for Respiratory Care</i>
<i>B.S.</i>	<i>Bachelor degree in Science</i>
<i>CCSS</i>	<i>Social Security Agency of Costa Rica</i>
<i>CENDIESS</i>	<i>National Center for For Training & Research in Health</i>
<i>COPD</i>	<i>Chronic Obstructive Pulmonary Disease</i>
<i>GOCR</i>	<i>Government of Costa Rica</i>
<i>ICU</i>	<i>Intensive Care Unit</i>
<i>INFOP</i>	<i>Institute for Personnel Development</i>
<i>MOH</i>	<i>Minister of Health</i>
<i>PAHO</i>	<i>Pan Americal Health Organization</i>
<i>PH</i>	<i>Project Hope</i>
<i>RT</i>	<i>Repiratory Therapy</i>
<i>UNCR or</i>	
<i>UCR</i>	<i>University of Costa Rica</i>

HONDURAS

<i>AV</i>	<i>Audio visual</i>
<i>BME</i>	<i>BioMedical Engineering</i>
<i>BMET</i>	<i>BioMedical Engineering Technicians</i>
<i>CENAMA</i>	<i>National Center for Maintenance of the MSP</i>
<i>CENEMEC</i>	<i>National Center for Continuing Medical Education</i>
<i>CME</i>	<i>Continuing Medical Education</i>
<i>CMH</i>	<i>Child and Maternal Hospital of IHSS</i>
<i>IHSS</i>	<i>Honduran Institute for Social Security</i>
<i>INFOP</i>	<i>Institute for Personnel Development</i>
<i>MOH</i>	<i>Minister of Health</i>
<i>MSP</i>	<i>Ministry of Public Health</i>
<i>UNAH</i>	<i>University of Honduras</i>

SWAZILAND

<i>BME</i>	<i>Biomedical Engineering</i>
<i>CCCD</i>	<i>Center for Disease Control Communicable Disease Project</i>
<i>CNO</i>	<i>Chief Nursing Officer</i>
<i>FLAS</i>	<i>Family Life Association of Swaziland</i>
<i>HIV</i>	<i>Acquired Immunity Deficiency Virus</i>
<i>HPN</i>	<i>Health, Population and Nutrition</i>
<i>MCH</i>	<i>Maternal and Child Health</i>
<i>MOH</i>	<i>Ministry of Health/Swaziland</i>
<i>MSH</i>	<i>Management Sciences for Health</i>
<i>NGO</i>	<i>Non-Governmental Organization</i>
<i>ORT</i>	<i>Oral Rehydration Therapy</i>
<i>PHC</i>	<i>Primary Health Care</i>
<i>RHMT</i>	<i>Regional Health Management Team</i>
<i>SCOT</i>	<i>Swazi College of Technology</i>
<i>SIHS</i>	<i>Swazi Institute of Health Sciences</i>
<i>STD</i>	<i>Sexually Transmitted Disease</i>
<i>THO</i>	<i>Traditional Healers Organization</i>
<i>UNICEF</i>	<i>United Nations Children's Fund</i>
<i>A.I.D.</i>	<i>United States Agency for International Development</i>
<i>WHO</i>	<i>World Health Organization</i>

APPENDIX D

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