PD-AAK-807

A.I.D. EVALUATION SUMMARY: PART I

A. REPORTING A.I.D. UNIT:
USAID/EGYPT
ES#: 88-

B. WAS EVALUATION SCHEDULED CURRENT FY EVALUATION PLAN?
Yes x Slipped__
Ad hoc__

C. EVALUATION TIMING:
Interim__ Final x
Ex Post__ Other__

D. ACTIVITY EVALUATED:

Suez Canal Area Medical Education and Health Services Development Project (263-0136).

E. ACTION DECISIONS APPROVED BY THE MISSION DIRECTOR:	OFFICER	COMPLETION DATE
1. Extend PACD to January 30, 1990.	M. Brown C. Mantione J. Sam W. Gelabert.	June 1988

G. CLEARANCE/APPROVAL OF EVALUATION SUMMARY AND ACTION DECISIONS:

Technical Directorate

C. Mantione, HRDC/H
J. Sam, HRDC/H
W. Gelabert, AD/HRDC

Program Development and Support Directorate

J. Laudato, PDS/P
V. Molldrem, PDS/P
J. Patterson, AD/PDS 5/26

Approved: _____ 5/31/88
Marshall D. Brown, DIR

(PPP/P, SUEZEV, 5/25/88)

H. EVALUATION ABSTRACT

1. Background and Purpose: Since 1980, USAID has given $ 15.4 million to the Ministry of Health (MOH) and Suez Canal University (SCU) to establish a new medical university with an innovative curriculum to train doctors in primary health care and a program to integrate medical education and health services. The purpose of this evaluation was to assess the overall progress of the project.

2. Major Findings and Conclusions: The project purpose has been achieved.

a. Significant Project Achievements:
- A fully functioning 6 year medical school with an excellent, innovative curriculum and trained faculty.
- Establishment of essential educational support activities: an excellent central library, mini-libraries, audio-visual/educational media center, computer laboratory, multi-purpose demonstration laboratory, a microbiology and central research laboratory.
- Masters in General Practice graduate program.
- Research program clearly related to communities' needs.
- Revenue generating activities that contribute significantly to school sustainability such as faculty group practices and faculty housing.
- Teaching and service facilities constructed or renovated and equipped.

b. Outputs partially achieved.
- Faculty of Medicine (FOM). Administrative and program management of FOM/SCU require further strengthening. Postgraduate program needs more faculty in General and Family practice. Clinical laboratories have not utilized and maintained their equipment or marketed their services effectively.
- Health Services. The poor quality of MOH clinic services negatively affects community health and students' clinical training. The low status of primary health care services also discourages students from General Practice and Family medicine practice.

3. Key Recommendations. The team recommends a no-cost two year project extension to :
- Assist the MOH in developing model primary care clinics through continuing education programs, better administrative systems, and introduction of cost recovery measures.
- Develop career structure for General Practice physicians.
- Strengthen clinical and basic science faculties and develop scholarly community oriented research capabilities.
- Strengthen FOM/SCU management and financial analysis capacities.

I. Evaluation Costs

1. Evaluation Team	Contract # OR TDY Person Days	Contract Cost OR TDY Cost (US $)	Source of Funds
Ernest Petrich, Team Leader David S. Greer Yolande M. Gershman Nancyanne Causino Ibrahim H. Abdel-Rahman Aleya Hussein Ayoub M. Lotfy Dowidar	263-0136-C-00-8042-00.	$ 76,000 LE 25,000	Project No. 263-0136

A.I.D. EVALUATION SUMMARY: PART II

I. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.

BACKGROUND: In 1980, USAID, the Ministry of Health and the Suez Canal University Faculty of Medicine initiated the Suez Canal Area Medical Education and Health Services Development Project. The project purpose was: to establish a program for the integration of medical education and health services in the Suez Canal area, and to educate and train primary care physicians as direct providers and health team managers to work effectively within resource constraints. The founding Deans of the Medical School pioneered radical new concepts in medical education by focusing on community health needs and utilizing a multi-disciplinary, problem solving approach.

USAID has provided $ 15.9 million to the Ministry of Health and Suez Canal University. Approximately $460,000 will be unspent at the Project PACD. The total amount of GOE contributions was estimated at over LE 60 million. USAID funding has supported: construction and renovation of teaching and service facilities; purchase of faculty housing; equipment for teaching, research and service facilities; foreign and local long-term and short-term training of faculty and other personnel; and technical assistance.

PURPOSE: The purpose of this evaluation was to assess progress in establishing a community oriented medical school that successfully integrates undergraduate medical education with MOH services, to determine impact of USAID assistance, to identify critical inputs and lessons learned, and to examine the feasibility of replicating this approach at other medical schools.

FINDINGS AND CONCLUSIONS:

1. Project Outputs. The major USAID funded outputs are:

- A fully functioning 6 year medical school. In 1987, the first class of 44 students graduated. Undergraduates now total 390.
- A new medical curriculum. The school has pioneered curriculum reform worldwide and in Egypt.
- A comprehensive faculty. Though junior, it is among the best in the world in problem based medical education.
- Postgraduate teaching and Research. The school has the only Masters degree in General Practice in Egypt. Small research grants have hastened faculty development and a community oriented research program.
- Educational Support Services. These include a well maintained and stocked medical library, an extensively used computer laboratory, and a clinical skills laboratory. An audio-visual, educational media center produces learning materials developed by the faculty. A microbiology laboratory is well equipped to serve community health needs, but underutilized.
- Revenue Generating Activities. Group practices and housing provide additional support for faculty and supplement the GOE operating budget.
- Renovation/construction and equipment for 24 primary health care clinics in three governorates.

Within the Faculty of Medicine, several outputs were not fully achieved: strengthening management, development of faculty to support the Masters in General Practice program, and clinical laboratory services (See Section 2). Major outputs to upgrade primary health care clinics have not been achieved (See Section 3).

The real long-term output of USAID project investment will be future graduates. The majority (80%) are likely to live and work in the Suez Canal and Sinai area. They eventually will outnumber traditionally trained physicians and could have a major influence on health care in the area.

2. Medical Education. The most outstanding school achievement is development of an excellent quality undergraduate curriculum. The problem based curriculum is almost entirely derived from community needs, which are assessed through field projects, student electives, faculty theses, and general assessments. This approach has radically altered learning and teaching.

Postgraduate students are working in almost all traditional specialities at both the Masters and Doctoral level, but the Masters of Science in General Practice has attracted a decreasing number of students. General Practice is undervalued both by the profession and patients who prefer specialists. The faculty is not large enough to provide adequate clinical supervision or create a curriculum comparable to the undergraduate course in imagination and relevance.

Research at the university has focused on local and regional issues. Research should be expanded to include scholarly topics of interest to the broader professional community in order to bring recognition and promotion of faculty and prestige to the university.

Replication of the FOM/SCU Curriculum. The school has stimulated the medical community to consider revision of the Egyptian medical curriculum at other schools. The Ministry of Education has sponsored several conferences focusing on community-oriented, problem-based medical education. Minoufia University is already utilizing portions of the FOM/SCU curriculum and approach.

3. Health Services and Clinical Teaching. 24 MOH clinics and hospitals were chosen for medical students to work with MOH clinic personnel in actual provision of patient care. Service facilities were renovated and are staffed and equipped. During the past seven years, FOM/SCU has worked hard to educate MOH personnel about the goals and objectives of the school. A recent survey identified the following problems:

- Physicians are not trained as student trainers.
- Technical performance of MOH physicians and health team is low.
- Attendance by MOH staff is irregular.
- Clinic operating hours are short.
- There are too few patients for a meaningful training experience.

The failure of the MOH to develop even model primary health care units has meant that FOM/SCU graduates have no opportunities to provide the type of health care for which they have been educated; however, the Evaluation Team believes that the substantial FOM/SCU - MOH relationships provide a foundation for future service improvements.

4. Management Development. Much of the success of FOM/SCU can be attributed to the participative management style. The broad involvement of faculty and students in planning, monitoring, and evaluating programs was a radical departure from traditional Egyptian authoritative educational methods. As the institution has matured, the lack of formal systems and delegation of authority has become counter productive. The Deans' offices are overburdened. Administrative-management personnel need training in supervisory methods and skills to support continued innovation and change. Junior staff are now ready for increased responsibility needed to develop future school leadership. Management information systems, financial analysis and planning capability need further development to effectively utilize growing revenues. Finally, formalizing the administrative policies and procedures that have developed will permit greater delegation of authority.

5. Financial Sustainability of FOM/SCU. Moderate expansion of the GOE operating budget plus income from revenue generating activities should just be sufficient for FOM/SCU to maintain its educational program when USAID funding ends. Where GOE salary levels are insufficient to retain personnel, income generating activities will be used to supplement the regular GOE budget. The principal concern is the cost of maintaining, repairing and replacing essential medical equipment for teaching and research. Since foreign currency is scarce for all Egyptian institutions, the school may need some foreign currency assistance for spare parts and equipment unavailable locally.

Revenue generating activities such as group practices provide an important supplement to staff income. These group practices are expanding rapidly and should eventually provide large amounts of funds for the continued development and maintenance of the medical school. Faculty housing provides a limited but stable income source and has helped attract a full time faculty. Although the microbiology and pathology laboratories were expected to be income generating, they are underutilized and have not been covering a fraction of their costs. The school should offer staff incentives for productivity and inform doctors about their services. Thus revenue generating activities have contributed significantly to overall school performance as well as assuring long term financial sustainability.

RECOMMENDATIONS: The Evaluation Team makes the following recommendations to strengthen Faculty of Medicine program.

Medical Education:

1. Strengthen Department of General Practice and specialty departments.
2. Develop a career structure for General and Family Practice physicians.
3. Develop specific scientific disciplines and scholarly research capabilities of particular importance to community Health General Practice.
4. Develop management capacity through:
   - employment of senior professional business manager with FOM/SCU funds,
   - improvement of FOS/SCU organizational structure, management, and financial analysis systems, and
   - implementation of in-service training courses for FOM/SCU supervisory staff.
5. Increase revenue generation by:
   - expanding group practices,
   - developing potential of laboratories through local service networks, and
   - other innovations.

The Team recommends a no-cost two year extension, supplemented if necessary by local currency funds, by USAID to:

1. Complete management development work within FOM/SCU,
2. Expand continuing education programs for physicians, nurses and allied health workers,
3. Develop and monitor MOH model health service units with improved administration and cost recovery measures in the Suez Canal area and Sinai area, and
4. Assist the MOH in designing a major new project for substantial upgrading of health services in the five governorates to expand the new concept of health service delivery and development of major cost-recovery measures.

J. MISSION COMMENTS:

USAID/Cairo is proud to have participated in the development of the Faculty of Medicine of the Suez Canal University. The achievements of the dynamic leaders and the technical assistance team in creating an innovative, community based medical school have received worldwide recognition. This project exemplifies many of USAID's development goals:

- A commitment to excellence,
- A willingness to undertake innovative, risky development efforts,
- Flexible implementation based on continuing evaluation, and
- Financial sustainability through cost recovery programs.

USAID's association with FOM/SCU has generated a wealth of new project design concepts. University Linkages II's Component 2 (FY 89, $40 million) will provide funding for university faculties to develop innovative, community based programs and income generating services. The Cost Recovery in Health Project (FY 88, $95 million) will encourage group practices and facilitate private practice by young physicians with loans. The policy reform component will support MOH efforts to provide higher quality hospital services with 60% recovery of costs. Basic Health Services Improvement (FY 90, $90 million) will encourage improved community-oriented health care services, provide continuing education for medical and nursing personnel, and expand operational research on major diseases and environmental health. Enthusiasm for these new approaches among GOE counterparts is a testimony to the project's broad impact.

This PES recommends extending the PACD for this project by 19 months, for a total LOP of 10 years, to continue concentrated development of FOM/SCU activities which will be ready for expansion under these larger programs. When these projects start up in one to two years, practical problems associated with group practices, continuing education for medical personnel, community sponsored health centers, up-grading MOH primary care clinics will be well understood and, hopefully, resolved. Successful implementation of these very large programs depends on good, fully developed pilot activities.

For example, during PACD extension, the management and administrative systems of FOM/SCU will be strengthened. As local technical assistance has not been successful, U.S. technical assistance will be necessary . This experience will assist new programs under University Linkages II, Component 2.

Strengthening administration of FOM/SCU group practices will also facilitate implementation of Cost Recovery in Health Services. Efficient, well run FOM/SCU group practices can provide an effective model and assist the TA team in identifying key areas for training. The Cost Recovery project will provide loans for doctors

to start up private practices. FOM/SCU general practice graduates would be likely candidates for loans to start up primary health care services; however, they may need additional skills in office and clinic management. FOM/SCU courses can be "packaged" and duplicated. This would help the new project achieve its objective of 90% successful start ups. The strong evaluation program of FOM/SCU will provide very useful data in correcting problems and improving project designs.

The major problem to be addressed during the PACD extension activities is the quality of services at MOH clinics. In the Suez Canal area, 24 clinics have already been renovated and equipped. FOM/SCU's undergraduate students work in MOH clinics and have completed a number of surveys to identify local health problems and reach communities. Together FOM/SCU and the MOH have developed a 3 month orientation program for new MOH physicans, but considerable work needs to be done to improve the quality of clinic services. Although the policy environment has changed considerably with the Minister of Health's support, governorate staff have been slow to utilize their authority to make administrative changes, institute courses to upgrade skills, and institute cost recovery. Developing model MOH clinics will require USAID management time to communicate MOH/USAID goals and objectives to governorate and clinic MOH staff, but will provide valuable information on the feasibility of upgrading MOH primary health services to feed into the proposed Basic Health Services project for FY 90.

DISK PPP/P, (SUEZEV), 5/25/88.

XD-AAX-807-A

SUEZ CANAL AREA MEDICAL EDUCATION AND HEALTH SERVICES DEVELOPMENT PROJECT

SUEZ CANAL UNIVERSITY

FINAL EVALUATION REPORT

Delivered Under
USAID/HRDC/Health
Contract No. 263-0136-C-00-8042-00

ISMAILIA — EGYPT

MAY 1988

DATEX INC

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May 2, 1988

Mr. Charles Mantione
Health Officer
USAID/HRDC/Health
106 Kasr el Aini Street
Garden City, Cairo
Egypt

Dear Chuck,

Re: Final Evaluation Report FOM/SCU

Datex Inc. is pleased to submit the attached final evaluation report of the Suez Canal University's Faculty of Medicine project. As required, six copies are enclosed.

I would like to record our appreciation of your help and support throughout the evaluation period. It helped us to deliver the report on time. Thank you also for allowing Datex Inc. to be of service to USAID/HRDC/Health.

Sincerely,

Ajit S. Dutta
President

cc. 6 copies of Evaluation Report

1079 Cornish El Nil, Garden City, Cairo - Egypt

ABBREVIATIONS

FOM/SCU	*= Faculty of Medicine/Suez Canal University.*
MOH	*= Ministry of Health.*
USAID	*= United States Agency for International Development.*
PHC	*= Primary Health Care.*
MOE	*= Ministry of Education.*
GOE	*= Government of Egypt.*
PIL	*= Project Implementation Letter.*
CA	*= Cooperative Agreement.*

ACKNOWLEDGEMENTS

The Evaluation Team for the Suez Canal Area Medical Education and Health Services Project wishes to express its appreciation to the many people who facilitated our work. It is possible to only single out a few for specific mention.

The President of Suez Canal University, Dr. Ahmed Ismail Kohdar, graciously gave his time and thoughts about the Project, about FOM/SCU, and its future priority within the University system and the community it serves.

Dean Esmat Ezzat and Vice-Dean Zohair Nooman were most cooperative and generous in making themselves, their faculty and other personnel, their records, and their students, available to us as we needed them.

The Governors, the Governorate Director Generals of Health and their representatives, for Suez, Ismailia, Port Said, North Sinai and South Sinai, were most cooperative and helpful in making their health facilities and staff available. Their expressions of support for FOM/SCU assisted the team in assessing future directions.

Special thanks goes to Dr. Abdel-Ghaffar Khallaf and Dr. Mohamed Ibrahim Shehata who served as resource consultants to the Evaluation Team in helping us to better understand the complexities of the school, the chronology of development initiatives and the current development issues.

Mr. Charles Mantione and Ms. Jan Ladato, of the USAID Mission in Cairo, defined and clarifed our tasks, provided thoughtful suggestions and were extremely helpful in completing our work.

Dr. William Bicknell and the entire Boston University staff in Boston and Ismailia were most cooperative, informative and helpful. Mr. Ahmed El Labbany and his staff in Ismailia worked long hours and were extremely helpful in gathering background and other information, sometimes on extremely short-notice, in setting and changing interview and field visitation schedules also on short-notice, and in arranging transportation and other logistical support.

A special thanks goes to Ms. Julia Terry who traveled from Washington D.C. to Boston to spend a long day briefing the Team. A very big thank you goes to Dr. William Bicknell who seemed always immediately available to respond to the Team's every need, from offering additional background explanations and analyses of complex issues, to assistance in hunting down missing data.

The foreign Team members also wish to express deep appreciation to the Egyptian Team members for their thoughtful, congenial and stimulating contributions to the overall effort.

EVALUATION TEAM MEMBERS

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1. EXECUTIVE SUMMARY

In 1980, USAID signed a Grant Agreement with the Ministry of Health (MOH) and Suez Canal University Faculty of Medicine at Ismailia (FOM/SCU) to initiate the Suez Canal Area Medical Education and Health Services Development Project. The Project purpose was: to establish a program for the integration of medical education and health services in the Suez Canal area, and to educate and train primary care physicians as direct providers and health team managers to work effectively within resource constraints.

The Project was an outgrowth of an unsolicited proposal from FOM/SCU, the MOH and Boston University, who had been involved in developing the concept of a new medical school based on the pioneering ideas of the founding Dean, Dr. Zohair Nooman and the founding Vice-Dean, Dr.Ismat Ezzat. They believed that medical education should be community health oriented, and community-based; that the educational methods should be active and student centered; that a multi-disciplinary problem solving approach should be used; and that the overall goal of the new medical school should be to produce physicians capable of meeting the basic health needs of the people at an affordable cost. These ideas represented a radical departure in medical education, not only for Egypt but elsewhere, since they came at a time when the medical profession was increasingly stressing greater medical specialisation.

In 1980, a Cooperative Agreement was also signed between USAID and Boston University to provide technical and other assistance to FOM/SCU for developing medical education and health services management.

Since 1980, the Project has progressed impressively through three development phases and is now scheduled for completion in July 1988. During the eight years, informal on-going and formal Project evaluations have been conducted and have resulted in continuing revision of Project outputs as the institution developed and priority needs changed. The Project purpose, however, has never been changed and the Evaluation Team is pleased to report that the Project purpose has been achieved. There are, however, a number of issues involving qualitative concerns and sustainability that the Evaluation Team addresses below.

USAID Project funding over the eight years has amounted to $15.9 million, of which approximately $460,000 will be unspent at Project expiration. Funding has been managed through a variety of mechanisms: Cooperative Agreement with Boston University, Project Implementation Letters, Fixed Reimbursement Agreements, and Purchase of Service Agreements. The total amount of GOE L.E. and in-kind contributions to the Project is estimated at over 60 million L.E..

USAID funding has supported: construction and renovation of teaching and service facilities; procurement of faculty

housing; equipment for teaching, research and service facilities; foreign and local long-term and short term training of faculty and other personnel; and technical assistance.

In developing the medical education component of the Project, achievements have been commendable. A fully functioning 6 year medical school now exists with a first class of 44 students now graduated. A second class will soon be graduated. There is a complete and well designed undergraduate curriculum that exemplifies the innovative educational approach. A large post-graduate training program has been developed and has graduated 126 masters and 20 doctoral candidates including the only functioning Masters degree in General Practice program in Egypt which now has graduated 45 candidates.

A comprehensive, although mainly junior faculty, has been assembled. USAID and GOE have supported overseas training for more than 40 faculty members in basic and clinical sciences with over 25 new doctorates achieved. The Evaluation Team believes that the overseas training of faculty in problem-based medical education was excellent and that FOM/SCU faculty are among the best in this field in the world. Special training in research methodology has also been completed.

All of the essential educational support services are in place, including: an impressive central library that is now being used by students from other medical schools; mini-libraries at field teaching sites; a computer center; demonstration, basic science and research laboratories; audio-visual educational media center producing FOM/SCU's learning materials; and a variety of other student services to enhance learning success.

In the development of community-based clinical teaching resources at MOH health service units and hospitals less has been achieved. Rural and urban health units have been renovated or constructed, and equipped. Field educational policies and procedures that guide the supervision and evaluation of field learning activities have been developed and implemented. The students and faculty of FOM/SCU appear to have influenced quality and quantity of MOH health services but this is yet to be confirmed by formal study.

The integration of FOM/SCU's educational program with the MOH service delivery system continues to be a problem despite years of effort by FOM/SCU leadership in working with the MOH at all organizational levels to establish close working relationships and for the purpose of encouraging improvements in the management and delivery of health services, a key objective of the Project. The establishment and functioning of formal inter-Ministerial committees to achieve better integration has not been as effective as has informal working relationship at lower organizational levels of the system. The fact that appropriate PHC service delivery

models do not exist, and that MOH officers and physicians had difficulty in understanding and accepting FOM/SCU's medical education approach, has served as a key obstacle to integration. Nevertheless, the many years of substantial relationships between FOM/SCU and MOH has built a foundation of better understanding and trust, and which is leading to better collaboration and mutual support, particularly at governorate and lower levels of the MOH system.

In addition to the dynamic leadership of FOM/SCU's founders, and the quality of assistance they received, much of the success of FOM/SCU can be attributed to the participative management style that they introduced and which is quite different from traditional authoritarian institutions of higher learning in Egypt. Senior faculty worked collaboratively with junior faculty and students in planning, monitoring and evaluating development activities. A complex organizational structure was required to accommodate both traditional speciality departments and the multi-disciplinary committees that had primary responsibility for developing and implementing the new problem-oriented curriculum. Moreover, the difficulty of establishing a university regulated administrative-management infrastructure to support a very different field-oriented educational program can not be understated. Nevertheless, all of the essential administrative-management systems were installed, albeit, some still operating at marginal or unacceptably low levels.

Much effort over many years by FOM/SCU leaders and their technical advisors were directed to management development, however, internal FOM/SCU managment development has not kept pace with the very successful development of the educational program and the growing complexity and maturity of the institution.

The development of revenue generation activities has been an integral part of the Project. This has produced a successful Group Practice in Ismailia employing about 25% of the faculty and other FOM/SCU personnel to enhance their income and promote greater retention, while producing additional revenues for FOM/SCU. The Group Practice earned profits after 18 months of operation and is now being expanded. Group Practices for Port Said and Suez based faculty are now being planned and activated. Other revenue generating activities have been successful e.g., rental of faculty housing, while others have not. Nevertheless, future financial sustainability of FOM/SCU is reasonably assured because of the attention given to these revenue generating activities and the continuing growth of its GOE budget. There may be, however, some need for foreign currency assistence to procure equipment spare parts during the next few years.

The development of this highly successful medical education program is having a profound impact on medical education in Egypt and internationally. The Dean and Vice-

Dean have become internationally recognized as leaders in medical education. FOM/SCU has been nominated to be a W.H.O. international collaborating center. Some medical schools in Egypt and other countries (e.g., Sudan) are adopting aspects of the new approach. It is the conclusion of the Evaluation Team that FOM/SCU should be regarded as a model of how to conceptualize, plan, prepare and implement a new kind of medical school, with innovative ideas related to community need. FOM/SCU provides an excellent example of how faculty members can be good educators while also contributing to community development.

There are some concerns to be addressed in the future as the experiment has not yet been completed: optimal PHC service delivery systems and models in Egypt have not yet been developed and thus there does not exist an appropriate receptive framework for the new FOM/SCU graduates; there is need of a career structure for General Practice physicians; further strengthening of the basic and clinical sciences faculty and further development of scholarly research capabilities, particularly community health oriented research, is needed within FOM/SCU; better coordination and collaboration between FOM/SCU and MOH is needed with major improvements still needed in the quality of MOH service units; upgraded training of nurses and other allied health workers is needed; a continuing education program for physicians, nurses and other allied health workers in MOH unit teams is needed; and further management development is needed by FOM/SCU and the MOH.

Regarding these concerns, the Evaluation Team recommends that: a no-cost two year Project extension be granted, together with additional USAID controlled soft currency funds if needed, to: plan for development of new and expanded educational programs for nurses and other allied health workers; develop continuing education for all members of the health services team; develop and monitor model prototype health clinics; assist the MOH in designing a proposed new Project for substantially upgrading MOH services in the Suez Canal and Sinai area to accomodate the new concept of health service delivery, including the development of major cost-recovery measures; and to further develop management capabilities within the FOM/SCU. Other recommendations are also provided, including the recommendation that USAID seriously consider funding the recommended new project for substantial up-grading of MOH services in the Suez Canal and Sinai area to create a special demonstration area for Egypt and for the world.

The Evaluation Team believes that this successful community-oriented problem-focused approach to higher education can be applied in other academic fields to produce graduates and post-graduates better prepared to work in their respective fields while also engaging universities in constructive community development work.

2. PROJECT BACKGROUND

The FOM/SCU represents a radical departure from traditional approaches to medical education in Egypt in that it is community oriented and based, health problem focused and student centered, utilizing practical, active learning, methods. The overall goal being to meet the basic health needs of the community at an affordable cost.

This medical education concept originated with Dr. Zohair Nooman (founding Dean and current Vice-Dean) and Dr. Esmat Ezzat (the current Dean and founding Vice-Dean).

The educational concept is reflected in the following five institutional goals of FOM/SCU which have guided development of the FOM/SCU since its beginning in the late 1970's:

1) To qualify physicians whose primary objectives will be to provide health care in a combined hospital-community system with major emphasis on primary care.
2) To relate medical education to the needs of the society so that the physicians would be able to diagnose and manage the community health problems.
3) To develop and implement with the Ministry of Health and other health care delivery bodies, an integrated system for comprehensive health care delivery and health manpower development in the Suez Canal and in Sinai. Such systems consider the limits of the national per capital health expenditure at present and in the foreseable future. The

regional health service facilities will be used as the locus for education and training.

4) To develop and provide for health personnel programs of post-graduate training and continuing education.
5) To develop research programs that address primarily the actual health needs of the community.

USAID assistance began in 1980 as an outgrowth of an unsolicited proposal submitted by FOM/SCU, the MOH and Boston University. The initial five year project grant agreement with FOM/SCU and MOH had the following objectives:

1) To establish a program for the integration of medical education and health services in the Suez Canal area;
2) To educate and train primary care physicians as direct providers and health team managers to work effectively within resource constraints.

The USAID grant agreement specified a cooperative agreement (CA) between USAID and Boston University for the purpose of providing assistance to FOM/SCU and MOH in the areas of medical education and health services management. The CA was signed in 1980.

Since 1980 the Project has progressed impressively through the following three development phases:

Phase I, March 1980 to March 1982:

1) Curriculum Development;
2) Selection of clinical training sites, and renovation of six of them;

3) Development of a group practice in Ismailia;

4) Design and partial equipping of a main campus facility including a non-clinical facility (Building 29) for teaching, administrative, and other library space for FOM/SCU;

5) Staff development and continuing education in Egypt and in the United States;

6) Strengthening FOM/SCU management;

7) Planning for Phase II longer term development.

Phase II, March 1982 to July 1985:

1) Further strengthening of FOM/SCU management;

2) Program monitoring and evaluation;

3) Undergraduate curriculum development;

4) Postgraduate training programs in general practice/family practice/primary care;

5) Establishment of an infectious disease and clinical microbiology program;

6) Health services improvement in the Project area (Suez Canal and Sinai);

7) **Further** development of the group practice;

8) **Development** of a Junior and Senior Faculty Research Fund;

9) **Further** facility development.

Phase III, August 1985 to July 1988:

1) Further strengthening of administrative, management and financial capability of the FOM/SCU;

2) Developing the clinical teaching curriculum and faculty;

3) Expanding the role of FOM/SCU, supporting collaboration between FOM/SCU and the MOH in the improvement of health services at the MOH clinical teaching sites, and serving as a regional model for health care improvement;
4) Assistance in the expansion of the Group Practice concept to Suez and Port Said;
5) Renovation of additional training sites in the project area;
6) Faculty housing.

For a more thorough review of Project background and Phase I and II Project achievements, see "Evaluation Report of the Suez Community Health Personnel Training Project, dated October 12, 1983," and the Project Chronology, Annex 9.7.

3. EVALUATION PURPOSE AND METHODOLOGY

The purpose of this evaluation is to assess the overall impact of the Project in assisting development of the FOM/SCU. Specifically:

1) To assess the extent to which the Project has developed and implemented a substantial community-oriented medical school that successfully integrates undergraduate medical education with MOH services, and educates students to better meet the basic health needs of the population in the Suez Canal Area;
2) To assess impact of the Project on the Medical Community and the feasibility of replicating this Medical School Curriculum in other Egyptian medical schools;
3) To determine if USAID support has made a meaningful and substantial contribution to the development of FOM/SCU;
4) To identify and describe the critical inputs and lessons learned about the Project design;
5) To define the critical factors that contributed to Project achievements.

Evaluation methodology consisted of:

1) Review of existing documentation, including statistical records, project and program data, survey research reports, previous evaluation reports, technical and financial reports, Project and program plans and reports (See Document References, Annex 9.3).

2) Interviews and meetings with officials, faculty, staff and students of SCU, officials of MOH and USAID, members of the Medical Community and the community at large.
3) Field visits to rural and urban clinics, hospitals and other clinical teaching/service/research sites.

The Report was prepared in an iterative manner. Findings, issues and preliminary conclusions were discussed with SCU and MOH officials as the evaluation progressed. Draft papers were prepared, reviewed and discussed among Evaluation Team members, SCU and USAID officials, prior to preparation of the final Report.

4. ANALYSIS OF PROJECT OUTPUTS

The description of Project outputs and their objectively verifiable indicators have undergone continuing revision over the eight year period of the Project. Revisions have been reflected in up-dated Logical Framework matrices for each of the three phases of the Project. An analysis of Phase I and II outputs was included in the 1983 Project evaluation report, and is not discussed here. See Annex 9.4 of this report for Phase III Project Design Summary/Logical Framework.

A simple review of phase III Project outputs and their objectively verifiable indicators, which is provided below, does not do justice to the extensive achievements produced by the Project over the eight year period of development work.

While The Evaluation Team recognizes that all Project outputs are a result of the combined effect of GOE resources complimented by USAID inputs, the USAID contribution has been particularly significant in the following areas:

The Faculty of Medicine:

1) A fully functioning 6 year medical school. FOM/SCU will shortly graduate its second class. Total undergraduates are 390. First graduating class in 1987 with 44 graduates.
2) A new medical curriculum. The FOM/SCU has pioneered in curriculum reform within Egypt and world-wide. Their self-directed learning, community and health problem oriented approach to physician education has been

recognized by the Egyptian medical education community. For example, a recent Cairo meeting was held on medical education sponsored by the Supreme Council of Universities which highlighted the innovative educational approach of FOM/SCU. The theme was curriculum reform and the focus was on community-orientation and problem-based education. Also world-wide, the selection of the FOM/SCU founding Dean as Chairman of the WHO Network of Community Oriented Medical Schools, and presentation to the present Dean and Founding Dean of WHO gold medals at the first graduation in October 1987, testify to the international recognition earned by FOM/SCU and its leaders.

3) A Medical Library. A fully functioning, heavily utilized, well-supplied and well maintained medical library is one of the pillars of support for self-learning and the problem-based curriculum. Students from other medical schools are now using this library.

4) An Audio-Visual/Educational Media center. This fully equipped facility with trained staff performs essential support services for undergraduate and graduate programs as most learning materials are developed by the faculty and produced by this unit.

5) A microbiology laboratory. This laboratory is fully equipped to handle routine and specialized bacteriologic examinations essential for teaching, service and research, in a community setting where much of the disease burden is

infectious and parasitic; however, under utilization is a problem.

6) A computer laboratory. This unit is equipped with a number of powerful IBM compatible personal computers for use by faculty, students and administrative personnel. The staff is well trained in the use of various software.

7) Skills laboratory. This unit is equipped with teaching models and simulators that allow students to develop certain basic diagnostic and treatment skills prior to their first contact with patients.

8) Faculty Development. In-service and on-the-job training, short courses within Egypt and overseas, and longer-term faculty development activities have been coordinated with the needs of the school. The magnitude of this effort is documented in Annex 9.5 and the nature of many of the training activities is presented chronologically and by program component in Annex 9.7.

9) Postgraduate teaching. The only functioning Masters degree in General Practice program has been initiated at FOM/SCU with 45 graduates since 1983. These physicians are predominantly from the Suez Canal Area where undergraduates receive much of their clinical training.

10) Research. Mini-grants to faculty has facilitated rapid development of the teaching faculty. Of 34 mini-grants, 24 (71%) were clearly related to community health needs. Of 31 student research projects supported by USAID funds, 100% were community-oriented.

11) Revenue Generating Activities have been created by the Project, including the Group Practice in Ismailia, which is the first faculty sponsored group practice in Egypt. It was intended to stabilize the faculty and allow the implementation of a policy analogous to the geographic full-time approach common in many U.S. and Canadian medical schools. It was also intended to increase the revenues available to FOM/SCU as a non-governmental supplement to the GOE operating budget, which it has. The original practice has outgrown its building and now is expanding into an additional building bought with profits, but renovated and partially equipped with USAID support. A second Group Practice, integrated with faculty housing in Suez, has recently become operational. The acquisition of the building, its renovation and some equipment have been supported by USAID. A third Practice is being planned for Port Said in a facility constructed through USAID support.

The real long-term output of USAID Project investment will be the FOM/SCU graduates of future years, about 390 over the next five years. 80% of these new types of physicians are likely to work within the Suez Canal and Sinai area. They will eventually outnumber traditionally trained physicians in the area and could, for this frontier area of Egypt, create an entirely new approach to health care for the people. This in turn, could have major influence on health services elsewhere in Egypt, and internationally. Already other new

medical schools in Egypt and existing medical schools in the region (e.g. Sudan), are adopting substantial parts of the FOM/SCU model.

Phase III Project outputs and current achievement status are as follows:

Output	Status
1. Strengthening management	Only partially met. Although most sub-outputs were met, the desired impact was not achieved. Management infrastructure, administrative and program management of FOM/SCU, the Group Practice and the MOH service delivery system require further improvement.
2. Undergraduate Curriculum	Outputs were exceeded. The Under-graduate curriculum is exemplary and serves to clearly support the innovative approach of FOM/SCU. Its use produces outstanding graduates.
3. Postgraduate Program in Family Practice and General Practice	Only partially met. Training of more faculty in General and Family practice is needed to provide adequate clinical supervision and curricula development for the Masters program.
4. Continuing Medical Education of faculty	Outputs were exceeded in the number of faculty trained, including those trained without USAID support.
5. Clinical Laboratory Services	Only partially met. Laboratories were established and staff trained. Underutilization as a regional resource remains a problem. Laboratories appear less viable now than when first established.
6. Health Services	
6.1. Improved health services at clinical training sites.	Only partially met. In some instances, innovative changes and improvements have been reported but this is not substantiated by a study. No systematic intervention has been planned or executed to improve the quality of team services in local units. Much remains to be done.

6.2. Training supporting improved PHC services.	Only partially met. Meetings and workshops have been organized for physicians, other members of the health team have had limited access to continuing education.
6.3. Improved basic health team-nursing skills.	Not met. The students worked occasionally with nurses and assisted them in various occasions, i.e., while carrying out a project; however, no systematic conscious intervention has been organized.
6.4. Improved functioning of staff at model health centers.	Not met. The development of model health centers has not occurred, but the need is acutely felt in the FOM/SCU and should be a future priority.
7. Group Practice	Outputs were exceeded. Ismailia Group became financially self-sufficient after 18 months of operation. Additional Group Practices are now being planned and activated.
8. Facilities Development	
8.1. Design and Development of Model Health Centers	Only partially met. Functioning Model health Centers were not included as planned Project activities, although physical renovations of clinics were achieved.
8.2. Plan and Design Community Hospital	Output exceeded without USAID support. Contract for new FOM/SCU hospital construction recently approved, to be financed by GOE.
9. Equipment Maintenance Center	Output was met. However, loss of trained maintenance technicians has reduced maintenance capabilities.

5. ANALYSIS OF ACHIEVEMENT OF PROJECT PURPOSE

The Project purpose has remained completely unchanged throughout the eight years and three phases of the Project: "to establish a program for the integration of medical education and health services in the Suez Canal area, and to educate and train primary care physicians as direct providers and health team managers to work effectively within resource constraints."

Achievement of Project purpose was to be measured by the extent to which clinical training emphasizing PHC was on going in support of FOM/SCU undergraduate and postgraduate curriculum at MOH clinical training sites, whether the first six years of students had been accepted and trained according to the curriculum, and whether a first class had been graduated (See Annex 9.4, Project Design Summary).

Based on these objectively verifiable indicators, the Evaluation Team concludes that the Project purpose was, in fact, met. There are, however, a number of major issues involving qualitative concerns and sustainability that the Evaluation Team addresses throughout this Report.

6. FINDINGS AND CONCLUSIONS

6.1. MEDICAL EDUCATION

In less than a decade, FOM/SCU has established a full, well thought out and meticulously designed problem-based curriculum. A comprehensive, although mostly junior faculty has been assembled. The school has attracted an adequate number of applicants and the students are bright and motivated. One class of graduates is doing well in their internships, some say better than the graduates of traditional schools, because of their self-confidence and initiative.

6.1.1. Excellent Quality Undergraduate Curriculum

The problem-based curriculum is almost entirely derived from community need, i.e., the illnesses and malfunctions most prevalent in the community. Community need is assessed in many ways: field projects by the students, student electives, faculty theses for the Masters and other post-graduate degrees, and more general assessments derived from national and international sources. Informal feedback from students and faculty working in the clinics is also helpful in this regard.

One of the most impressive Project successes is the curriculum for undergraduates. FOM/SCU has used the full power of the problem-based approach to radically alter traditional approaches to learning and teaching while

assuring the delivery of substantial content. The evidence of a real new beginning in educational process is everywhere:

- the curriculum guides the student in learning how to learn while also assuring the acquisition of essential knowledge and skills;
- the examination process assures that self-learning is adequate learning;
- the role of the faculty in the classroom and in the community has required the faculty to acquire new skills as facilitators of the learning process rather than dispensers of information for memorization;
- an examination of the curriculum materials gives ample evidence that the faculty responsible for curriculum design have a good understanding of factors contributing to health and disease, basic medical sciences and clinical medicine; and
- the most remarkable but least tangible evidence is the attitude of the students. They have inquiring minds and are convinced that questioning premises is essential for learning.

It appears that the intensive efforts of the Phase Committees, Block Coordinators and Problem Developers have been quite successful.

Basic-science comprehensiveness, however, is difficult to assess because there is no discipline-by-discipline list of what the curriculum actually covers. Problem orientation,

beginning in the first year, seems to expand the time devoted to clinically-oriented education relative to traditional methods, possibly reducing the time available for the basic sciences.

6.1.2. Class Size

Class size of less than 100 has been maintained. The actual average is 65.

6.1.3. Essential Educational Support Activities

The central library, mini-libraries at teaching sites, computer resources laboratory, multi-purpose student laboratory and microbiology laboratory are all established and functioning. The central library is excellent, in both its holdings and its personnel; the mini-libraries observed were few and were of variable but improving quality. The multi-purpose laboratory is not a laboratory in the conventional sense, in that it provides demonstrations for the students rather than hands-on experience. Students may voluntarily undertake laboratory work in the departmental laboratories, but there is no record of how many actually avail themselves of these opportunities.

The microbiology laboratory was a disappointment, as were several of the other departmental laboratories. In the microbiology laboratory, populated by six people (four of whom were visitors), no one was working. Equipment was not functioning. The laboratory was untidy. The head of the department stated that the laboratory provided services (but

only 5-10 specimens a day were received from all of the clinics and hospitals), teaching (but there is no regular, systematic teaching program for undergraduates) and research (consisting of a total of two survey-type Masters degree studies). In a department consisting of six teaching staff and four technicians, output at this level is inadequate and excessively costly.

Circumstances similar to microbiology were encountered by the Evaluation Team in the parasitology, pharmacology, physiology, and biochemistry laboratories, i.e., 3 to 5 teaching staff plus technicians assigned to each department, few people, no functioning equipment, little output.

The immunology laboratory and the central research laboratory were exceptions: personnel were present and active, research productivity was demonstrable.

6.1.4. Student Evaluation

Undergraduate student evaluation procedures constitute a major and important aspect of the activity of the FOM/SCU. Student Evaluation aims at knowing the degree of performance of the students during the 3 phases of the curriculum more than evaluating the curriculum itself. In a complicated but efficient way, it is applied throughout the 6 years of study: using self-assessment, peer evaluation, end of block evaluation, and end of year evaluation. This continuous method of evaluation is time consuming but the Team believes it to be educationally sound. Feed-back to Block planners

and Phase Coordinators has resulted in modifying and improving the problem solving sector of the curriculum.

The use of external examiners (from other schools of medicine) in the final examination, ensures an accepted level of student competency in relation to students in other schools. This is a general rule in all Egyptian medical schools. It will be desirable also to include among the external examiners, people from the health service delivery system.

Field-training evaluation has 2 objectives: to monitor the administration aspects and the educational aspects of the field training. Each objective has a committee overseeing evaluation within each governorate. Field training evaluation appears to be overly burdensome and some simplification may be needed.

6.1.5. Graduate and Continuing Education

FOM/SCU has post-graduate students in almost all of the traditional specialties, at both the Masters and Doctoral levels. More than 125 Master and 20 Doctoral degrees have been awarded.

Continuing education for the faculty has been supported by the USAID grant and also directedly by the GOE (See Annex 9.5). The General Practice Society is reported to be active in the Suez Canal area, conducting continuing medical education meetings for area practitioners, and has started a

journal. This can be considered an outcome of the General Practice Masters Program. Some departments (e.g., Surgery Department) invite community physicians to weekly meetings to attend visiting professor lectureships, and to other special events. Except for the Surgery Department, educational programs emanating from FOM/SCU for community doctors appear to be minimal.

In view of its primary care mission, special emphasis has been placed at FOM/SCU on the M.Sc. in General Practice. This is a two-year program, essentially a traditional discipline-by-discipline introduction to the various relevant specialties, that has attracted a decreasing number of students in recent years (only one this year), although it has graduated a total of 45 since 1983 (See Annex 9.5).

The postgraduate program in General Practice, however, is very important to the full implementation of FOM/SCU. The difficulties facing the General Practice program reflect, in part, problems in the health care delivery system and the practice environment that FOM/SCU can influence only slowly, with great difficulty. General Practice is not rewarded with either money or prestige, the profession undervalues it and patients prefer specialists. Physicians, patients and the MOH must come to recognize General Practice as a speciality, as demanding and as rewarding as internal medicine or surgery.

FOM/SCU has invested in the training of several faculty in General and Family practice in England and the U.S. However, the numbers are not sufficient to provide adequate clinical supervision during the Masters program or to provide a curriculum for the Masters program that is comparable in imagination and relevance to the undergraduate curriculum. This is particularly important as the graduates of the Masters program are intended to become the directors of MOH clinics where students have the bulk of their clinical experience. If the undergraduate clinical experience is to be of good quality and relevance, the MOH clinic director graduates need a solid grounding in population-based medicine and the effective integration of curative ard preventive services around the needs of individuals, families and communities.

An additional point should be made. More General Practitioner faculty will not be enough. Other FOM/SCU faculty, particularly faculty who are in the clinical specialities, need to fully appreciate the challenge and complexity of General Practice. Their growing appreciation can contribute to patient acceptance and student interest in General Practice. Such small but very important matters as where General Practitioners have their offices in the Group Practice, and how much they are compensated compared to other specialists, send powerful messages.

6.1.6. Research and Faculty Prepared for Research

Research done at FOM/SCU differs in some respects from that done in the traditional faculties. The traditional definition includes a testable hypothesis and a conclusion that is generalizable or at least of interest to the broader professional community. Besides basic and clinical research, much of the research done at FOM/SCU is based on evaluative surveys of local or regional interest. This type of research has contributed to the relevance of the curriculum and could be of use to regional health planners and a stimulus for basic or clinical research.

The relative absence of senior faculty mentors and the weak departmental structure of FOM/SCU handicap the efforts of the junior faculty. In addition, the large amount of effort the faculty expend on educational activities, frequently outside their specialties, reduces the time available for research relative to peers in traditional faculties of medicine. Parenthetically, the unique obligations of this faculty, as field project coordinators, tutors and education committee members, gives them less opportunity to develop as specialty educators.

In general, FOM/SCU research seems to be of greater benefit to the local community, probably more so than research in traditional faculties, but is unlikely to bring timely promotion and stature to the faculty, or prestige to the University unless it is strengthened. The unique mission

of FOM/SCU suggests that it could develop world-class research capabilities in the fields of Community Health and General Practice supported by the appropriate medical and public health disciplines. Dr. Esmat Ezzat's recent appointment to an international research commission chaired by Canada's John Evans and charged to identify research priorities in health services in developing countries, highlights FOM/SCU's research potential.

6.1.7. Training, Retaining and Promoting Academic Faculty

The faculty have received excellent training in problem-based medical education, and are among the best in this field in the world. Education in research methodology for both students and faculty has been emphasized. Retention has not appeared to be a problem (See Annex 9.9).

A substantial number of both basic-science and clinical faculty are resident in the Suez Canal area. Staff in Egyptian medical schools frequently prefer to live in the Cairo area and the relative success of FOM/SCU in countering this trend cannot be assessed without data from other faculties of medicine which are unavailable. The housing accommodations, supported by USAID, the University and the Group Practice, seem to have been helpful in this regard.

The continued paucity of senior faculty after eight years is somewhat troubling and promotion seems generally slower for FOM/SCU faculty than for their peers at other medical schools. The Evaluation Team found no evidence of

widespread dissatisfaction among the faculty and many are enthusiastic about the innovative program.

6.1.8. The Impact of FOM/SCU on the Medical Community

FOM/SCU has stimulated in the medical community an awareness of the necessity to revise the objectives and goals of medical education, a necessity arising from the inevitable and continuous socio-economic evolution of society. FOM/SCU can be regarded as a model of how to conceptualize, plan, prepare, and implement a new kind of medical school, with innovative ideas relating to community need. FOM/SCU provides an example of how faculty members can be good educators while simultaneously contributing to community service.

These lessons have not gone unheeded, as is evidenced by the recommendations of the National Conference on Medical Education in 1987, the Regional Conference on Medical Education this year, and the current (April 1988) conference focusing on community-oriented, problem-based medical education held in Cairo, which was sponsored by the Ministry of Education.

6.1.9. Replication Feasibility of FOM/SCU Curriculum in Other Egyptian Medical Schools

It is unlikely that the entire FOM/SCU curriculum could, or would, be adopted by other Egyptian medical schools in the foreseeable future because of persisting values, institutional rigidities and resource constraints. Some aspects of the curriculum and the approach can and should be

adopted by other schools, more easily in new schools, but also by creating new tracks in established schools. This will be possible only after establishing the understanding and conviction of the staff, preparing them for the task and ensuring adequate support and resources. FOM/SCU has produced conversion plans for medical schools in Egypt and abroad and should remain active in this field, with appropriate flexibility dictated by local conditions.

It must be said that the costs of developing an educational program like that at FOM/SCU should be balanced against the benefits, which are frequently cost-saving. Students and teachers involved in health service delivery can replace other professionals, good primary care with an emphasis on prevention may reduce the financial and the human burden of illness, and health service research may reveal cost-effective opportunities for changes in health services throughout Egypt. These potential economies should not be ignored when considering the cost of the educational venture.

Conclusions Regarding Medical Education

The Project demonstrates what can be accomplished when dynamic, creative, leadership is adequately supported. The critical inputs/factors were: Drs. Zohair Nooman and Esmat Ezzat; the dedicated faculty they were able to attract, often to the detriment of their own academic career development; the bright students (who some say are the key factor in educational excellence, rather than faculty or curriculum);

and the resources provided by USAID and the Ministries of Health and Education.

In the final analysis, it is the intelligence, personality and energy of Drs. Zohair and Esmat that underlay the success of the educational program.

The lessons learned are that educational innovation, however necessary and however well conceived and implemented, is not sufficient to bring a program like this to an ultimately successful conclusion. Among the remaining hazards to this fragile organism are the following:

A traditional, non-primary-care-oriented health service system exists that does not provide an appropriate receptive framework for the new and better primary care doctors the school is producing, and this may force them to convert to the old way as a means of survival.

Radical departure from convention involves risks that may be self-destructive. It is true that traditional medical faculties are too enamored with esoteric research, that departments in conventional faculties of medicine are too powerful and therefore orient the school toward specialty values rather than the needs of the society, that conventional methods produce too many specialists, thus fragmenting the profession and the patient as they simultaneously raise cost. Still, one cannot depart too radically or rapidly from conventional values and practice

without endangering the institution, the faculty, and most important of all, the students, whose careers will depend upon the image and reputation of their alma mater within the profession. Compromise is necessary. Change can be evolutionary. Parallel development of conventional and innovative programs is possible and desirable.

Pioneers are not often good managers. Successful entreprenership brings new problems that the entrepreneur is often poorly equipped to handle. Growing organizations require progressively more complex management, for which professional managers are better suited than pioneer educators. Recruitment of personnel to whom administrative authority can be confidently delegated is mandatory; the organization will outgrow its blood supply and wither if there is only one channel to its heart.

6.2. HEALTH SERVICES AND CLINICAL TEACHING

6.2.1. Sites of Clinical Teaching (MOH)

The FOM/SCU has proposed educational objectives for the three phases of the community-based and problem-oriented curriculum. In the early phase of FOM/SCU few clinical resources were available and it seemed that the urban and rural MOH clinics and the hospitals in the three governorates would provide the learning experiences needed to achieve these objectives. Curative and preventive services were offered to various groups of population by the health teams already functioning in these units.

Assignment of Students to Health Units. Based on the educational objectives, the students are assigned to various health clinics by the field coordinators and block planners. (See Annex 9.11) The field tutors are the educational facilitators in the field. They inform and discuss the assignments of students with the director of the health units, coordinate between FOM/SCU and the health units, discuss difficulties that can be encountered and conduct weekly evaluations of the students' learning process. The students also work on individual projects related to solving health problems, and in teams to conduct surveys in the community.

Based on the experiences acquired in the past six years, and the findings of a recent survey carried out by the FOM/SCU, (See Annex 9.12), the students identified the

following main factors affecting the training process: insufficient cooperation between FOM/SCU and the MOH units; administrative management of MOH and FOM; deficiency of linkage between service and training in the unit; and conditions of the field units.

Further investigation is needed before these results are used as a basis for program changes. When the facts are clarified, interventions may be suggested to the unit directors and their teams. Plans could be developed to improve the atmosphere of cordiality, teamwork, and desire to learn, not only by the students but each member of the unit team. The role and activities of field tutors should be reviewed in the light of the above findings.

Assignment of Students to Hospitals. During the last 3 years of study the students are assigned to the general hospitals in the governorates. Members of the FOM/SCU staff, who also practice in these hospitals, are responsible for the supervision and teaching of the students. The students rotate among the various departments, including the outpatient clinics (See Annex 9.11). In spite of the limited resources, the learning and training process appears satisfactory.

As most clinical teaching takes place in MOH units, it is imperative to enumerate in detail and in writing what the students need. This can be discussed with the directors of health units and heads of departments in hospitals, who can

help the program use its limited resources to respond to the needs of the population served. Afterwards, plans of action that are realistic, clear, feasible, and measurable, could be developed jointly by the unit teams and FOM/SCU coordinators. Regular follow-up would ensure that expected coordination and effective cooperation occurs between the service team and the education team at the local level.

6.2.2. Working Relationships with the MOH

From the very early days of FOM/SCU, the leaders have engaged actively and persistently in a dialogue with MOH officers at the central, governorate, hospital, and clinic levels.

The uniqueness of the FOM/SCU curriculum in Egypt has offered a major problem: no model existed. It has been difficult for many MOH physicians to understand the requests presented to them and the approach to be used because these physicians have been traditionally educated. Many meetings and seminars have been conducted and these have helped many and convinced others about the appropriateness of the FOM/SCU curriculum.

To improve working relationships, the following mechanisms have been developed and are discussed below:

1) Permanent Committee on Medical Education and Health Services;

2) Regional Board of Health (was proposed and approved but never become functional)
3) School Committee on Health Services.

Permanent Committee on Medical Education and Health Services. This Committee acts as a linkage with MOH which owns and runs the health units in the area. The early version of this Committee was composed of senior officials of the MOH and the FOM/SCU Dean and Associate Dean (Feb. 1978).

The Permanent Committee is an advisory committee only. It has no executive powers to implement its decisions. Its power rests in the social status and high governmental rank of its members. The Committee has lately met less frequently.

During 1980 and early 1981, discussions were held between senior officials of FOM/SCU and MOH to find appropriate ways and means of establishing a sound relationship between FOM/SCU and MOH staff. FOM/SCU staff would carry on service duties over and above training duties. On the other hand, MOH staff would participate in teaching over and above their service duties. As it is to be expected in such endeavors, much attention was devoted to clarifying administrative issues such as the responsibilities of managing the units, identification of departments from which the school staff would be seconded to MOH units, and the ways and means of remuneration. The outcome of these discussions was a rather flexible arrangement in the form of a new

"Permanent Committee of Medical Education and Health Manpower Development" for Suez Canal Area and Sinai. This action was taken by ministerial decree in May 1981.

The Committee has the following members: the First Undersecretary of MOH, as President; four other MOH undersecretaries; the Dean, the Vice Dean, and one professor from FOM/SCU; and the Director Generals of Health of Port Said, Ismailia, Suez, North Sinai and South Sinai.

The terms of reference of the Committee are: to co-ordinate between MOH, the units and hospitals in the area, and the school, both services and education; to choose the units and hospitals in the area that are eligible for this co-operation; to solve the problems that may be encountered; to suggest ways and means of upgrading services and education; to coordinate activities related to foreign AID; and in exercising its terms of reference, to observe the following points:

a. that health programs of the units must be prepared and implemented according to the decision of the MOH;
b. that management of the units is the responsibility of the unit directors, who are accountable to the health director of the governorates; and
c. that when FOM/SCU staff work in health service units on a continual basis, they are accountable to the MOH for performance of their service duties.

Proposed Regional Board of Health. This Board was proposed and received MOH approval but due to a subsequent change in MOH leadership, never became operational. The purpose of the Board was to coordinate the subsystems and other agencies involved in health activities with more specific terms of reference and more authority to implement its decisions than was given the Permanent Committee discribed above.

The Regional Board was to have had the following members: the first Undersecretary of MOH as President; another representative of the MOH; Directors of Health of the governorates; Regional Director of Health Insurance Organization; representives of the Medical Syndicate; and the Dean of FOM/SCU and other FOM/SCU staff members.

The Terms of Reference of the Board was to be as follows:

a. to make the best use of the facilities, equipment, and financial resources for both education and service;
b. to make the best use of the available health personnel in teaching and service;
c. to make available to all members of the health team, the necessary facilities for training both undergraduates and postgraduates;
d. to introduce health services where people participate in the cost, but this should not interfere with the present systems of free care, health insurance, or private practice;

e. to present a plan to the Minister of Health for using resources according to the real needs of the area; and
f. to present its rules of work.

The decisions of the Board were to have been approved by the Minister of Health.

As mentioned earlier, the terms of reference of committees were intended to be flexible. These were the early days of the schools' activities in field services. As expected, in such an exercise there was resistance from MOH staff at hospitals. This was not unique. In fact, it is the experience all over the world.

A School Committee on Health Services. At the same time, FOM/SCU created as one of its committees, a Committee on Health Services. This Committee is composed of the five Director Generals of Health in the area and an equal number of FOM/SCU staff.

The Terms of Reference of this Committee are:

a. to co-ordinate and promote activities between the school and health directorates in the area, particularly in the area where school staff can best participate in the service;
b. to draw a plan regarding the identification of units that need the school member service, a plan which has to be co-ordinated with the teaching needs and the Permanent Committee;

c. to suggest rules governing joint activities in service, education and research, including administrative financial rules;
d. to propose a fiscal budget on what is needed for the school in terms of equipment and incentives;
e. to propose systems of private health care delivery in accordance with the school programs and philosophy; and
f. to help the Dean in monitoring the agreements on foreign aid, particularly the agreement with USAID Cairo.

All activities of the Committee have to be co-ordinated with those of the Permanent Committee. (Extract From Report on "The Relation Between FOM/SCU and the MOH" by Prof. Khallaf dated 5/4/88).

The establishment of these various mechanisms have undoubtedly brought more understanding by all parties involved. A crucial issue remains however: the function of the health units in providing PHC services. It is a developmental process requiring "give and take" by all partners involved. In addition, plans of action related to each phase of development, and to supervision and monitoring of these plans of action, are needed to insure that objectives are ultimately reached.

One must keep in mind that the major part of planning as well as decision-making is taking place at the governorate level. It is at this level that FOM/SCU should continue to engage in discussions for the development of PHC.

6.2.3. Influence of Faculty and Students in MOH Clinics and Hospitals — Quality and Relevance

Twenty-four primary health care units were renovated by the Project in three governorates. In some instances, teaching classroom, and residential facilities were constructed, and material and equipment were provided. A small library was organized in some of the units.

The seven units visited have the basic elements necessary to provide a model for the practice of PHC activities if the units are developed properly. The units are spacious, and some with hospital beds. The units are staffed adequately to offer curative and preventive services to the population.

According to the results of a recent survey carried out by FOM/SCU the medical equipment was graded as moderately high, while other material was graded moderate to moderately low. As reported in recent surveys, (See Annex 9.12 to 9.15) in health units and in hospitals, and through student surveys in the community, the population is more aware of health issues. People are being referred to health units or hospitals for further examination and treatment and this has had an impact on the delivery of health services.

The renovation of buildings, the new furniture in certain instances, and the additional equipment provided by the Project, has positively influenced the work of health team members.

Coordination and Cooperation between FOM/SCU and MOH in Health Units. The staff of MOH clinics and FOM/SCU have worked together for seven years. Instances are reported in which physicians have been progressively receptive to the new approach and are working well with students and tutors. Moreover, students have developed innovative outreach activities. The students have also been involved in community activities such as surveys. No follow-up of the surveys has yet been organized.

The results of the FOM/SCU surveys, (Annexes 9.12 to 9.15), indicated that facilities were appropriate for students to attain the educational objectives. 86 percent of the field tutors stated that the presence of the students has stimulated the improvement of services. Some problems and difficulties remain, however, and are affecting students' training. Some problems were observed during Evaluation Team visits, others were mentioned in the survey results. The following five factors are noteworthy:

From the tutor's points of view:	From the students points of view:
Physicians in PHC were not trained as trainers to students (77 percent).	Physicians are not trained to be trainers (92 percent).
The technical level of performance of physicians and health team in the units is low (65.9 percent).	Physicians are not concerned with the training objectives of the students (90 percent).
The presence of physician and health team in the unit is irregular (62 percent).	The presence of physician and health team are irregular (78 percent).

From the tutor's points of view:	From the students points of view:
The physician and health team are present in the unit for short time periods (56 percent).	The competence level of physicians and health team is low (90 percent).
There are administrative problems between physicians and other members of the health team (46 percent).	There is limited communication between physician and field tutor (79 percent).
Contact between physician, students (31 percent), and field tutors (28.9 percent), is insufficient.	

Other components needed in effective functioning of health units were not available at the time of visits, although the Evaluation Team was advised that some existed. The status of some necessary components is as follows:

- unavailability of health policies or clear, precise, objectives for the units;
- unavailability of a job description for each member of the health team;
- availability of norms and procedures for only a few activities;
- the limited record keeping practiced in the units;
- the very limited practice of continuity of care (87% of physicians recognized its importance);
- unavailability of guidelines to mobilize and organize the population for the health sector;
- the absence of action plans, systematic supervision, appraisal of personnel and monitoring;

- absence of guidelines for the study of health problems encountered in the families and in the community;
- almost nonexistant continuing education for all members of the staff based on the needs identified by them to carry out their activities and their work in the community.

To reach the goal desired by the FOM/SCU, the leadership of FOM/SCU should discuss with the committee at the governorate level, recommend and encourage the development of the following for MOH units:

- a job description for each member of the health team;
- norms and procedures for each activity;
- methods of evaluation for members of staff;
- basic and regular record keeping;
- guidelines on the coordination and cooperation between medical students, other students, and the health team;
- guidelines concerning the relationship with the community and other sectors of development such as agriculture, education, social affairs, local authorities;
- guidelines for preparation of action plans and monitoring.

• The students have used the facilities and in most cases have attained their educational objectives. Yet it seems that educational activities that would have improved the operational level of the units and of each member of the staff, including dentists and pharmacists, have been lacking.

The students of FOM/SCU must also learn to become team members of the unit rather than working mainly within the

group of students, isolated from the health team and the daily concerns of a PHC unit.

General Hospitals (Port Said, Ismailia). In brief visits to the hospitals, with limited time to interview staff, students and interns, and to observe the working conditions, the Evaluation Team found the following situations:

- The students are much appreciated by the staff for their skills, their ability for self-learning, their ability to think and look for appropriate resources when needed.
- The working conditions vary from one service to another. In certain instances more attention to the working environment is needed to achieve cleanliness, better use of space, and cooperation with other members of the health team.
- It appears that the students and interns function as a "medical team", not as a multi-disciplinary health team.

Occupational health and safety is also included as learning experiences for the students. It seems that this attention has been mainly directed towards industrial settings related to the health insurance scheme. It might be useful to study the contribution that physicians can bring to Occupational Health and Safety in the agricultural sector. Agricultural Occupational Health and Safety requires immediate attention, considering the existing health problems.

In summary, it appears fair to say that the FOM/SCU has worked extremely hard on the development of the curriculum, and has had less time available to work closely with the MOH health units and hospitals. Nevertheless, with the substantial FOM/SCU-MOH relationships that have been developed, the necessary foundation has been established for future service improvements. Therefore, the priority for the future is to complete this work: to provide the best learning environment possible in preparing students for their role as leaders of the health teams in health clinics and hospitals. The influence on quality and relevance of services might be limited for now but the future holds promise, considering the growing awareness about the importance of health services in medical education.

A last point regarding team work within the MOH units: educational programs to equip nurses, technical and management personnel, with diplomas and masters degrees are needed. These personnel, as members of health teams, could be much more valuable partners of physicians in the improvement and delivery of health services.

6.3. MANAGEMENT DEVELOPMENT

6.3.1. Internal FOM/SCU Management Style

Much of the success of FOM/SCU can be attributed to the committee-oriented participative management style that was introduced at the beginning. The involvement of senior and junior faculty, with students, in planning, monitoring and evaluating development initiatives, represented a radical departure from traditional authoritarian methods used in Egyptian medical education. As FOM/SCU evolves to a fully developed and mature institution, and as the excitement of the formative years subsides, there is danger that the participative management style could be compromised. To protect what has been a very successful style, while adjusting it to the reality of a larger more complex institution, has become a high priority need.

The personal management style of the Dean and Vice-Dean were particularly effective in the early formative years but have become less so as the institution has grown in size and maturity. As the 1983 Project evaluation indicated, the Dean's and Vice-Dean's offices had already become overburdened and in some respects counter-productive to the overall institution by the lack of formal and informal delegations of authority to subordinates. This problem continues to persist. Inadequate delegations to subordinates also reduce their professional and managerial development opportunities which subsequently results in a lack of future leadership capabilities among faculty needed to sustain the

innovative mission of the school when present leadership is unavailable. In the early years of an institutions' development, a shortage of adequately trained subordinates limits delegation potential. After eight years of institutional development, delegation capability does exist. Some faculty, senior and junior alike, may strongly believe otherwise due to the conditioning of a system with which they have become accustomed.

6.3.2. Organizational Structure

Annex 9.8 provides information on FOM/SCU's present organizational structures which combine interdepartmental multi-disciplinary committees with traditional speciality departments and other units into a complex matrix. This type of organization is difficult to manage but is particularly effective in supporting the innovative interdisciplinary approach to medical education being pioneered by the school. A matrix structure produces creative tensions which can easily deteriorate into destructive conflicts and maldistribution of power and resources among subordinate units unless the organization is well managed with an appropriate balance maintained among all of the competing sub-units. A matrix structure requires strong central leadership which is currently resident, but also lower level managers who can work, compete and compromise with each other in a healthy team environment. This approach is best supported through rationalized and documented delegations of authority and a reliance upon the concept of "management by

exception" wherein only atypical problems not covered by normal policies and procedures are referred to the top for resolution and the development of a new standard policy and/or procedure if warranted. Thus, in a matrix structure, decision-making is pushed down to lower levels where intra-institutional, inter-program and inter-disciplinary issues can be resolved through negotiation and compromise, rather than by allowing subordinates to delegate upwards. This characteristic of the present organization is not yet adequately developed.

Years of experience with participative management within FOM/SCU has served to identify ways in which the organizational structure could be changed to better accommodate the maturing institution. The FOM/SCU is presently considering a new organisational plan. Some committees have become more viable while others have faded away. Some informal functions have become permanently essential and need to be formalized within the structure, and vice-versa. Some committees now need permanent institutionalized staff support to provide better follow-up, continuity and special expertise. Some positions, such as Phase and Governorate Coordinators, need to be given appropriate formal status. Some faculty have indicated that there needs to be a second Vice-Dean. Job descriptions need to be developed consistent with an evolved and rationalized organizational structure that provides the basis for faculty

selection, promotion, job training, continuing education, supervision and performance evaluation.

6.3.3. Internal Management Policies and Procedures

Under rigid Egyptian university regulations, it is not easy to effectively manage an educational program and this is particularly true for an innovative community-oriented program. A multitude of constraints exist that reduce options and control, and prevent descretion and flexibility in management. The leaders of FOM/SCU have demonstrated great skill in formulating management polices and procedures to accomodate this situation; however, there is need to formalize, through documentation, these policies and procedures and to identify and fill gaps in management policies and procedures. This is a crucial need if the FOM/SCU is to be permanently sustained without deterioration of purpose and institutional style. Documentation provides the means for: orienting and training incoming faculty and administrators; implementing formal delegations of authority; effective supervision and performance evaluation; and periodic, systematic, review and updating of the policies and procedures. Documentation is the institutional memory upon which institutional sustainability depends. An attempt was made to produce this documentation with assistance of a local management consulting firm employed by FOM/SCU. Performance was unsatisfactory, the contract was canceled, and the work remains undone.

6.3.4. Management Information System (MIS)

A key requirement for effective management, including program planning and evaluation, is valid and reliable information provided by a functioning MIS. Unfortunately, this basic need was not seriously addressed until Phase III, very late in the development of FOM/SCU, and then with too little resources and too short a leadtime to produce an effectively functioning system before the Project terminates in July 1988. Although much work has been done in conceptualizing a proposed MIS and in begining the design of MIS sub-systems for selected administrative-management areas, e.g., personnel and inventory, the Evaluation Team has some serious reservations about the overall effort: too much is now being attempted too quickly; the overall conceptual design is excessively ambitious involving too many sub-systems, and within subsystems, too much data; there is need for a more realistic design and implementation phasing plan over several years that allows for functioning manual systems to proceed and run parallel to computer systems until computer systems are debugged and reliable; there may be inadequate FOM/SCU computer capacity in the future to meet all of the rapidly growing and competing demands of faculty and students beyond the needs of a MIS, and; there is need for technical assistance resources to give special attention to the more difficult aspects of a MIS, i.e., the training, supervision and maintenance that occurs after a system is

designed, installed and debugged, and most important of all, in how to use the data produced.

6.3.5. Development of Administrative–Management Personnel

University administrative-management systems in Egypt have well developed operating policies and procedures, some would argue too developed and too rigid. Many of the administrative-management personnel of FOM/SCU were recruited from outside university systems and thus were initially unfamiliar with university administrative rules. The Proje t supported training for these personnel; however, there are many that should receive additional training if FOM/SCU/'s administrative-management systems are to perform at a reasonable level of support. With the present minimal training, university rules may continue to be applied in narrowly interpretive ways which can be obstructive, as compared to the more supportive, creatively flexible, interpretations that are the product of better trained personnel.

In addition to training in university administrative policies and procedures, administrative-management supervisors urgently need training in supervisory methods and skills.

6.3.6. Development of Financial Analysis and Planning Capability

Regular university financial accounting and management is highly centralized and the FOM/SCU, like other sectors of the university, is not substantially involved in budget

estimates preparation, nor in the production or analysis of fiscal reports and plans related to regular GOE financing. In this sense, the FOM/SCU is at the mercy of central university administration for the funds it receives and the future university-wide incremental budgets that are produced centrally on the basis of prior year expenditures.

The development of FOM/SCU revenue generating units, however, and the growing sophistication of its financial affairs, requires financial accounting, analysis and planning capabilities within FOM/SCU if financial resources are to be effectively managed and the financial viability of the school is to be protected. This is particularly important given the financial sustainability issues discussed below.

Unfortunately, an adequate level of financial management capability within FOM/SCU does not yet exist.

6.3.7. Development of Faculty

Faculty development has been a major, and successfully achieved objective of the Project. (See Annexs 9.5 and 9.9). The FOM/SCU has developed a "critical mass" of competent faculty oriented to the unique mission of the school. The faculty development strategy, in so far as possible, involves developing senior faculty from junior faculty within the institution to insure maintenance of FOM/SCU's unique educational approach, rather than hiring senior faculty from the traditional schools. This approach takes time and has resulted in a shortage of senior and mid-level faculty that

is expected to continue until junior faculty have met time and other requirements for promotion.

Promotions have been relatively slow for several reasons. Time spent in program development activities of a new school, the heavy emphasis on teaching activities, and weaknesses in the research program of FOM/SCU, have distracted junior faculty from rapidly achieving the traditional research requirements for promotion in medical education.

Nevertheless, FOM/SCU's system for faculty selection, continuing education and promotion, is established and working. It can be expected to produce senior faculty in due time. In the meantime, well trained and highly motivated junior faculty are quite capable of performing duties usually assigned to more senior staff.

The unique mission, management style and organizational structure of FOM/SCU requires specially trained administrators, managers and supervisors, to support and sustain it. The Project provided minimal managerial training to faculty. Much more training is required in the future to prepare them to function more effectively. Ideally, such training should be specifically designed to satisfy the unique needs of FOM/SCU since most training of academic administrators in Egypt is based on traditional authoritarian institutional models.

The Evaluation Team noted special weaknesses in faculty supervision of technician level personnel. While more formalized systems for supervision will assist in overcoming this problem, training of faculty in supervisory methods and skills is also needed.

6.3.8. Staff and Program Evaluation

Although much time and effort has been spent on the development and refinement of student evaluation methods and instruments with excellent success, not enough has yet been done to provide for on-going systematic evaluation of faculty and programs of teaching, research and service. During the early years, major activities were focused on assessing program development, e.g., international conferences at the end of Phase I and Phase II. FOM/SCU's Evaluation Committee was also quite active.

As the educational program has developed, program evaluation activity has become less. At present, the Evaluation Committee only functions on the basis of ad hoc requests. There are presently no formalized program evaluation policies, procedures or criteria, written or unwritten. This also applies to faculty evaluation with respect to their functioning within the unique teaching, research and service programs of the school. The relationship between the Evaluation Committee and the departments and other committees and units of the school are delicate and undefined and there is a lack of linkage between

the evaluation and management functions of the school, including planning.

6.3.9. Management of the Group Practice

It was reported by the 1985 Group Practice Evaluation Team that "Although the quality of patient-doctor interaction in the Group Practice significantly exceeds local standards, non-medical administration does not live up to the standards of first-rate Egyptian private practice." This continues to be a problem. Rapid turnover of administrators (business managers) has contributed to the perpetration of this problem. Without improvements in institutional management and working conditions, optimum performance of the Group Practice cannot be achieved in terms of revenue generation, retention of staff, and exemplary conditions for students to experience. Considerable technical assistance was provided in designing administrative-management systems. What is now needed is the institutional discipline to fully implement them, and to maintain them.

Conclusions Regarding Management Development

Much effort over many years by the FOMSCU leaders and their technical advisors have been directed to the development of FOMSCU's management infrastructure. However the development of management capabilities and managerial sustainability has not kept pace with the very successful development of the educational program. This is not at all surprising given the relatively low priority assigned to

management development by FOM/SCU due to preoccupation with establishing and building the educational program. The problem of lower priority has persisted despite the continuing advice of consultants and previous Project evaluation reports that called for greater emphasis on management. Another key contributing factor was the poor performance of some management consultants. Some foreign consultants and local consulting firms have not performed up to expectation or have failed to perform at all.

Despite these limitations, much has been achieved in the management of FOM/SCU: in developing operating policies and procedures; in instilling what is for an Egyptian institution a very innovative participative management style and structure, and in implementing all of the essential administrative-management systems that permit a complex institution like FOMSCU to function, albeit for some systems still at a very marginal or unacceptably low level.

Not only is management infrastructure critical in establishing a new educational institution, continued efforts in management development are needed as the institution evolves in size and complexity. This requires special continuing attention and inputs. If not provided, institutional pathologies develop in the form of lower morale and productivity, and increasing internal conflict. Thus "preventive" management development should be a high priority in young institutions to avoid slippage into a "curative",

crisis oriented, management approach which is difficult to reverse once entrenched. In this respect, there remains some unfinished FOMSCU management development work to be done.

6.4. FINANCIAL SUSTAINABILITY OF FOM/SCU

The issue of future financial sustainability of FOM/SCU arises as the eight year Project comes to an end. The major question is: how will the discontinuation of USAID funding affect the financial viability of the school in the foreseeable future?

In considering this question, it is necessary to identify and assess any FOM/SCU non-recurrent expenditures that might generate recurrent costs, e.g. buildings and equipment, as well as recurrent operating costs that may have been paid with Project funds and that may have to be supported by other sources in the future. The impact of Project termination on future year FOM/SCU operating costs can then be assessed and a determination made as to whether FOM/SCU will have the ability to accommodate such costs.

6.4.1. Personnel Related Costs

This category of expenditure is funded under Title I of the GOE budget. Fortunately, the Project has never directly funded special salary supplements or incentive pay for FOM/SCU staff. The Project initially fully funded faculty consultants from other Egyptian medical schools to augment the FOM/SCU faculty, but all of these costs were accommodated in the regular FOM/SCU budget during the past 12 to 18 months. There remains a few existing Project funded positions of which the following may be permanently needed:

- 2 secretaries, one in the office of the Dean and the other in the Education Department.
- 1 senior supervising maintenance engineer.
- 1 librarian in Port Said.

In the past, the FOM/SCU has demonstrated an ability to expand its GOE Title I budget to cover growing numbers of personnel. In a discussion with the University President, the Evaluation Team was assured that this policy would continue for the foreseeable future. It is anticipated that in cases where GOE salary and allowance levels are insufficient to retain or recruit personnel, e.g., the senior engineer, that revenues from the Group Practice will be utilized to supplement salaries according to present practices. The Evaluation Team, therefore concludes that with respect to the funding of FOM/SCU personnel, financial sustainability is reasonably assured.

6.4.2. Non-Personnel Operating Costs

This category of expenditure is funded under Title II of the GOE budget and includes such expense items as: expendable supplies, transportation of students and faculty, electricity and other utility costs, various services including communications, and equipment maintenance and repair, including spare parts.

It is this category of operating expenses that is most vulnerable to budget shortfalls since government personnel costs always receive first priority. The payroll is always

met, too often at the expense of maintaining the physical plant and equipment, and providing the supplies and services needed for effective operation. Information provided in Annex 9.16.1 indicates that the FOM/SCU Title II expenditures, as a percentage of total operating costs, have been growing at a faster rate than Title I personnel costs. This suggests that increasing attention is being given to the need for adequate funding of Title II costs even as generated revenues are also increasing to cover these costs.

Annex 9.16-2 provides a summary of actual FOM/SCU Title II expenditures for the past three years and estimated expenditures for the current and next fiscal years. It indicates the level of support for these costs which are being provided by revenue generating activities of FOM/SCU and what has been provided by the Project.

Annex 9.16-3 provides past actual and conservative future estimates of funds produced through FOM/SCU revenue generating activities.

Except for the area of equipment maintenance, discussed below, the growth of funds available to support Title II expenditures over the past three years and projected into the next two years, including the year following Project expiration, though lean, appear to be adequate to meet Title II costs. The capacity of FOM/SCU to expand its GOE Title II budget in critical areas of need is illustrated by Title II budget increases for the library which have been expanding

very rapidly at about 50% a year as the need has developed (See Annex 8.12-2).

Annex 9.16-4 describes the relatively small contribution to Title II costs by the Project which should be readily absorbed into the GOE budget, particularly since the Project was able to recently provide for purchase of a large inventory of expendable supplies that will reduce the need for GOE funding of expendables for several years after the Project ends. This will cushion the impact of Project termination and provide several years of lead-time to absorb these costs into the regular GOE budget.

The area of principal concern with respect to financial sustainability, is the cost of maintaining and repairing essential medical equipment for teaching and research, including the purchase of replacement spare parts. Annexes 9.16-5 and 9.16-6 provide best and worst scenario's respectively, on cost forecasts for equipment maintenance and repair. Since equipment replacement costs are covered on an as needed basis by the GOE in Title III of the budget, it is not possible to predict the availability of equipment replacement funds, but it is possible to forecast approximate maintenance costs of existing equipment.

As Annex 9.16-5 and 9.16-6 indicate, relatively new equipment requires less maintenance than older equipment. This serves to delay the equipment maintenance costs which rise rapidly and are often difficult to accommodate in a more

gradually increasing government budget. The full maintenance burden will not be felt for several years; however, estimated short-falls in future annual GOE budgets (See Annex 9.16-7) amount to: (In L.E.)

	88/89	89/90	90/91	91/92
Best Scenario	0	9,511	15,834	13,542
Worst Scenario	20,041	33,584	41,115	45,977

There are several options for accommodating equipment maintenance budget short-falls:

1) Growth in revenues generated by FOM/SCU activities which are presently earmarked for Title II expenses. Revenue generation possibilities are discussed below.
2) Reallocation of revenues generated by FOM/SCU activities with less allocated to Title I personnel expenses and more allocated to Title II expenses as the overall revenues increase.
3) Special request to increase the GOE Title II budget to cover the escalating maintenance costs not unlike what was done to increase the library operating budget for the past several years. (See Annex 9.16-2).
4) Reallocation of existing GOE Title II funds among line items to provide more for equipment maintenance and less for other items.
5) Any combination of the above options.

Given all of the above options, together with a very strong commitment of the University President to accommodate these future costs in the regular GOE budget, the Evaluation Team feels reasonably assured that, with some difficulty and continued vigorous attention, these important recurrent costs can be met. Some mention should be made about the shortage of foreign currency to procure imported spare parts. This is a serious and continuing problem experienced by all institutions in Egypt and is a problem that needs to be solved by Egyptian authorities. In the meantime, there may be need for some future foreign curency assistance to accomodate this problem.

6.4.3. FOM/SCU Revenue-Generating Activities

The Project has helped to develop a number of revenue generating activities which are important to the future financial viability of FOM/SCU since high quality medical schools can seldom be maintained on regular government budgets. These revenue generating activities have included:

- medical group practice;
- computer center;
- microbiology laboratory;
- pathology laboratory;
- audio-visual center;
- maintenance workshop;
- faculty housing.

As discussed above, the future financial sustainability of FOM/SCU will be greatly dependant upon maintaining and expanding income producing services.

Medical Group Practice. The philosophy and organization of the Group Practice are described in Annex 9.17. The existing Group Practice provides a supplemental salary income for about 25% of FOM/SCU faculty and selected FOM/SCU administrative-management personnel, making it possible to attract and retain higher quality faculty and other personnel. GOE faculty salary levels represent one-tenth or less of what these physicians could earn in private practice. Thus, in evaluating the contribution of the Group Practice to FOM/SCU's sustainability, it is important to take into account how it serves to attract and retain quality faculty. Further, FOM/SCU administrators find that physicians who work at the Group Practice spend more time at FOM/SCU than do those who supplement their income through their own private practice. The ethical standards of the Group Practice appear to be high and faculty who work there are insulated from worries and temptations associated with private practice.

The Group Practice in Ismailia utilizes its net earnings to subsidize a wide variety of FOM/SCU activities: fuel for faculty and student transport, expendable supplies and capital equipment, start-up costs associated with the new Infectious Disease Center in Suez, as well as direct payments to the FOM/SCU.

The success of this effort in earning income for faculty and the FOM/SCU is prompting expansion of the Ismailia Group Practice to an additional building with capital funds it has earned. In the next year, services will approximately double in size and more of the faculty will work there. As the prestige of affiliation with FOM/SCU increases, and as the Group Practice's own reputation for quality care spreads, its profitability is likely to escalate and it can be expected to earn much larger revenues for support of FOM/SCU activities.

In addition to the planned expansion, an opportunity for increased cost-recovery from uninsured patients is under consideration. The Group Practice is investigating a pre-paid health plan for those who are uninsured by their employers. Such a plan could be both a service to the community and a source of increased revenue for the Group Practice. Yet such a plan should be implemented gradually and with expert advice. It is important that the premiums collected from such a plan fully cover the cost of providing the services that the plan promises to its members.

Other FOM/SCU Group Practices are now being planned and activated. A new Group Practice for Suez-based faculty has recently begin operation. A new building in Port Said, recently completed with Project assistance, is about ready for use.

The development of Group Practices should eventually provide large amounts of funds to support the continued development and maintenance of FOM/SCU.

The Computer Center. The Computer Center is a workroom with a dozen assorted microcomputers and peripheral equipment. It is equipped at an adequate level to support the needs of FOM/SCU's students, faculty, and in the short run, the FOM/SCU administration. It is self-financed and, in fact, turns a slight profit by charging graduate students for its use.

The Center is not staffed, maintained, or equipped in a way that would make it commercially viable. There is a tentative plan for the Center to offer courses in computer applications to the business community, and to charge tuition. This seems to be an idea worth researching. Yet it seems more appropriate for the Center to simply support itself.

Indeed, a major factor is missing from the cost figures: when depreciation of equipment is taken into account, the Computer Center looks less prosperous. The top-of-the-line microcomputer of three years ago is antiquated today. To offer classes or services to the business community, there needs to be adequate capability for upgrading computer hardware and subscribing to state-of-the-art software.

It may be more realistic for the FOM/SCU to concentrate on those businesses in which a medical school can be expected to excel: services related to health care. Further, it is in these kinds of businesses that medical students can participate and learn that which they come to FOM/SCU to learn. Thus, it comes as no surprise that the Group Practice is highly successful in generating revenue, the Computer Center is only marginally so, and the Audio-Visual Center (discussed below) does not support even itself.

Yet, cost recovery has its place; however, it is in the interest of FOM/SCU's mission for students to become computer literate, and fees might discourage students from learning to use a useful research, analytic, and record-keeping tool. The microcomputer facilities at FOM/SCU should not be expected to support the school, and should not necessarily be required to be self-supporting.

The Audio-Visual Center. Annual expenses of the Audio-Visual Center presently exceed revenues by about nine thousand LE. The Center is not generating revenue for the school, and should not be expected to do so for the reasons discussed regarding the Computer Center. The Audio-Visual Center's practice of cost recovery for some services, such as making slides for presentations, and photocopying is appropriate. It is likely that the kinds of services that would be profitable to sell outside FOM/SCU are far afield from the mission of the school.

The Microbiology and Pathology Laboratories. The microbiology and pathology laboratories are appropriately expected to be revenue-generating units. The pathology laboratory earned about two thousand L.E. last year, a negligible percent of what it costs to operate such a laboratory. As functioning regional referral laboratories, these laboratories should be major revenue generators. The explanation offered at FOM/SCU for under-utilization is that there is not much demand for services: practicing doctors rarely wait for cultures before treating, biopsies are few and far between, etc.

The management of these laboratories needs to be designed in a way that managers have productivity incentives. Moreover, FOM/SCU needs to inform doctors in the community of the importance and availability of these high quality laboratories. That some private laboratories are prospering in Ismailia is evidence that the FOM/SCU laboratories could turn a profit, since their overhead should be lower than that of private laboratories.

The Maintenance Workshop. FOM/SCU's equipment maintenance workshop is presently understaffed to even adequately maintain FOM/SCU equipment. Electronic and bio-medical engineers and technicians are in short supply. Once trained, they often seek other more lucrative employment. The FOM/SCU will continue to have difficulty in obtaining adequate staff for this unit. The unit may have more workload from within FOM/SCU than it can responsively handle. It is therefore,

unlikely that this unit can be depended upon to earn revenue for the school.

Faculty Housing. A primary source of supplemental revenue has turned out to be rents from faculty housing, which are now at a level of about 24,000 LE per year, or about one percent of the GOE budget contribution to the school. Total rents can be expected to rise somewhat in the next year as more units are occupied. Future maintenance costs of these units will also increase; however, a continuing and stable income can be depended upon from this source.

In evaluating the return on USAID's investment in faculty housing, more must be taken into account than net rent. To the extent that these units are more attractive to faculty than housing they could procure elsewhere in Ismailia for the level of rent that they pay FOM/SCU, rental of these units to faculty amounts to an additional subsidy of faculty salaries. It may be that some faculty would be unwilling to live in Ismailia. It is clearly in the interest of FOM/SCU to have its faculty living in the local community in that they are likely to spend more of their time in productive activity at FOM/SCU and less on the road. They are also more likely to be involved in the local community.

Conclusions Regarding Financial Sustainability. Revenue generation has become an integral part of FOM/SCU activities. Early imaginative leadership by the Dean and Vice-Dean, and by Boston University consultants, provided the stimulus and

lead-time needed to develop and have "on-stream" these activities prior to Project expiration. The growing vitality of Egypt's private sector in the Suez Canal Area has enhanced these efforts. There appears to be even larger potential for some of the FOM/SCU revenue generating activities than first envisaged. Consequently, FOM/SCU should be able to further develop and adequately maintain its financial viability.

7. FUTURE DIRECTIONS

Regardless of how successful this Project has been, it is an experiment that has still to be completed. What has been accomplished is admirable, but more remains to be done to ensure the long-term viability of FOM/SCU and its new approach to medical education. Decisions made in the next few years, not only at FOM/SCU but also in the Ministeries of Health and Education, centrally and in the governorates, may well determine the ultimate outcome. It is therefore critically important to carefully define areas needing further attention in the future to complete the experiment and to ensure its ultimate success.

7.1. AREAS OF CONCERN

7.1.1. Optimal Primary Care Remains an Abstract Concept in Egypt

To our knowledge, there is no ideal functioning PHC model in the health care system of Egypt, i.e., no clinic that provides first contact with the health care system on a 7-days-a-week, 24-hours-a-day basis offering comprehensive care at the primary level, with appropriate referral to specialty care, and that provides personalized continuity of care from prevention through acute and chronic services by a team of professionals. The failure of the MOH to develop such a system of care, even in the form of local demonstration clinics, has meant that FOM/SCU graduates have no opportunity to provide the care they have learned to render. The MOH has not developed true health care teams in MOH clinics that can implement a coordinated comprehensive

service, and it maintains the costly option of self-referral of patients to hospitals and specialists, which bypasses the General Practitioners in favor of more expensive and often inappropriate technical resources. If there is no change in MOH policy, we believe that the current program in medical education at FOM/SCU will ultimately fail, as students and faculty perceive that it does not prepare them for the real world.

7.1.2. Need for Career Structure in General Practice

The FOM/SCU has pioneered in introducing the post-graduate education in General Practice but to attract more candidates for this important practice in PHC they should recommend and try to convince higher authorities for the recognition of a formal career in this field.

On the other hand, the fault does not lie entirely with the MOH. As Dr. Zohair himself has recently commented, "The MOH is unlikely to provide, and the community unlikely to demand such care until its advantages and desirability are demonstrated." This is the responsibility of the school: to engage representatives of the MOH intimately in the educational endeavor so that they will understand and feel ownership of the product; and to engage in pragmatic demonstration and research to document objectively the superiority of the new systems of care. A major Health Services Research Center is mandatory in a school like FOM/SCU, which goes beyond academic clinical epidemiology and

local survey to evaluate in multi-disciplinary fashion the relative costs and benefits of innovative vs, conventional health care programs.

7.1.3. Development of FOM/SCU Scholarly Research and Faculty

At FOM/SCU there has been slow development of the scholarly base and reputation of the faculty, even for those few who have risen to more senior rank. Promotion and reputation are largely dependent on research productivity and at FOM/SCU there is comparatively little time and little financial and professional support for research. Declining support for research in all Egyptian medical schools is currently a problem. The weakened departmental structure of FOM/SCU appears to retard development of specialty - oriented groups in the faculty and appears to further impair support for scholarly development. This situation raises questions as to whether high quality faculty will be attracted to FOM/SCU after the initial enthusiasm engendered by a pioneering venture dies down. It could also adversely affect the reputation of the institution, and therefore ultimately could weaken support for the school by the Medical Establishment, the Ministries and the Profession.

7.1.4. FOM/SCU and MOH Coordination and Standards of Practice

Based on the educational approach and the clinical resources available, the MOH clinics and hospitals were selected from the beginning for clinical teaching. These clinics and hospitals do not currently have all the amenities

for the students to fully attain the educational objectives. The FOM/SCU has advanced the concept of cooperation and collaboration and more needs to be done in this regard. The standards of practice in these units need to be improved. A certified detailed plan of action prepared by MOH authorities and FOM/SCU at the governorate level could be the initial step after selecting urban and rural health units that could be developed as model prototypes for primary health care practice. There is a growing awareness of the need for higher quality MOH services, and the need to supplement GOE resources with locally generated resources for the purpose of improving these services.

7.1.5. Continuing Education for Each Member of Health Team

The directors of health clinics and their staff e.g. nurses, social workers and sanitarians have not been adequately prepared to contribute fully to realization of the educational objectives of the medical students in solving community health problems and in functioning effectively as cohesive team members. To solve this problem, continuing education needs to be organized systematically in the form of discussions, workshops, seminars and meetings.

7.1.6. Management of FOM/SCU and MOH Field Teaching Units

Management is a difficult area to develop given the rigidities and constraints of Egyptian institutions. Additional management development work is needed within the FOM/SCU, and even more so within the MOH field teaching

facilities. Although the Project's contribution to management has been quite extensive, FOM/SCU lacks key job descriptions and staff and program performance evaluation criteria. There is an absence of formal program management policies and procedures, including those for program planning, supervision and evaluation, and on absence of the essential data needed for planning, monitoring and evaluation. The organizational structure of FOM/SCU and individual management styles need to be updated to avoid a variety of institutional pathologies from further developing that affect morale and productivity. There are problems of over- and under-utilization of resources and other weaknesses in supervision and management practice. The lower priority given to management development by FOM/SCU, and the poor performance of some management consultants, has extended the amount of time needed to achieve a reasonable level of management capability within FOM/SCU.

7.2. RECOMMENDATIONS

1) That the FOM/SCU Department of General Practice teaching staff be enlarged with qualified General Practitioners. This faculty should assume responsibility for most of the year 1-3 tutoring and supervision of undergraduate students in the field. This is a compromise between having "expert" tutors and randomly chosen tutors. The General Practitioners would have broad enough knowledge to more efficiently guide the students when they are confused or using too much time in the self-education process. But the major reason for this recommendation is to lighten the burden on the basic science faculty and the highly specialized clinical faculty so that they can spend more time on their research and on post-graduate teaching in their specialties.
2) That a higher priority be given to FOM/SCU specialty departments in order that a reasonable standard of postgraduate academic and research excellence be developed and sustained in the basic and clinical sciences.
3) That future attention be given to developing the specific scientific disciplines and research capabilities of particular importance to Community Health and General Practice, including: epidemiology, biostatistics, health

ecomomics, medical sociology, and other public health and related behavioural sciences disciplines.

4) That urban and rural model PHC clinics within the MOH be developed in each governorate progressively on a phased in basis until all service units are upgraded. These clinics will facilitate the acquisition of knowledge, skills, attitudes, and experiences of medical students and of other members of the health team, while providing higher quality services to target populations. The clinics may have different styles and different approaches.

5) That communications be pursued with representatives at all appropriate levels of MOH and be focused on issues and problems that can be handled positively at each organizational level, e.g., MOH service delivery policies and health care standards; management infrastructure to support MOH clinics and hospital services; research and staff development needs of the MOH; health care financing and the sharing of resources.

6) That educational objectives of FOM/SCU be discussed in depth with all members of the teams of field health service units to assess how each member can and wishes to contribute, to assess the continuing education needs and contribute to the staff development as needed or as requested.

7) That the staff and students of FOM/SCU, and the members of MOH field health teams, assume a position of "give and take," in exchanging experiences and learning, so that they may improve the quality of care offered to the population, and that the staff of FOM/SCU and students work more closely with all members of the health team in health clinics and in hospital settings.

8) That a special study be designed and conducted to evaluate the impact that FOM/SCU has on other medical schools, on the MOH health service delivery system, and other systems of health care in Egypt.

9) That FOM/SCU give a high priority to further management development, including: the employment of a senior professional business management specialist to provide permanent on-going management capability within the FOM/SCU; the rationalization of an up-dated FOM/SCU organizational structure; preparation of organizational unit functional statements and performance oriented job descriptions; design and installation of management systems, including systems, for program planning, supervision and evaluation to support the educational, research and service programs of FOM/SCU; designing, installing and making fully operational, a practical information system; developing internal financial analysis, planning and control capability and; designing

and implementing internal inservice competency-based training courses for supervisors, managers and administrators of FOM/SCU and MOH field educational facilities.

10) That the present Dean and Vice-Dean utilize technical assistance to perform a review of their jobs for the purpose of rationalizing activities, responsibilities and authorities and identifying what should be decentralized, and how; and that local management consultants be matched with appropriate international management consultants having familiarity with decentralized participative management styles, as counterparts, in performing this and other future FOM/SCU management development work.

11) That FOM/SCU continue to develop its revenue generating activities by: expanding the size and number of Group Practices; improving revenue generation potential of its laboratories through establishing local servicing networks; conducting research and promotion in support of marketable continuing education services; selling library cards to the medical community; attracting paying foreign students; and by developing other cost-recovery and revenue generating opportunities, including greater contributions from local governments, the communities at large and through FOM/SCU alumni.

12) That a no-cost two year project extension be granted by USAID to:

- plan for the development of new and expanded educational programs for nurses and other allied health workers;
- develop continuing education programs for all members of the health services team;
- develop and monitor MOH model prototype health service units within the five governorates;
- complete basic essential management development work within FOM/SCU;
- assist the MOH in designing a major new project for substantial upgrading of its rural and urban health services in the Suez Canal and Sinai area to accomodate the new concept of health service delivery including the development of major cost-recovery measures.

13) That if unexpended USAID Project funds are insufficient to implement the above recommendations during the next two year period, that additional USAID controlled soft currency funds be made available.

14) That USAID give serious consideration to future funding of the recommended new project for substantially upgrading MOH services in the Suez Canal and Sinai area to produce a model PHC demonstration area for Egypt and for the world.

8. GENERAL CONCLUSIONS

The Suez Canal Area Medical Education and Health Services Development Project began as a very risky venture-new untested ideas in a pioneer environment devastated by recent warfare. The Evaluation Team judges the Project to be a success despite the continuing need for support to complete the experiment.

The lessons learned have been many. Risky ventures have bigger payoffs. FOM/SCU has become an internationally recognized institution in medical education with potentially great impact on other medical schools in Egypt and internationally.

The Evaluation Team also believes that this successful community-oriented problem-focused approach to higher education can be applied in other academic fields to produce graduates and post-graduates better prepared to work in their respective fields while also engaging universities in constructive community development work.

The success of FOM/SCU can be mainly attributed to the dynamic leadership of the founders, Drs. Zohair Nooman and Esmat Ezzat. Time was available for them to conceptualize and adequately incubate their ideas in collaboration with Dr. William Bicknell of Boston University and others.

The Project design was neither USAID initiated nor USAID funded. The Project design team (FOM/SCU and Boston University) were also the Project implementers. The original

principals, of what became a USAID Project through an unsolicited proposal, Dr. Nooman for FOM/SCU and Dr. Bicknell for Boston University, have served continuously as Co-Project Directors during the entire eight year life of the Project. This degree of continuity in project planning and implementation is very unusual, valuable and difficult to replicate.

A new educational institution could be established rather than attempting to change an existing one. The result: a radically new approach to medical education. Less satisfactory results in attempting to reform MOH services, confirms the disadvantages of trying to change an existing institution.

Unlike typical shorter-term USAID projects, eight years provided the time needed to do major institutional development work. More time is needed to transform the MOH. Flexibility of USAID and FOM/SCU, in revising the Project design based upon continuing informal and periodic formal Project evaluations, optimized Project contributions and impact.

And finally, the Evaluation Team concludes that Boston University and its many institutional and individual collaborators from the U.S., Canada, The U.K., The Netherlands and Australia, have provided collectively a remarkable breadth and depth of technical assistance. Their essential contribution to the success of the Project and FOM/SCU merits recognition.

ANNEXES

STATEMENT OF WORK

For

Final Evaluation of the Suez Canal Area Medical Education and Health Services Development Project (SAME/HSD)

(263–0136)

I. Terms of Performance

The period of performance is from April 1 to May 4, 1988. A six day work week will be authorized in Egypt.

II. Objectives of the Evaluation

A.1. To assess the extent to which the Project has developed and implemented a substantial community oriented medical school that successfully integrates undergraduate medical education with the Ministry of Health services and educates students to better meet the basic health needs of the population in the Suez Canal Area.

A.2. To assess impact the Project had on the Medical Community and feasibility of replication of the Medical School Curriculum to other Egyptian Medical Schools.

B.1. Has the USAID support made a meaningful and substantial contribution to the Development of the Faculty of Medicine at Suez Canal University?

B.2. What were the critical inputs and lessons learned about the Project design?

B.3. What were the critical factors that contributed to Project achievements?

III. Scope of Services

A Team of four consultants comprised of (1) a Manpower/Primary Health Care and Management Specialist (Team Leader), (2) A Medical Education Specialist, (3) A Health Economist and (4) a Health Services Delivery Specialist will, over a 29 day period, complete a final evaluation of the SCAME/HSD Project.

The Team Leader will be responsible for coordinating the activities of the other team members; insure that all team members carry out their assigned tasks and that they prepare acceptable draft reports in a timely fashion that will be incorporated into the final evaluation report. The Team Leader is responsible for the preparation and submission of the final report. In addition, the Team Leader, in conjunction with the Health Economist, will address the issues presented under the headings of Management and

Sustainability (C), Adequacy and Relevancy of Project inputs (D) and Unanticipated Benefits and Problems, Unresolved, (IV) Issues (which are described below).

Based on the available data, and with the intent of maximizing the usefulness of this evaluation to both the FOM/SCH and to USAID, the evaluation team is expected to answer the following questions:

A. Medical Education

The Medical Education Specialist will address the following:

1. To what extent has the project interventions developed and implemented a relevant community-based under-graduate medical curriculum of good quality that addresses the basic health needs of the Suez Canal area population in affordable and acceptable ways that emphasize primary care;
2. Retained a sufficient number of substantially full-time basic science faculty resident in Ismailia;
3. Retained sufficient number of substantially full-time clinical faculty resident in Ismailia, Port Said and Suez;
4. Developed the capacity to sustain essential educational support activities of a quality and capacity sufficient to meet the needs imposed by the overall curriculum, (Educational support activities include):
   - a central medical library
   - mini-libraries at clinical teaching sites
   - an audio-visual (educational media) production facility
   - teaching laboratories including:
     - clinical skills lab.
     - microbiology lab.
     - multi-purpose student labs.
   - an equipment maintenance function sufficient for on-site preventive maintenance and first line repair of all FOM/SCU owned and post-graduate programs including:
     - trained and competent technicians
     - maintenance equipment
     - spare parts management system including inventory and ordering; and
5. Maintained a class size of less than 100.
6. Provided for continuing education.

B. Health Services and Clinical Teaching

The Health Services Delivery Specialist will address the following:

1. To what extent has the Medical School conducted the bulk of clinical teaching in existing MOH clinics and hospitals;
2. Developed and maintained good working relationships with the MOH, particularly at the governorate, hospital and clinic levels;

3. Improved the quality and relevance of services in MOH clinics and hospitals through the involvement of faculty and students in day-to-day MOH services; and
4. Established and sustained a general practice residency program of good quality that has academic and clinical tracks and whose content is relevant to local health care needs.

C. Management and Sustainability

The Team Leader and Health Economist will address the following:

1. Developed a management system sufficient to support the unique teaching, service and research needs of FOM/SCU.
2. Developed the capacity to quantitatively monitor current and anticipate future capital and operating costs of the overall FOM/SCU program;
3. Developed management capacity to anticipate the need to modify program scope so that the basic objectives of the FOM/SCU program is sustained, i.e., annual training plans, inventory system, etc.
4. Developed and maintained supplemental sources of revenue sufficient to assure the long-term program integrity of FOM/SCU. Specifically:

A Group Practice that will assist in stabilizing the faculty by providing a good quality practice environment, supplemental income to the faculty and cash flow from the Group Practice to FOM/SCU.

- Other activities needed by FOM/SCU that also generate new revenue. Specifically:
  - the computer laboratory
  - the audio-visual center
  - the maintenance workshop
  - the microbiology lab
  - rents from faculty housing
  - the pathology laboratory,

5. Developed capacity to select, train or arrange to train, retain and promote personnel sufficient to maintain necessary academic and administrative support for FOM/SCU; and
6. Developed and used evaluation tools for determining student competency as well as faculty and staff performance. Have mechanisms in place for linking the results of evaluation to student education, curriculum modification, faculty selection and training as well as FOM/SCU management practices.

D. Adequacy and Relevancy of Project Inputs

The Team Leader and Health Economist will address the following:

1. Have Project inputs been applied in ways that contributed effectively to project objectives?

2. Identify project inputs that were key and crucial to project achievements.

IV. Unanticipated Benefits and Problems, Unresolved Issues

All Team Members will address the following:

1. Has the Project met unanticipated difficulties? If so, have they been reasonably addressed?
2. Has there been unanticipated benefits? If so, specify.
3. How might other AID-assisted Health Educational projects benefit from the SCAME/HSD experience.
4. Could this educational model be adapted to other educational disciplines.

METHODS AND PROCEDURES

The Evaluation Team will perform the following:

1. Review basic Project documentation, including technical reports and financial information.
2. Interview SCAME/HSD staff, USAID personnel, MOH personnel and other appropriate contacts.
3. Visit field clinical teaching sites as appropriate.

VI. Reporting Requirements

1. Draft Report to be submitted to MOH and USAID for review and comments three days prior to the end of period of service.
2. Debriefing for USAID and MOH by the entire team on major evaluation findings and recommendations.
3. Final Report acceptable to USAID and MOH to be submitted in five copies prior to the departure of the Team Leader, but not later than May 4, 1988.

SITES VISITED AND CONTACTS

SCU/Ismailia

Dr. Ahmed Ismail Khodair, President of SCU

FOM/SCU

Faculty:

Dr. Esmat Ezzat, Dean of FOM
Dr. Zohair Nooman, Vice-Dean of FOM and Project Co-Director
Dr. Adel Nessim, Faculty, Radiologist
Dr. Laila Makhlouf, Faculty, A. Prof. Parasitology, Coordinator of Educ. Phase III
Dr. Mohamed Saleh, Faculty, Pharmacology, Responsible for computer section
Dr. Abdel Raouf El Dieb, Faculty, Int. medicine, responsible for Audio-Visual Section
Dr. Attef El Akhras, Faculty, dermatology, responsible for Evaluation Committee and Group Practice
Dr. Youseff Wahieb, Faculty, Community Medicine, reporter of Health Services Committee
Dr. Fathi Maklady, Faculty, Int. Medicine, Coordinator of Phase I, responsible for Committee for Training and Cultural relations
Dr. Tymoor Khattab, Faculty, Gynaecology and Obstetrics, Coordinator of Phase II
Dr. Maged Khattab, Faculty, General Practice

Dr. del Meshriky, Faculty, Community Med., Assit. Coordinator for Educ. Phase
Dr. Salma El Ghandour, Faculty, Paediatrics, responsibility in the Research Center
Dr. Fatma Abdel Baky, Faculty, Community medicine

Dr. Amany Refaat, Faculty, Community medicine, Assist. Coordinator for Phase II
Dr. Yasser Hassan Ahmed, Faculty, Gen. Practice Dep., Indulged in Tal El-Kabeir Project
Dr. Mohssen Ahmed, Faculty, Gen. Practice Dep.
Dr. Abdel Malak Mohamed Nasar, Laboratories System Represntative

Administrative-Management Personnel:

Mr. Rabea El Anany, FOM/SCU Chief Administrator
Ms. Samia Abdel Al, Personnel Affairs System Representative
Ms. Mervat Esmat Abdel Hamid, Student Affairs
Mr. Ibrahim Amed Abu El saode, Libraries System
Ms. Aziza Shafik Shenoda, Staff Affirs System
Mr. Attia Abdel Salam, Inventory System

Ms. Dalia A. Al-Aswad
Mr. Rabea Radwan El-Anany
Admin. Supervisor of Group Practice
Eng. Nadia Abdel-Fattah, Maintanance Eng.
Mr. Ismaiel Mohamed Badr, Procurement/Inventory
1st, 2nd, 3rd,4th,5th,6th year and Graduate
Students, including: Mr. Tarek Youseff, Graduate; Mr. Ahmed Ibrahim El-Saka, Student, 6th year; Miss Sherian Abdel Hameed Shalaby, Student, 1st year; Miss Mona Atwa, Student, 5th year.

Port Said Governorate:

Dr. Hassan Tawfik, Director General of Health

Dr. Hosni El-Rawadi, A. Professor, Internal Medicine, FOM Representative in Port Said
Dr. Farag Rizk, Lecturer, Immunology
Dr. Moussa Abdel El-Hamid, Lecturer, Orthopedics, Responsible for Field Training in Port Said

MOH General Hospital:

Dr. Mohsen Ahmed Merdan M.Sc. Surgery
Dr. Khaled El-Hendawy, Resident, Surgery
Dr. Hamedy Saad, House officer
Dr. Ashref Ragab, House officer
Dr. Ali El-Manshawi, (Dept. of Physiology, Faculty of Medicine)
Other Personnel.

Kuwait Urban Health Center:

Dr. Saad El-Maghraby, Center Director
Other Staff, Personnel, and Students

El-Salam Urban Health Center:

(Totally New, not yet staffed or functioning)

Kabboti Health Center and Training Center:

Dr. Ibrahim El-Zayyat, Center Director
Other Staff, Personnel, and Students

Suez Governorate:

Mr. Tahsin Shanan, Governor of Suez
Representative of the Director General of Health

Infectious Disease Center:

Dr. Resident in charge
Dr. Mohamed El-Gohary, Clinical Pathology Specialist (School of Medicine)
Other Faculty, School of Medicine

Geneva Rural Health Unit:

Dr. Mervat Abdel Salam, Unit Director.
Nurse Fatma fadl El Moulla, Unit nurse.
Other Staff.

Sabbah Urban Health Center:

Dr. Mohamed El-Hareery, Center Director
Other Staff.

Abu-Sultan Rural Hospital:

Dr. Zaki Mohamed Zaki, Director
Other Staff.

Ismailia Governorate:

Representative of the Director General of Health

Ismailia General Hospital:

Dr. Abd El Raouf Deib (Internal Medicine)
Dr. Ahmed El Labban (Surgery)
Other Faculty, Personnel, and Students

El Sheich Zaid Urban Health Center:

Dr. Mohamed Awad, Director
Dr. Maged Khattab, Tutor
Other Staff and Students

Mosque Clinic

Dr. Hassam Hamdi, Adminstrator
Other Staff and Personnel

Project Office/Ismailia:

Dr. Mohamed Ibrahim Shehata, Management Consultant
Mr. Ahmed El Labbany, Adminstrator
Other Personnel

Ain Shams University, Faculty of Medicine, Cairo

Dr. Hamed Khalil, Chair-Dept. of Parastitology
Dr. Moustafa Kamal, Vice-Dean, FOM
Dr. Maki, Vice Chair, Department of Pathology
Other Staff

USAID/Cairo:

Mrs. Jan Ladatto, Evaluation Officer
Mr. Charles Mantione, Health Officer

Boston University:

Dr. William Bicknell, Project Co-Director.
Ms. Julia Terry (Former Boston University)
Other Personnel

And Many Other FOM/SCU and MOH Personnel for Whom Names and Titles were not Obtained by the Evaluation Team

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76. Summary Report of Progress for Phase II. Increment 1, Evaluation. The Development of Medical Education and Health Services for the Suez Canal Area under Canal Cooperative Agreement of the Boston University and the Suez Canal University. Boston University Health Policy Institute, Boston, Mass., Sept. 1983.

77. Technical Proposal, Medical Education and Health Services for the Suez Canal Area, submitted by Boston University's Health Policy Institute to the United States Agency for International Development, Washington, D.C., U.S.A., August 27, 1979.

78. The Other Arm of the SCU/FOM Program, Approaching the H.C.D.S. (Health Care Delivery System), Dr. Zohair Nooman, Dean.

79. The project of Family Medicine Concept and Records in Elshiekh Zaid Health Centre, Dr. Maged Khatab, Principale Investigator of the Project, Lecturer in the Department of General Practice (MRCP) London.

80. Totals for Sections 1, 2 and 3 of the FOM/SCU expenditures for July 1984 through June 1987, with Hemization of Section 2.

81. Undergraduate Curriculum Outlines for Phase I, II and III, FOM/SCU.

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Phase III - Three Years

Project Title: Medical Education and Health Services for the Suez Area - Phase III

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program Sector Goal: The broader objective to which this project contributes: To improve the quality of life by making basic health services, particularly those related to primary care, including MCH, family planning, nutrition, and environmental health, available and accessible to the majority of the population of the Suez area at an affordable cost.	Measures of final achievement: 1. Increase the proportion of the population with access to the appropriate primary care services 2. The change in the relevance of of health programs to meet regional health problems. 3. The increased efficiency of utilization of all health resources.	1. Infant and maternal mortality statistics; school and industrial attendance records. 2. Community health, nutrition and population surveys. 3. WHO and CDC communicable disease statistic reports. 4. WHO Demographic and Statistics Yearbook. 5. Special surveys and reports.	Assumptions for achieving goal targets: 1. Local and National Government interested in improving the health status of the population. 2. Assistance in the health sector will be acceptable and will improve health status. 3. That the efficient utilization of trained manpower is a priority. 4. An extensive training program is necessary.

ANNEX 9.4

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Project Title: Medical Education and Health Services for the Suez Area - Phase III

Phase III - Three Years

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose: a. Integration of medical education and health services. b. Education and training of primary care physicians as direct providers and health team managers to work effectively within resource constraints	Conditions that will indicate purposes have been achieved: a. Clinical training emphasizing primary health care is ongoing in support of FOM/SCU undergraduate and postgraduate curriculum at MOH clinical training sites. b. First six years of students have been accepted and trained according to curriculum, and first class has been graduated.	Reports by the contractor a. On-site visits to assess the extent to which the new educational system has begun to function. b. Reports from the Suez Canal University Faculty of Medicine.	1. The Ministry and University are willing to work together and make necessary changes in order to accomplish project purpose. 2. Primary responsibility for achieving project purpose rests with FOM/SCU.

ANNEX 9.4

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Project Title: Medical Education and Health Services for the Suez Area - Phase III

Phase III - Three Years

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
2. Undergraduate Curriculum:			
Students in training	50 - 100 students per class taught per year	Quarterly reports	Students perform adequately to progress from year to year
Curriculum consortium functioning	Curriculum development assistance by consortium members	Quarterly reports	Periodic technical consultation needed as curriculum develops
Curriculum developed	Curriculum for 6-year undergraduate education program developed	Written curriculum	Curriculum needed to teach
Media center operating	One media center	Quarterly reports	Media center needed to support teaching method/curriculum
Medical library	One medical library at FOM/SCU; clinical reference material libraries at clinical teaching sites	On-site inspection and quarterly reports	Carefully planned medical library needed to support FOM/SCU and clinic based curriculum
Integration of clinical curriculum	Year 4-6 students in clinical clerkships	Quarterly reports	Integration of clini. urriculum required to achieve pr. .ct goals
Participant training	Sufficient seminars/workshops and short courses to achieve the above outputs	Training plan; quarterly reports	Training is critical to suport all educational function and curriculum development activities

ANNEX 9.4

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Phase III - Three Years

Project Title: Medical Education and Health Services for the Suez Area - Phase III

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of outputs:	Measurement of outputs:	Assumptions for achieving outputs:
1. Strengthening Management			
Design of organizational structure and detailed management plan for FOM/SCU.	One written organizational design; one management plan	Quarterly report	FOM/SCU recognizes need for strengthening management in order to achieve project goals
Feasibility study of potential revenue supplementation activities and report on implementation.	One feasibility study; one implementation report	Quarterly Report	Need to develop supplemental sources of revenue seen as high priority of FOM/SCU
Training materials	One training plan; and one videotape on management principles and applications	Quarterly Report	Strengthening management requires training
Training in management/administration of medical education	At least one workshop for training administrative staff in Egypt; Medium and long term training for at least four FOM/SCU managers	Training plan and quarterly report	
Decreasing level of project subsidy to FOM/SCU	Zero subsidy by end of Year two in all critical areas	Budget and staffing of project and FOM/SCU	FOM/SCU's independence of ongoing foreign donor support critical to success of project at end of project
Feasibility study of development of central administrative unit & Development of central administrative unit, if study indicates feasibility.	One feasibility study; and one implementation report	Quarterly report	Centralized administrative system seen as critical for coordination and efficient utilization of FOM/SCU resources

ANNEX 9.4

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Phase III - Three Years

Project Title: Medical Education and Health Services for the Suez Area - Phase III

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
OUTPUTS - continued			
5. Clinical Laboratory Services			
Infectious disease and epidemiology Center	One such Center staffed and operating	On-site inspection; quarterly reports	FOM/MOH will provide equipment and staff for Center
Senior staff of Center trained	Two infectious disease specialists trained	Training plan; quarterly reports	Trainees available and selected
Central clinical laboratories serving Suez region	Microbiology and clinical pathology laboratories collecting, analyzing and reporting results for samples provided by physicians in the Suez area	Quarterly reports	Need for clinical laboratory recognized by Suez region physicians
6. Health Services			
Improved health services at clinical training sites	Improvement in services sufficient to provide relevant and affordable primary health care clinical teaching experience	Reports analyzing content and quality of services; on-site inspection	Improved health services are needed for adequate clinical teaching capacity
Training supporting improved primary health care services	One mobile seminar per year to relevant community oriented primary care health centers in Tunisia; in-service training seminar and slide/tape or videotape on primary care	Training plan; quarterly reports	Trainees available and selected
Imporved basic health team - nursing skills	At least 20 nurses having completed in-service training on-site with documented improvement in basic and teamwork skills	Training plan; quarterly report	Improved basic nursing skills critical to improved service

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Phase III - Three Years

Project Title: Medical Education and Health Services for the Suez Area - Phase III

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
OUTPUTS - continued			
3. Postgraduate Program in Family Practice and General Practice			
Adequate clinical supervision for postgraduate training	FOM/SCU faculty sufficient in number to supervise program by end of project	Quarterly reports	Faculty training is needed to develop postgraduate training at FOM/SCU
FOM/SCU faculty trained to teach postgraduate program	At least six faculty having completed Family Practice fellowships	Training plan; quarterly reports	
4. Continuing Medical Education			
Postgraduate medical education ongoing	At least nine faculty and six outstanding General Practice graduates trained during life of project	Training plan; quarterly reports	Continuing medical education is needed to enhance faculty's teaching, research and service capabilities
Scientific method and research design training	One course in Egypt per year	Training plan; quarterly reports	

ANNEX 9.4

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Phase III - Three Years

Project Title: Medical Education and Health Services for the Suez Area - Phase III

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
II OUTPUTS - continued			
6. Health Services - continued			
Improved functioning of staff at model health centers	Model health center staff have participated in in-service training sessions with specific community oriented primary care objectives	Assessment of skills; quarterly reports	Improved function of health center staff critical to improved service
7. Primary Care Group Practice			
Ismailia Group Practice operating and self-sufficient	Initial Group Practice continues to operate at better than breakeven	On-site review; financial reports	Financially viable group practice(s) required to attract and retain high quality faculty and staff at FOM/SCU
Evaluate feasibility of establishing second Group Practice and implement if study indicates feasibility	One feasibility study; if feasible - one implementation report and achievement of breakeven by end of project	On-site review; quarterly and financial reports	
8. Facilities Development			
Design and develop model health centers	At least four model health centers operating	On-site review; quarterly reports	Renovation of project facilities is a prerequisite to success of project activities
Plan and design community hospital to contribute to project goals	One architectural study	Written report; quarterly reports	Proper design of community teaching hospital is critical to success of project activities

ANNEX 9.4

PROJECT DESIGN SUMMARY: LOGICAL FRAMEWORK

Phase III - Three Years

Project Title: Medical Education and Health Services for the Suez Area - Phase III

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
II OUTPUTS - continued 9. Equipment Maintenance Equipment repair and maintenance center functioning	One equipment repair and maintenance center, staffed with trained technical personnel	Records of equipment purchase; on-site inspection; quarterly reports	Greater Glasgow Health Board availability continues; space is provided by FOM/SCU; graduates of training program adequately funded on the job.
III INPUTS 1. Technical expertise: a) Primary care b) Curriculum development c) Health planning and management d) Public health e) Facility design 2. Faculty of Medicine and MOH staff 3. Selected support and Construction materials 4. Project support in Boston & Egypt	Salaries Fringe benefits Consultants Goods and services purchased International/domestic travel Total direct costs Indirect costs External evaluation	Project expenditure records and input	1. The grant recipient has the unique experience and special capability necessary to carry out the project successfully 2. The Egyptian side will provide trainees, facilities and other necessary support

9.5 PROJECT OUTPUTS

TRAINING SUMMARY
Faculty of Medicine, Suez Canal University
Co-operative Agreement, Boston University /CA
Project Implementation Letters/PILs : USAID-FOM&CU

TRAINING IN WEEKS

	3/80-6/82 CA	7/82-7/85 CA	8/85-now CA	7/84-now PIL	TOTAL WEEKS
I EDUCATION SUPPORT					628
A Curriculum	76	73	13		176
B Library		2			2
C Audio-Visual	12	18			30
D Equip. Repair	72	72			144
E Infectious Disease	3	6			9
F IED Masters			104		104
G Environ. Health			8		8
H Computer Lab		12			12
I Cont. Med. Educ.	12	128	3		143
J Other					0
II MANAGEMENT		9		20	29
III HEALTH SERVICES					173
A Group Practice		6			6
B General Practice			12		12
C MOH & Comm. Hlth	81	42	32		155
TOTAL	258	374	178	20	830

Overseas Training for SCU/FOM Staff for Periods Over One Year. (GOE Financed)

AME	COUNTRY	AREA OF TRAINING	DEGREE	PLACE OF WORK AT FOM	REMARKS
r. Emad Ibraheem A. Fattah	USA	Biochemistry	Doctoral	Biochemist. Dept.	1979 - 1986
r. Samir Mohamed A. Moniem	"	"		" "	Joint Supervis... still in the US.
r. Nadia Redah Hassan	"	Pathology	"	Pathology Dept.	
r. Ali Ahmed El-Menshawi	"	Physiology	"	Physiology Dept.	
r. Nader Ahmad Morad Mokhtar	"	Pathology	"	Pathology Dept.	
r. Ali Abdel-Meguid El-Hag.	"	Emionology	"	Microbiology Dept.	
r. Sherif Islam Medhat	UK	Haematology	"	Internal Med. Dept.	Personal expens... Still in the UK.
r. Gamal Abdel-Rahman Hassan	W. Germany	Anatomy	"	Anatomy Dept.	Still in W. Ger...
r. Raouf Abdel-Rahman Fadel	Canada	Anatomy	"	" "	Still in Canada.
r. Farag Ibraheem Farag.	USA	Emionology	"	Microbiology Dept.	Still in the US
r. Galal Mohamad Lotfi	UK	Gyn./Obst.	"	Gyn./Obst. Dept.	Joint Supervis...
r. Mamdouh El-Mahdi Saied	"	" "	"	" "	" "
r. Mohamed El-Sayed Hafez	"	" "	"	" "	" " Still in U.K.
r. Ahmad El-Sayed Rabea	USA	" "	"	" "	Joint Supervis... Still in USA.

ANNEX 9.3

Overseas Training for SCU/FOM Staff (Continued)

(GOE Financed)

E	COUNTRY	AREA OF TRAINING	DEGREE	PLACE OF WORK AT FOM	REMARKS
Mohamad Moselhi M. Shawki	USA	Gyn./Obst.	Doctoral	Gyn./Obst. Dept.	International Peace Felowship 21 months.
Osama Yousef El-Basiouni	Belgium	Ophthalmology	"	Ophthalm. Dept.	2 years.
Medhat Kamal El-Sayed	Canada	Pharmacology	"	Pharmacology Dept.	18 months Trainin
Hesham Ahmad Fathi	"	Pedicatrics	"	Pediatrics Dept.	Joint Supervision
Ismail Sherin Hamed	USA	Community Medicine	"	Communit Med. Dept.	Still in USA.
Ashraf Mohamad Abaza	"	Parasitology	"	Microbiology Dept.	" "
Esam El-Saied Mousa	"	Community Medicine	"	Community Med. Dept	" "
Essam Rashed Ghazal	UK	Orthopaedics	"	Surgery Dept.	Personal Expens.
Medhat Nagy El-Masri	USA	Bacteriology	"	Microbiology Dept.	" "
Mohamad Ali Ahmad	USA	Histology	"		Joint Supervision.
Anwar Abdel-Ati Heiba	"	Bacteriology	"	Microbiology Dept.	" "
Mohamad Sami Afifi	"	Bacteriology	"	Microbiology Dept.	
Layla Mohamad El-Kadi	UK	Radiology	"	Internal Med.Dept.	16 months

ANNEX 9.5

Overseas Training for Genral Practice Faculty Staff Members.

(GOE Financed)

NAME	DEGREE	PLACE OF WORK AT FOM.	REMARKS
Dr. Mohamad Mohammady Awad Diab.	Membership of the Royal College of General Practitioners. Gay Hospital, the UK.	General Practice Departemnt.	Training started on Jan. 1,'81 & was sceduled to end on Dec. 31,82 then extended twice till Oct. 31, 1983.
Dr. Maged El-Sayed Khattab.	" " " "	" "	" " "

Name of Applicants Who Fulfilled the Master Degree in Medical Education, at University of Illinois :- (USAID FINANCED)

(1) Dr. Moustafa Abdel Aziz.
(2) Dr. Ossama El Okda.
(3) Dr. Salma El Ghandour
(4) Dr. Ahmed Atef
(5) Dr. Hashem Rashwan
(6) Dr. Mohamed Saleh
(7) Dr. Somaia Hosny
(8) Dr. Fatma Abdel Baki
(9) Dr. Amany Refaat
(10) Dr. Maged Khattab
(11) Dr. Essam El Said
(12) Dr. Raouf Osman
(13) Dr. Soubhi Ahmed Soubhi

ANNEX 9.5

Following are the 1st graduates of FOM/SCU that have been awarded the Bachelor of Medicine and Surgery on Oct. 1987 :-

Student's Name	Degree
(1) Ahmed Mahmoud Mustafa Ali	Very Good
(2) Ahmed Yousef Farag Rabei	Very Good
(3) Usama Moheb Ibrahim	Very Good
(4) Ashraf Albear Khalil Ibrahim	Good
(5) Ashraf Ra'fat El-Sayed Haggag	Very Good
(6) Ashraf Mohamed Mohamed Ali	Very Good
(7) Ashraf Mahmoud Mohamed Ragab	Very Good
(8) Amani Ibrahim Ibrahim	Very Good
(9) Gamal Ali Hasan Shehota	Very Good
(10) Gamal Mansour Mohamed	Good
(11) Hasan Abdulla Kasem	Good
(12) Hasan Mohamed Hasan El-baz	Very Good
(13) Helmy Zakaria El-Sayed Rayan	Very Good
(14) Hamdy Sa'd Mohamed Abdulla	Very Good
(15) Hanan Mohamed Muftah Khalif	Very Good
(16) Zakeya Mahdy Ibrahim Ahmed	Excellent
(17) Sameh Fawzy Ahmed	Very Good
(18) Seham Abdul-Hamid Hasaballa	Very Good
(19) Tarek Ibrahim Rashad	Very Good
(20) Tarek Fouad Yousef Habib	Excellent
(21) Amer Hussein Mahmoud El-Ashmawy	Good
(22) Abdul-Hamid Hasan Abdul-Hamid	Very Good

Student's Name	Degree
(23) Ezzat Ahmed Ali Ibrahim	Very Good
(24) Azza Abdul-Hamid Mohamed	Excellent
(25) Aziza Sayed Mohamed	Very Good
(26) Esam Hasan Ali El-Killini	Very Good
(27) Ali Saber Mohamed	Very Good
(28) Lamya'a El-Sayed Mohamed	Very Good
(29) Lidya Emozis	Good
(30) Mohamed Ahmed Mohamed Mustafa	Good
(31) Mohamed Mohamed Ahmed Mursi	Excellent
(32) Mohamed Saleh Mustafa	Very Good
(33) Mohamed Nagi Ahmed	Excellent
(34) Mervat El-Sayed Ali	Very Good
(35) Mustafa Ahmed Fouad	Very Good
(36) Maha Mohamed Lutfi Mohamed	Very Good
(37) Michael Mena Mechael	Very Good
(38) Nadya Yousef Mohamed	Very Good
(39) Nevine Mahmoud Mohamed Suliman	Very Good
(40) Hanem Sa'd Abdul-Azeem	Very Good
(41) Wa'el Abdul-Rahman	Very Good
(42) Mayyada Mohamed Mounir Taha	Excellent
(43) Mervat El-Shabrawi El-Ghareeb	Excellent
(44) Mos'ad Ali Ali Omar	Good.

LIST OF APPLICANTS WHO FULFILLED THEIR MD DEGREE AT FOM/SCU

	APPLICANT	FIELD	DATE
1)	Dr. Hatem Abul-Wafa Zuhdi	Dermatology&Venereology	Apr. 83
2)	Dr. El-Saeed Mohamed Gad El-Dusuki	General Surgery	Oct. 83
3)	Dr. Mohamed Adel Mohamed El-Deab	Orthopaedics	Oct. 84
4)	Dr. Mohamed Saleh Mohamed Hasan	Pharmacology	Apr. 85
5)	Dr. Mohamed Farid Ahmed Fahmi	Bacteriology	Oct. 85
6)	Dr. Mustafa Ali Mohamed Abu Ali	General Surgery	Oct. 85
7)	Dr. Mohamed Usama Ibrahim	Pathology	Oct. 85
8)	Dr. Makram Hussein Hommam	Pathology	Oct. 85
9)	Dr. Usama Mohmoud Yousef	Ophthalmology	Apr. 86
10)	Dr. Hasan Nasrel-Eslam Mohamed	Microbiology	May. 86
11)	Dr. Mamdouh El-Mahdy Saeed	Gynaecology	Apr. 86
12)	Dr. Galal Lutfi Mohamed Ali	Gynaecology	May. 86
13)	Dr. Ala' El-Din El-Zohairy	Orthopædics Surgery	Oct. 86
14)	Dr. Adel Mounir Meshriki	occupational Medicine	Oct. 86
15)	Dr. El-Sayed Abdul-Fattah El-Zayat	General Surgery	Oct. 86
16)	Dr. Asem Khalaf Alla Khaleifa	Internal Medicine	Feb. 87
17)	Dr. Hasam Ahmed Ali El-Shahali	Physical Medicine	Feb. 87
18)	Dr. Hashem Mohamed Rashwan	General Surgery	Feb. 87
19)	Dr. Yousef Waheeb Malak	General Health & Prerentive Medicine	Feb. 87
20)	Dr. Samir Mohamed El-Hadi	Pathology	Apr. 87
21)	Dr. Mustafa Abdul-Aziz	Occupational Medicine	Feb. 87

LIST OF STUDENTS WHO FULFILLED MASTERS DEGREE IN GENERAL PRACTICE AT FOM/SCU

1.	Dr. Ahmed Abdul Hamid Ali	April, 83
2.	Dr. Abdul Sadek Mohamed Bahnasi	April, 83
3.	Dr. Afaf Ibrahim Abul Yazeed	April, 83
4.	Dr. Eisha Ahmed Ibrahim	April. 83
5.	Dr. Omran Abul-Latif	April, 83
6.	Dr. Mohamed Awad Mohamed Othman	April, 83
7.	Dr. Mohamed Yehia El Sayed Abdul Al	Oct., 83
8.	Dr. Michael Labib Eisa	Oct., 83
9.	Dr. Saber Mohamed Ali Mansi	April, 83
10.	Dr. Saeed Mustapha Mohamed	April, 83
11.	Dr. Saad Mohamed Ali	April, 83
12.	Dr. Shawki Butrus Ghali	April, 83
13.	Dr. Youssef Mohamed Ali Obeid	April, 83
14.	Dr. Youssef Ali Abdullah	April, 83
15.	Dr. Emad Mohamed Zaki ElKhadaire	Oct., 84
16.	Dr. Helmi Khalil Soliman	April, 84
17.	Dr. Ibrahim Hassan Badr	April, 84
18.	Dr. Ismail Ibrahim Khalifa	April, 84
19.	Dr. Mohamed Abdul Khalek Ali	April, 84
20.	Dr. Mahmoud Abul Moniem Mahmoud	April, 84
21.	Dr. Sami Mohamed Halawa	Oct., 84
22.	Dr. Samir El Sayed Ghweaba	Oct., 84
23.	Dr. Osama Mohamed Eid	Oct., 84
24.	Dr. Abdul Wahab Abdulla Hussein	Oct., 84
25.	Dr. Magid Abdul Fattah El Khonli	Oct., 84
26.	Dr. Mahmoud Hassan Sayed Ahmed	April, 88
27.	Dr. Nagwa Ibrahim Ahmed	Oct., 84
28.	Dr. Raouf Hamed Othman	April, 85
29.	Dr. Zaki Mohamed Zaki Hussein	April, 85
30.	Dr. Essam Eldin Mohamed El Saeed	Oct., 85
31.	Dr. Salwa Mohamed Ali El Sarraf	Oct., 85
32.	**Dr. Ibrahim** El Sayed El Zayat	April, 87
33.	**Dr. Mohamed** Ahmed Abdul Halim	Oct., 86
34.	**Dr. Nadia** Rizkalla Michael	Oct., 86
35.	**Dr. Nessim** Albert Nessim	April, 87
36.	**Dr. Sawsan** Mohamed El Sayed	Oct., 86
37.	Hassan Hassan Rehan	April, 87
38.	Ali Mohamed Ali El Egeizy	April, 87
39.	Nagwa Emil Habib	Oct., 87
40.	Abaul Magid Ahmed Abul Magid	Oct., 87
41.	Hassan Mahfouz Abdulla	Oct., 87
42.	Osama Mohamed Auwar Khater	Oct., 87
43.	Mohsen Ahmed Moheb El Din	Oct., 87
44.	Yasser Hassan Ahmed	Oct., 87
45.	El-Amira Mohamed Youssef	Oct., 87

List of Applicants Who Fulfilled the Master Degree in Medicine, at FCM/SCU:

Applicant	Field of	Date
(1) Dr. Shawki Buturs Ghali	General Practice	Apr. 83
(2) Dr. Ahmed Abdul-Hamid Ali	General Practice	Apr. 83
(3) Dr. Yousef Mohamed Ali Ebeid	General Practice	Apr. 83
(4) Dr. Eisa Ahmed Ibrahim	General Practice	Apr. 83
(5) Dr. Yousef Ali Abdulla	General Practice	Apr. 83
(6) Dr. Omran Abdul-Latif	General Practice	Apr. 83
(7) Dr. Sa'd Mohamed Ali	General Practice	Apr. 83
(8) Dr. Saeed Mustafa Mohamed	General Practice	Apr. 83
(9) Dr. Abdul-Sadek Mohamed Bahnasi	General Practice	Apr. 83
(10) Dr. Saber Mohamed Ali Mansi	General Practice	Apr. 83
(11) Dr. Mohamed Awad Mohamed Othman	General Practice	Apr. 83
(12) Dr. Afaf Ibrahim Abul-Yazeed	General Practice	Apr. 83
(13) Dr. Safe El-Nasr Mahmoud Abdul-Aziz	Otthopaedics Surgery	Oct. 83
(14) Dr. Mayy Muselhy Mohamed Shawki	Physiology	Oct. 83
(15) Dr. Mohamed Salah El-Din Khidr	Internal Medicine	Oct. 83
(16) Dr. Mohamed Yehia El-Sayed Abdul-Al	General Practice	Oct. 83
(17) Dr. Michael Labib Eisa	General Practice	Oct. 83
(18) Dr. Ali Khalil Ali Khalil Ali	Internal Medicine	Oct. 83
(19) Dr. Abdul-Hamid Ahmed Abdul-Hamid	Internal Medicine	Oct. 83
(20) Dr. Mohamed Ibrahim Mohamed	Anaesthesia	Apr. 84
(21) Dr. Ezzat Mohamed El-Taher	Anaesthesia	Apr. 84
(22) Dr. Mohamed Emad-El-Din Abdul-Ghaffar	Anaesthesia	Apr. 84
(23) Dr. Mohamed Ibrahim Abdul-Gawad	Anaesthesia	Apr. 84
(24) Dr. Sobhi Ahmed Sobhi	Community Medicine	Apr. 84
(25) Dr. Amina Mohamed Shafik	Gynaecology	Apr. 84
(26) Dr. Mohamed Musilhi Shawki	Gynaecology	Apr. 84

Applicant	Field of	Date
(27) Dr. Ahmed Zakaria Ahmed Rabei	Gynaecology	Apr. 84
(28) Dr. Anwar Ahmed Abdul-Ati	Microbiology	Apr. 84
(29) Dr. Mohamed Adel Ahmed Rashad	Orthopaedics Surgery	Apr. 84
(30) Dr. Ali Saeed Ali Nono	Orthopaedics Surgery	Apr. 84
(31) Dr. Suliman Ali Hasan	General Surgery	Apr. 84
(32) Dr. Yousri Nabih Ibrahim	General Surgery	Apr. 84
(33) Dr. Taha Ali Mohamed Ma'ati	General Surgery	Apr. 84
(34) Dr. Mahmoud Abdul-Mon'em Mahmoud	General Practice	Apr. 84
(35) Dr. Helmi Khalil Suliman	General Practice	Apr. 84
(36) Dr. Ibrahim Hasan Badr	General Practice	Apr. 84
(37) Dr. Mohamed Abdul-Khalek Ali	General Practice	Apr. 84
(38) Dr. Ismail Ibrahim Khalifa	General Practice	Apr. 84
(39) Dr. Samir El-Sayed Ghweaba	General Practice	Oct. 84
(40) Dr. Usama Mohamed Eid	General Practice	Oct. 84
(41) Dr. Emad Mohamed Zaki El-Khodairi	General Practice	Oct. 84
(42) Dr. Sami Mohamed Halawa	General Practice	Oct. 84
(43) Dr. Samir Mohamed Abdul-Monem	Biochemistry	Apr. 85
(44) Dr. Mustafa Ismail El-Maghrebi	Gynaecology	Apr. 85
(45) Dr. Ahmed Sa'd Eid Maysara	Gynaecology	Apr. 85
(46) Dr. Mahmoud Ibrahim Salman	Gynaecology	Apr. 85
(47) Dr. Hasan Mohamed Ahmed El-Wakeel	Gynaecology	Apr. 85
(48) Dr. Fathi Mohamed Ibrahim	Gynaecology	Apr. 85
(49) Dr. Magdi El-Saeed El-Sayed	Gynaecology	Apr. 85
(50) Dr. Nagwa Ibrahim Ahmed	General Practice	Apr. 85
(51) Dr. Sherif Mohamed Mohamed Abaza	Parasitology	Apr. 85
(52) Dr. Iman Mustafa El-Hamshari	Parasitology	Apr. 85
(53) Dr. Ahmed Farag Abdul-Magid	Orthopaedics Surgery	Feb. 85
(54) Dr. Mohamed El-Tabi Abbas	Orthopaedics Surgery	Feb. 85

Applicant	Field of	Date
(55) Dr. Mohamed Amro Mustafa Zada	Orthopaedics Surgery	Feb. 85
(56) Dr. Nevine Ramsis Weisa	Clinical Pathology	Feb. 85
(57) Dr. Ala'a El-Din Sa'd	Clinical Pathology	Feb. 85
(58) Dr. Nagla'a Abdul-Aziz Saleh	Clinical Pathology	Feb. 85
(59) Dr. Esam Mohamed Mohamed Ahmed	Clinical Pathology	Feb. 85
(60) Dr. Abdul-Wahab Abdulla Hussein	General Practice	Feb. 85
(61) Dr. Magdi Abdul-Fattah El-Khouli	General Practice	Feb. 85
(62) Dr. Mohamed El-Hami Ahmed	Anaesthesia	Feb. 85
(63) Dr. Ali Hamed Hamada	Anaesthesia	Feb. 85
(64) Dr. Gamal Ahmed Tawfic	Internal Medicine	Feb. 85
(65) Dr. Khaled Ahmed Mustafa	Internal Medicine	Feb. 85
(66) Dr. Mohamed Hassan Mohamed Ahmed	Internal Medicine	Feb. 85
(67) Dr. Guda Ahmed Mohamed	Tropical Medicine	Feb. 85
(68) Dr. Raouf Hamed Othman	General Practice	Feb. 85
(69) Dr. Adel El-Sayed Wahba	Tropical Medicine	Feb. 85
(70) Dr. Mohsen Mohamed Rashad	Pediatrics	Feb. 85
(71) Dr. Mahmoud Hasan Sayed Ahmed	General Practice	Feb. 85
(72) Dr. Zaki Mohamed Zaki Hussein	General Practice	Feb. 85
(73) Dr. Mohamed Ref'at Mohamed Habba	Diagnostic Radiology	Feb. 85
(74) Dr. Amro Abdul-Aziz Mohamed	Pathology	Aug. 85
(75) Dr. Nagi Bolus Rizk-Alla	Tropical Medicine	Aug. 85
(76) Dr. Badr El-Din Mohamed Mesbah	Pediatrics	Aug. 85
(77) Dr. Sayed Helmi Saleh Abdulla	Gynaecology	Aug. 85
(78) Dr. Mohamed Naguib Mahmoud	Tropical Medicine	Aug. 85
(79) Dr. Esam El-Saeed Mousa	Community Medicine	Aug. 85
(80) Dr. Abdul-Hadi Ahmed Mohamed	General Surgery	Aug. 85
(81) Dr. Gamal Mohamed Abdul-Rahman	Anatomy	Aug. 85
(82) Dr. Fawzi Kutb El-Sayed	Internal Medicine	Aug. 85

Applicant	Field of	Date
(83) Dr. Yousri Abdulla Ibrahim	Diagnostic Radiology	Aug. 85
(84) Dr. Salah Ali El-Sayed	General Surgery	Aug. 85
(85) Dr. Omayma Mohamed Abul-Ela	Bectriology	Aug. 85
(86) Dr. Farouk Ga'far	Gynaecology	Aug. 85
(87) Dr. Ibrahim Mohamed Ibrahim	Gynaecology	Aug. 85
(88) Dr. Yaser Hasan Helmi	Gynaecology	Aug. 85
(89) Dr. Ragab Ibrahim Ragab	Internal Medicine	Aug. 85
(90) Dr. Magdi Mohamed Mohamed Hussein	Microbiology	Apr. 86
(91) Dr. Amgad Albert Neseim	General Surgery	Apr. 86
(92) Dr. Raouf Abdul-Rahman Fadel	Anatomy	Apr. 86
(93) Dr. Esam-El-Din Mohamed El-Saeed	General Practice	Apr. 86
(94) Dr. Abdul-Latif Mohamed Mahmoud	Gynaecology	Apr. 86
(95) Dr. Salwa Mohamed Ali El-Sarraf	General Practice	Apr. 86
(96) Dr. Alaa El-Din Abdu Abdul-Aziz	Anaesthesia	Apr. 86
(97) Dr. Magdi Mustafa Kamal El-Nisr	Radiology	Apr. 86
(98) Dr. Mohamed Mahmoud Sayed Ewais	Pharmacology	Apr. 86
(99) Dr. Mohamed Saeed Fahmi Abaza	Internal Medicine	Apr. 86
(100) Dr. Sherif Shehata Abu Gendi	Internal Medicine	Apr. 86
(101) Dr. Hasab Ahmed Hasab Amer	Internal Medicine	Apr. 86
(102) Dr. Mohsen Ahmed Zaki Selmi	Internal Medicine	Apr. 86
(103) Dr. Gamal Abdel-Ati Hafez	Pathology	Apr. 86
(104) Dr. El-Sayed Nagi Ahmed	Gynaecology	Apr. 86
(105) Dr. Amani Hussein Ref'at Hasan	Histology	Apr. 86
(106) Dr. Mohamed Tawfic Abdul-Hamid	General Surgery	Apr. 86
(107) Dr. Afaf Mahmoud Mohamed Hasan	Biochemistry	Feb. 87
(108) Dr. Emad El-Din Fouad	Biochemistry	Feb. 87
(109) Dr. Yaser Mohamed El-Sayed El-Wazir	Physiology	Feb. 87
(110) Dr. Ala' El-Din Mohamed Abdul-Ela	Clinical Pathology	Apr. 87
(111) Dr. Nahed Mohamed Fathi Dandash	Dermatology & Venereology	Apr. 87

Applicant	Field of	Date
(112) Dr. Hana'a Ahmed Saeed Salam	Dermatology&-Venereology	Apr. 87
(113) Dr. Ismail Ismail Ali	Internal Medicine	Apr. 87
(114) Dr. Ibrahim Amer Ibrahim	Internal Medicine	Apr. 87
(115) Dr. El-Sayed Abdul-Hamid El-Shazli	Gynaecology	Apr. 87
(116) Dr. Salah El Sayed Suliman	Gynaecology	Apr. 87
(117) Dr. Ala' El-Din Hasan Ali	Gynaecology	Apr. 87
(118) Dr. Sawsan Mohamed El-Sayed	General Practice	Apr. 87
(119) Dr. Nadia Rizkalla Michael	General Practice	Apr. 87
(120) Dr. Mohamed Ahmed Abdul-Halim	General Practice	Apr. 87
(121) Dr. Ibrahim El-Sayed El-Zayat	General Practice	Apr. 87
(122) Dr. Magdi Filip Hasanein	Urology	Apr. 87
(123) Dr. Nesim Albert Nesim	General Practice	Apr. 87
(124) Dr. Mohamed Ibrahim Mustafa	Tropical Medicine	Apr. 87
(125) Dr. Rizk Awad Rizkalla	General Surgery	Apr. 87
(126) Dr. Taher Mos'ad Hasan Shehab	Orthopaedics Surgery	Apr. 87

FACILITIES AND RENNOVATION (In L.E.)

Location	Cost	MOH CA PII FAI	Construction	
			Begun	Completed
Abou Swair Ism.		MOH		
Abou Atwa Ism.	165,834	MOH		
Saha Abar Ism.		MOH		
Sarabuiom Ism.		MOH		
Rennovation of Ism. G.P.	95,064	CA	3.1982	6.1984
Rennovation of Ism. G.P.	36,722	CA	11.1984	6.1985
Rennovation of Ism. G.P.	9,454	CA	3.1986	7.1986
Rennovation of ISM G.P. (extension)	105,000	FAR	12.1987	4.1988
A&E for design and supervision for the 6 health units	42,787	CA	2.1984	5.1986
El Kabouty Pt. S.	87,998	CA	30.7.85	29.3.1986
El Kwait Pt. S.	72,910	CA	1.7.85	20.1.1986
Abou Sultan Ism.	147,635	Ca	25.6.85	25.3.1986
Saba Babat Ism.	32,712	Ca	25.6.1986	15.1.1986
Geneva Suez	5,6838	CA	30.6.1985	20.1.1986
El Sabbah Suez	88,483	CA	26.6.1985	26.12.1985
A&B for design and supervision for Infect. D.C.	1,5000	FAR	16.12.85	26.4.1987
Construction of Infect D.Center	247,167	FAR	26.8.1986	26.4.1987
Rennovation of FOM Building in Suez	67,500	FAR	4.1.1987	17.5.1987
Rennovation of Building 29 - Supply and installation of coiling tiles and light fittings	38,081	CA	29.11.83	14.12.1985
- Ventain blinds in pathology lab & Audio visual studio and partions in FOM classes	15,396	CA	24.12.83	20.2.1984
- Wooden partitions in FOM classes	2,200	CA	5.8.86	5.11.1986

FACILITIES AND RENNOVATION (In L.E.) cont.

Location	Cost	MOH CA PII FAI	Construction	
			Begun	Completed
Partitions in FOM classes	9,600	CA	24.9.86	3.10.1986
Partitions in Dr. Zohair's office	2,200	CA	8.12.86	24.1.1987
Rennovation of Bld. 29 warehouse	49,895	FAR	20.6.87	3.10.1987
A&E for design & supervision of 18 Health Units	40,000	FAR	9.1.86	30.3.1988
El Mahsamam Ism.	109,356	PIL	5.1.87	20.12.1987
Abou Swair Ism.	30,613	PIL	5.1.87	1.12.1987
Ein Ghosein Ism.	99,460,	PIL	5.1.87	21.12.1987
Sarabuiom Ism.	25,959	PIL	7.1.87	15.3.1988
Fanara Ism.	97,193	PIL	7.1.87	15.3.1988
Kasfareit Ism.	85,376	PIL	7.1.87	15.3.1988
Saba Abar Ism.	26,481	PIL	6.1.87	1.12.1987
Abou Atwa Ism.	25,313	PIL	6.1.87	15.12.1987
Abou Khalifa Ism.	93,532	PIL	6.1.87	15.4.1988
Abou Balah Ism.	93,281	PIL	6.1.87	15.3.1988
El Shaloufa Suez	103,097	PIL	4.1.87	2.12.1987
Geneva Suez	45,534	PIL	4.1.87	2.12.1987
El Gabalayat Suez	89,908	PIL	4.1.87	15.1.1988
Amer Village Suez	94,816	PIL	4.1.87	26.12.1987
El Ganayen Suez	104,356	PIL	4.1.87	16.12.1987
Salam area Pt.S.	263,249	PIL	3.1.87	25.12.1987
Port Fouad Pt.S.	139,623	PIL	3.1.87	15.3.1987
Bahr El Bakar Pt.S.	169,360	PIL	3.1.87	24.12.1987

9.6 PROJECT INPUTS

Budget Summary Faculty of Medicine, Suez Canal University (FOM/SCU) Co–operative Agreement (CA), Boston University Direct Funding USAID–FOM/SCU (PILs/FRAs/PSA) (1)

	Phase I CA	Phase II&III CA(2)	PILs/FRAs/PSA (4)	Total
Salaries	$514,475	$1,894,458		$2,408,933
Consultants	$121,008	$215,597	$617,955	$954,560
Fringe Benefits	$103,982	$290,263		$394,246
Travel	$226,091	$867,830	$92,855	$1,186,577
Equipment	$268,552	$457,884	$866,269	$1,592,705
Participant Training	$73,180	$196,102	$42,668	$311,950
Allowances	$7,589	$219,439		$227,028
Other direct Costs	$305,266	$1,418,832	$233,562	$1,957,660
Facilities Incl A & R	$0	$773,643	$2,291,917	$3,065,560
Overhead	$590,857	$1,938,548		$2,529,405
LE	$621,539			$621,539
Direct (3)				
Exp planned thru EOP		$86,863		$86,863
Total	$2,832,541	$8,359,459	$4,145,026	$15,337,026
		USAID funds for evaluation		$115,000
		Unexpended PIL funds		$447,974
		Total USAID Obligation		$15,900,000

1. Project Implementation Letters, Fixed Reimburseable Agreements, Purchase of Service Agreements.
2. Includes $ spent as L.E.
3. L.E. in Phase I were not disbursed through the CA.

(See Next Page)

4. Summary of PILs, FRAs, PSA.

Suez Inf. Dis. Center	$171,232
Equipment PSA	$803,000
Management	$864,000
Housing	$1,072,000
MOH Phase I	$122,840
A & E MOH Units	$34,246
18 MOH Units	$922,001
Ism Group Pr expansion	$47,452
Equipment for expansion	$63,269
B29 Renovations	$22,074
Warehouse-B29	$22,912
Total	$4,145,026

TECHNICAL ASSISTANCE (TA) SUMMARY
Faculty of Medicine, Suez Canal University
Co-operative Agreement, Boston University (CA)
Project Implementation Letters(PILs): USAID-FOMSCU

TECHNICAL ASSISTANCE IN WEEKS

	3/80-6/82 CA	7/82-7/85 CA	8/85-now CA	7/84-now PIL	TOTAL WEEKS
I EDUCATION SUPPORT					**1497**
A Curriculum(1,2)	87	157	19	480	743
B Library(3)	12			40	52
C Audio-Visual		16			16
D Equip. Repair(4)				120	120
E Infectious Disease	6	68			74
F CED Masters		6	38		44
G Environ. Health		2			2
H Computer Lab		2	1		3
I Cont. Med. Educ.		2			2
J Other(5,6)	27	14	9	392	442
II MANAGEMENT(7)					**907**
A Start-up(8,9)	395			332	727
B Consultation(10)		37	11	132	180
III HEALTH SERVICES					**325**
A Group Practice	38	32			70
B General Practice		63	12		75
C MOH & Comm. Hlth(11)	59	96		24	179
TOTAL	**624**	**495**	**90**	**1520**	**2729**

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1 - Allocates Dr. Anand 50% IA, 50% IIIC from '80 to '84.
2 - PIL support of visiting faculty has now been assumed by FOMSCU except for transportation.
3 - PIL includes librarian currently stationed in Port Said.
4 - Includes supervisory maineance engineer (Mr. Kadry).
5 - Includes under CA architect (Ms. Shaw), Dr. Koff, Dr. Kayne.
6 - Non-recurrent costs (e.g. Mr. Ragi, construction supervisor).
7 - No time has been allocated to any form of TA for Ms. Terry or Mr. El-Labany.
8 - CA includes Ms. Connor & Ms. Salerno.
9 - PIL includes secretaries to the Deans.
10 - PIL includes both managment contracts (12 & 16 weeks) and Dr. She
11 - PIL includes Dr. Khallaf, '84-'85.

CONTRIBUTIONS OF THE G.O.E TO THE PROJECT

The contributions of the G.O.E is represented by the assets used for training and the personnel sharing in the teaching process. Because of the unique programme of the School, the G.O.E contribution is represented by the share of the Suez Canal University as well as the share of the M.O.H facilities used for teaching purposes.

The share of the Suez Canal University/Faculty of Medicine (S.C.U/F.O.M) is calculated on 100% use for the Project. This is because the School has no other job except teaching. On the other hand, the Ministry of Health (M.O.H) facilities were divided into 4 categories :

1. Facilities used for 2 day/week for training where the load for work is estimated as 20%.
2. Facilities used 4 day/week for training and the load of work is estimated as 30%.
3. Facilities used 6 day/week for training and the load of work is estimated as 40%.
4. All hospitals are used on average 4 day/week and the load of work is estimated as 25%.

The price of land, the cost for contribution and equipments were estimated on the prices of the Project mid-term life. Equipment for the School itself were derived from the books of the School. Salaries and current expenses were taken for the actual expenditure for the years 1980-1985. For the years 1986 and 1987, they were estimated on 1985 basis.

In calculating the salaries and current expenses of the units of the M.O.H, in some cases we could get the actual expenditure from the health authorities. In other cases we failed to get the actual expenditure. This was particularly the case in current expenses because the budget for this item is one pool for each health directorate. In this case we resorted to 2 main sources:-

1. The budget rules of the M.O.H where directives are laid out e.g the bed cost/year.
2. The results of the study of the Health Profile of Egypt, particularly Bulletin No.10 and 17. In that study, the actual expenditure on sample units were presented and used as average for the whole country.

The most appropriate mean value was taken from these 2 sources and used for calculations.

CONTRIBUTIONS OF G.O.E (L.E 1000s)

	F.O.M	ISMAILIA	PORT SAID	SUEZ	TOTAL
LANDS	20424.05	2325.5	2755.0	2022.5	27526.05
CONSTRUCTION	4828.0	2092.5	2445.0	3130.0	12495.5
EQUIPMENTS	3000.0	4310.75	6995.0	7538.0	21843.75
SALARIES	6856.0	690.4	1180	434.4	9160.8
CURRENT EXPENSES	5356.0	948	1414	946	8664
VEHICLES	192.0				
TOTAL	40656.05	10367.15	14789	14070.9	79690.1

M.O.H FACILITIES

LANDS

PORT SAID

% of use for the Project	Sq.mtrs	Price/m2	Total in L.E 1000s	G.O.E share L.E 1000s
25% General Hospital	10000	200	2000	500
25% Chest Hospital	8000	200	1600	400
25% Fever Hospital	8000	200	1600	400
25% El Mabara	8000	200	1600	400
URBAN HEALTH UNITS				
40% El Kewait Centre	3500	200	700	280
40% El Kabauty Centre	3500	200	700	280
25% General Hospital Port Fuad	10000	150	1500	375
40% El Salam Urban Centre	1000	300	300	120
TOTAL				2755

SUEZ

25% General Hospital	15000	150	2250	562.5
25% Chest Hospital	12000	150	1800	450
25% Fever Hospital	12000	150	1800	450
URBAN HEALTH UNITS				
20% El Arbeine Centre	3000	150	450	90
20% El Sabah Centre	3500	250	525	210
RURAL HEALTH UNITS				
20% El Gabalaiate	2000	100	200	40
20% Village Amer	2000	100	200	40
20% El Ganaian	2000	100	200	40
20% Genifa	2000	100	200	40
100% Centre for Infectious Diseases	500	200	100	100
TOTAL				2022.5

LANDS

ISMAILIA

% of use for training	Sq.mtrs	Price/m2	Total in L.E 1000s	G.O.E share L.E 1000s
25% General Hospital	14400	150	2160	540
25% Chest & Fever Hospital	12000	150	1800	450
URBAN HEALTH UNITS				
40% El Sheigh Zayed	2880	150	432	172.8
40% El Sabaa Banat	3100	150	480	192
40% El Salam	3500	150	525	210
40% El Shohada	3500	150	525	210
RURAL HEALTH UNITS				
40% El Sabaa Abar	2000	100	200	80
30% Abu Swere	1950	100	195	58.5
20% El Mahsama	2000	100	200	40
20% El Wastia	1040	100	104	20.8
20% El Rayah	2500	100	250	50
20% Abu Kalifa	2500	100	250	50
40% Abu Atwa	2500	100	250	100
40% El Dabaa	1500	100	150	30
20% Sarabiome	2000	100	200	40
20% Abu Soltan	1270	100	127	25.4
20% Fayed	800	100	80	16
20% Fanara	2000	100	200	40
TOTAL				1215.5

F.O.M (Building 29)

Used 100% of the Project	2826	150		424.05
10% Teaching Hospital	100000	200		20000
TOTAL				20424.05

M.O.H FACILITIES

CONSTRUCTION

ISMAILIA

% of use of training	Bed nos.	Bed cost L.E 1000s	Total L.E 1000s	G.O.E share L.E 1000s
25% General Hospital	300	20	6000	1500
25% Chest & Fever Hospital	71	10	710	177.5
URBAN HEALTH UNITS				
40% El Sheigh Zayed			150	60
40% El Sabaa Banat			150	60
40% El Salam			150	60
40% El Shohada			150	60
RURAL HEALTH UNITS				
40% El Sabaa Abar			50	20
30% Abu Swere			50	15
20% El Mahsama			50	10
20% El Wasfia			50	10
20% El Rayah			50	10
20% Abu Kalifa			50	10
40% Abu Atwa			50	20
20% El Dabaa			50	10
20% Sarabiome			50	10
20% Abu Soltan			150	30
20% Fayed			50	10
20% Fanara			50	10
TOTAL				2082.5

CONSTRUCTION

PORT SAID

% of use for training	Bed nos.	Cost/bed L.E 1000s	Total in L.E 1000s	G.O.E shar L.E 1000s
25% General Hospital	250	20	5000	1250
25% Chest Hospital	80	10	800	200
25% Fever Hospital	80	10	800	200
25% El Mabara	100	15	1500	375
URBAN HEALTH UNITS				
40% El Kewait Centre			150	60
40% El Kabouty Centre			150	60
25% General Hospital Port Fuad	120	20	2400	300
TOTAL				2445

SUEZ

25% General Hospital	450	20	9000	2250
25% Chest Hospital	150	10	1500	375
25% Fever Hospital	150	10	1500	375
URBAN HEALTH UNITS				
20% El Arbeine Centre			150	30
40% El Sabah Centre			150	60
RURAL HEALTH UNITS				
20% El Gabalaiate			50	10
20% Village Amer			50	10
20% El Gunain			50	10
20% Genifa			50	10
TOTAL				3120

F.O.M

Used 100% for the project	3392
Used 100% for Teaching Hospital (A & E)	1436
TOTAL	4828

M.O.H FACILITIES

EQUIPMENTS

ISMAILIA

% of use for training	Bed nos.	Cost/bed L.E 1000s	Total in L.E 1000s	G.O.E shar L.E 1000s
25% General Hospital	300	50	15000	3750
25% Chest & Fever Hospital	71	25	1775	443.75
URBAN HEALTH UNITS				
40% El Sheigh Zayed			50	20
40% El Sabaa Banat			50	20
40% El Salam			50	20
40% El Shohoda			50	20
RURAL HEALTH UNITS				
40% El Sabna Abar			10	4
30% Abu Swere			10	3
20% El Mahsama			10	2
20% El Wasfia			10	2
20% El Rayah			10	2
20% Abu Kalifa			10	2
40% Abu Atwa			10	4
20% El Dabaa			10	2
20% Sarabiome			10	2
20% Abu Soltan			50	10
20% Fayed			10	2
20% Fanara			10	2
TOTAL				4310.75

EQUIPMENTS

PORT SAID

% of use for training	Bed nos.	Cost/bed L.E 1000s	Total in L.E 1000s	G.O.E share L.E 1000s
25% General Hospital	250	50	12500	3125
25% Chest Hospital	80	25	2000	500
25% Fever hospital	80	25	2000	500
25% El Mabara	100	50	5000	1250
URBAN HEALTH UNITS				
40% El Kewait Centre			50	20
40% El Kabouty Centre			250	100
25% General Hospital Port Fuad	120	50	6000	1500
TOTAL				6995

SUEZ

25% General Hospital	450	50	22500	5625
25% Chest Hospital	150	25	3750	937.5
25% Fever Hospital	150	25	3750	937.5
URBAN HEALTH UNITS				
20% El Arbeine Centre			50	10
40% El Sabah Centre			50	20
RURAL HEALTH UNITS				
20% El Gabalaite			10	2
20% Village Amer			10	2
20% El Ganain			10	2
20% Genifa			10	2
TOTAL				7538

FACULTY OF MEDICINE

Used 100% for the Project			3000	3000

M.O.H FACILITIES

SALARIES (L.E 1000s)
(Over the life of the Project)

ISMAILIA

	Total	% use of training
General Hospital	876	219
Chest & Fever Hospital	197	49.2
URBAN HEALTH UNITS		
El Sheigh Zayed	136	54.4
El Sabaa Banat	231	89.2
El Salam	146	58.4
El Shohada	160.8	64.4
RURAL HEALTH HOSPITALS		
El Sabaa Abar	34.6	13.8
El Swere	59.6	17.8
El Mahsama	20	4
El Wasfia	18.8	4
El Rayah	14.6	2.8
Abu Kalifa	265	53
Abu Atwa	37.6	15
El Dabaa	26.4	5.4
Sarabiome	33.2	6.6
Abu Soltan	119.2	23.8
Fayed	16.8	3.4
Fanara	30.8	6.2
TOTAL		690.4

SALARIES (L.E 1000s)
(Over the life of the Project)

PORT SAID

	Total	% use for training
General Hospital	1240	312
Chest Hospital	280	70
Fever Hospital	280	70
El Mabara	1200	320
URBAN HEALTH UNITS		
El Kewait Centre	120	48
El Kabouty	120	48
General Hospital Port Fuad	1248	312
TOTAL		1180

SUEZ

General Hospital	1250	312.5
Chest Hospital	80	20
Fever Hospital	70	17.5
URBAN HEALTH UNITS		
El Arbeine Centre	56	11.2
El Sabah Centre	120	48
RURAL HEALTH UNITS		
El Gabalaiat	42	8.4
Village Amer	42	8.4
El Ganian	42	8.4
TOTAL		434.4

SALARIES (L.E 1000S)

FACULTY OF MEDICINE

	YEAR								TOTAL
	80	81	82	83	84	85	86	87	
Salaries	220	220	220	257.7	265.7	265.7	265.7	265.7	1980.5
Social Insurance	74.1	74.1	74.1	76.4	78.9	78.9	78.9	78.9	614.3
Casual Labour	7.2	7.2	7.2	7.4	7.6	7.6	7.6	7.6	59.4
TOTAL	301.3	301.3	301.3	341.5	352.2	352.2	352.2	352.2	2654.2
Overtime	434	434	434	435.3	449	449	449	449	3533.3
Allowances	56.8	56.8	56.8	58.6	60.4	60.4	60.4	60.4	470.6
Meals for Students	23.9	23.9	23.9	24.5	25.4	25.4	25.4	25.4	197.9
TOTAL	514.7	514.7	514.7	518.5	534.8	534.8	534.8	534.8	4201.8

CURRENT EXPENSES (L.E 1000s)
(Over the life of the Project)

M.O.H FACILITIES

IMSMAILIA

% of use for training	Total	% used for training
25% General Hospital	1600	400
25% Chest & Fever Hospital	1000	250
URBAN HEALTH CENTRES		
40% El Sheigh Zayed	80	32
40% El Sabaa banat	80	32
40% El Salam	80	32
40% El Shohada	80	32
RURAL HEALTH UNITS		
40% El Sabaa Abar	70	14
30% Abu Swere	60	18
20% El Mahsama	60	12
20% El Wasfia	60	12
20% El Rayah	60	12
20% Abu Kalifa	60	12
40% Abu Atwa	70	28
20% El Dabaa	60	12
20% Sarabiome	60	12
20% Abu Soltan	70	14
20% Fayed	60	12
20% Fanara	60	12
TOTAL		948

CURRENT EXPENSES (L.E 1000s)
(Over the life of the Project)

PORT SAID

	Total	% used for training
25% General Hospital	1400	350
25% Chest Hospital	800	200
25% Fever Hospital	800	200
25% El mabara	1200	300
URBAN HEALTH UNITS		
40% El Kewait Centre	80	32
40% El Kabouty	80	32
25% General Hospital Port Fuad	1200	300
TOTAL		1414

SUEZ

25% General Hospital	1800	450
25% Chest Hospital	800	200
25% Fever Hospital	800	200
URBAN HEALTH UNITS		
20% El Arbeine Centre	80	16
40% El Salam Centre	80	32
RURAL HEALTH UNITS		
20% El Gabalaiate	60	12
20% Village Amer	60	12
20% El Ganain	60	12
20% Genifa	60	12
TOTAL		946

F.O.M FACILITIES
CURRENT EXPENSES (L.E 1000s)

YEAR								TOTAL
80	81	82	83	84	85	86	87	
630	630	630	650	704	704	704	704	5356

Grant Funded Activities and Related Events

POSTGRADUATE PROGRAM IN FAMILY/GENERAL PRACTICE

Dates	Activities	Report Available
October 1980	FOM opens school year with two-year masters program in family/general practice. Dr. Zohair and Dr. M.I. Shehata, working as part-time consultant, share the directorship of the program.	
June 1981	FOM and BU begin looking for Arabic-speaking, board-certified family practice physicians to assist with teaching and clinical supervision. Ads are placed in a number of U.S. journals. Dr. Martin Heshmat (identified by FOM), Egyptian-American FP/GP from Howard University, spends 6 weeks at FOM as consultant to GP program. Plans are made for him to return on one-year sabattical.	
June 1981	Dr. Mamdouh El-Nakil - one-month consultancy at FOMSCU.	
January 1982	First group of Graduates receive their Masters in General/Family Practice.	x
April 1982	John Danis and Samir Ahmed, BU, visit FOMSCU to discuss possible CME program for General Practice/MOH participants.	x
October 1982	Dr. Heshmat begins one-year assignment as clinical supervisor for General Practice Program.	xx
late 1982	Two FOM Junior Faculty (Maged Khattab and Mohammady Diab) return from General Practice Masters-level training in U.K. They will be able to serve as full-fledged faculty when they have completed their doctoral degrees in Egypt.	
March 1983	International Conference on General/Family Practice in Egypt: issues of training, career development, continuing education, etc. are discussed. Result is Egyptian commitment to consider major reforms in health care system. Visitors include former Iranian Med.School Dean and Tunisian MOH, as well as U.S. and Canadian consultants.	x
May-Aug. 1984	Mohammady Diab, GP staff, attends 12-week Certificate Course in International Health at Boston University.	x
February 1985	Martin Heshmat returns for 3-week consultancy to review GP [illegible]	

	gration of GP and undergraduate programs.	x
May-Aug. 1985	Ossama Eid (GP staff) and Afaf Ibrahim (GP Masters Program graduate) attend 12-week Certificate Course in International Health at B.U.	x
May 1986	Three GP staff attend WONCA conference in London.	
June 1986	Raouf Osman, GP Staff spends 6 weeks in Chicago and Albuquerque observing GP field training program.	
March 1987	Berthold Umland, UNM/Albuquerque, provides 8 weeks consultancy and clinical supervision to General Practice program.	xx
September 1987	M. Heshmat spends one month assisting GP residents in preparations for exams.	

Grant Funded Activities and Related Events

FACULTY DEVELOPMENT AND MISCELLANEOUS TRAINING*
(*Not including training listed elsewhere under other activities)

Dates	Activities	Report Available
December 1980	Nine Junior Faculty studying in Boston for Ph.D. degrees return to Ismailia to be oriented to problem-based curriculum.	
April 1981	Zohair Nooman, Esmat Ezzat, Hossam Hamdy attend curriculum development meeting in London at which the 'Consortium' is launched.	
April 1981	Dr. Abdel Meguid Osman, President of SCU, visits Boston for program planning.	
May 1981	John McCahan, BU Associate Dean and Samir Ahmed, Surgeon and BU medical school graduate, visit Egypt to plan program of continuing medical education (CME) for selected FOMSCU Faculty.	
January 1982	Hosny El Rawadi (cardiology) and Abdel Malek Nasser (clin.chemistry), first CME participants, spend one month in Boston.	
February 1982	Zohair Nooman, Esmat Ezzat, Ebtisam El-Begoury and Dr. Kamal spend one week at B.U. consulting with Jr. Faculty and discussing CME program.	
August 1982	Hassan Abu Zeid (community medicine), goes to Boston for CME program.	
October 1982	Ibrahim Rakha, (orthopedics), Mohamed Saleh (pharmacology) and Ossama El Okda (pathology) - CME programs in Boston.	
January 1983	Ibrahim Rakha - Davos (Switzerland) - workshop on orthopedics.	
February 1983	Selma El Ghandour (pediatrics) and Hoda Hadie (histology) - CME programs in Boston.	
February 1983	Azza Abdel Hamid, Mohamed Morsi - Gezira, Sudan: one-week workshop on problem-based learning.	
February 1983	Sayed El Zayat (surgery) and Hashem Rashwan (urology) - CME programs in Boston.	
March 1983	Alaa Zeitoun (pediatrics) - CME program in Boston.	
Spring 1983	Junior Faculty Research Fund draft documents developed by BU staff for review by FOM.	

April 1983	Samir Afifi, FOM Boston-based Jr. Faculty, visits Ismailia for 3-week study tour.
June 1983	Sherif Helmy, FOM Boston-based Jr. Faculty, visits Ismailia for 2-week study tour.
July 1983	Tymour Khattab (gynecology) and Mamdouh el Mezein (surgery) - CME programs in Boston.
August 1983	Fatma Ali and three students (Tarek Fouad, Maha M. Lotfy and Khalid Abdel Salam) attend workshop at Gezira, Sudan.
February 1984	Meeting of curriculum group in Maastricht to discuss proposed MHPE program offered by CED/U. Illinois.
March 1984	Dean Sandson and A. Culbert visit FOM to discuss continuation of CME program. (Due to pressures of work and other concerns, CME program suspended for one year.)
November 1984	Somaya Hoshy and Yasser el Nazir attend skills lab training in Maastricht.
December 1984	Foley, Risley and Grenholm visit Ismailia to plan MHPE program.
December 1984	Dr. Abdel Mohsen (orthopedics) - one-week workshop in Davos (Switzerland).
January 1985	Youssef Nahib, (comm. medicine) attends workshop on quantitative methods in community health research, Gezira (Sudan)
February 1985	Somaya Hosny, Amany Refaat (Histology) - CME programs in Boston.
February 1985	One-year agreement signed between CED and BU to implement MHPE program.
March 1985	Abdel H. Serwah (gastro-enterology), Taher el Serafi (biochemistry) - CME Programs in Boston.
March 1985	Salah Khedr and Fathalla Hassan - CME Program in Dallas.
April 1985	Block 1 of MHPE program held in Ismailia.
June 1985	Four FOM attend CME programs in Boston: A. Atef (pediatrics), Atef el Akhras (dermatology), Abdel Raouf (Gen. Practice), Ahmed el Ayat (clinical path.)
July 1985	Tarek Fouad, FOM Student, attends international student association meetings, Maastricht.
July 1985	Four FOM attend clinical assessment workshop in Ottawa.

September 1985	Block 2 of MHPE program is held in Ismailia.
November 1985	S. Khedr attends schistosomiasis conference, Istanbul.
November 1985	Zohair Nooman attends conference on hepatitis, London.
November 1985	Amany Refaat - WHO conference on primary health care, Cotonou (Benin).
March 1986	Agreement for Year 2 of MHPE Agreement signed between BU and CED.
March 1986	Block 3 of MHPE program held in Ismailia. (Barzansky, Risley and Busigel).
October 1986	Tymour Khattab and Esmat Ezzat - New Orleans conference on educational leadership.
October 1986	Mohammady Diab and Magdy El Kholy, Maseru (Lesotho): WHO conference on CME for primary health care.
October 1986	Mohamed Saleh, FOM Student: Switzerland - leadership program for medical students.
November 1986	Block 4 of MHPE program held in Ismailia (Dwyer, Clemens).
December 1986	Fatma Hassan and Ahmed Atef begin two-month residency at CED/U. Illinois to complete thesis work and earn MHPE degree.
January 1987	Five FOM Faculty (Sobhy A. Sobhy, Raouf Osman, Somaya Hosny, Amany Refaat, Issam El Said) begin two-month residency at CED/Chicago to complete thesis work and earn MHPE degree.
January 1987	Yasser El Nazir participates in special study program at skills laboratory in Chicago.
March 1987	Four FOM Faculty and two students attend international workshop on medical education, Maastricht.
April-May 1987	Remaining six FOM travel to Chicago to complete thesis work and other requirements for MHPE degree (Maged Khattab, Moustafa A. Azziz, Hashem Rashwan, Selma El Ghandour, Mohamed Saleh, Ossama El Okda)
August 1987	Four FOM students (4th year) - study tour to Albuquerque, N.M. to observe primary care teaching sites.
January 1988	Two FOM community medicine faculty (Moustafa Abdel Azziz and Adel Mishriky) attend special program in occupational/environmental medicine at Boston University and NIOSH.

PROJECT CHRONOLOGY

DATE	EVENT
November, 1977	Professors of Medicine, Zohair M. Nooman and Esmat S. Ezzat, are seconded from Assyut University to Suez Canal University to initiate foundation of Faculty of Medicine
February-March, 1978	Ministerial Conference for Health and Education held in Teheran, Iran; its recommendations helped to inspire notion of possible active collaboration of Ministry of Health in developing a new Faculty of Medicine at SCU
March 22-24, 1978	Symposium on Medical Education in Egypt held at Fayoum, Egypt, sponsored by the Supreme Council of Universities in conjunction with the Egyptian Doctors' Syndicate; its recommendations spelled out the rationale and directions for change in Egyptian medical education to better meet Egyptian health needs
June, 1978	Professor Esmat S. Ezzat visits Boston University health professional institutions and discusses possibility of joint working relationship between BU's Health Policy Institute and the SCU/FOM
September, 1978	Delegation from Health Policy Institute (Dr. Haase, Dr. Gheith, and Dr. Bicknell) visits SCU to discuss overall collaborative agreement between BU and SCU and a special agreement between SCU/FOM and BU/HPI
October 22-24, 1978	Seminar on Basic Health Needs and Education held at Center for Continuing Medical Education, Cairo, Egypt, cosponsored by Cairo University, BU/HPI, and the Ministry of Health, Arab Republic of Egypt (MOH)

DATE	EVENT
October, 1978	Professor Zohair M. Nooman appointed Dean, and Professor Esmat S. Ezzat appointed Associate Dean, of SCU/FOM; recruitment of faculty members begins
October, 1978	University-to-university agreements between BU and SCU, and between BU/HPI and SCU/FOM signed in final form
December, 1978	Permanent Committee for Health Services and Medical Education in the Suez Canal area is formed as a coordinating body for cooperative efforts between MOH and SCU/FOM in developing a new faculty of medicine at SCU
February, 1979	Delegation from Suez Canal Zone's Permanent Committee for Health Services and Medical Education (Dr. Abdel-Meguid Osman, President of SCU; Dr. Ahmed Sirry, First Undersecretary of the MOH; and Professors Nooman and Ezzat of SCU/FOM) visits BU and Washington to plan program development activities and requests for USAID and P.L. 480 funding
April, 1979	Preliminary survey of programs and facilities in the Suez area is completed by a working group composed of Dr. Nabil El-Ennah, Director-Designate for the SCU/FOM Dean's Planning Unit, two junior faculty, and BU/HPI professionals; BU/HPI architectural consultant, Ms. Susan Shaw submits comprehensive report entitled, "An Initial Report: Facilities Planning for the Community-Based Faculty of Medicine, Suez Canal University"
May 5-10, 1979	Curriculum Development Workshop for SCU/FOM held in Ismailia, Egypt; under direction of Dr. Ascher Segall of BU/HPI's Center for Educational Development in Health, newly recruited faculty

DATE	EVENT
	of SCU/FOM decide upon an initial curriculum approach and establish working committees with detailed workplans and procedures for implementing the curriculum development process
August 27, 1979	BU/HPI submits to U.S. Agency for International Development an unsolicited proposal for collaborative assistance among USAID, BU/HPI, the SCU/FOM, and the MOH for "Medical Education and Health Services for the Suez Canal Area"
November, 1979	Project Agreement signed by BU, SCU, MOH/ARE, and USDHEW/ HRA Office of International Health Affairs for "Medical Education and Health Services in the Suez Canal Area"; agreement provided $250,000 in P.L. 480 funds over a two-year period for curriculum and program development of innovative physician training for community-based primary health services in the Suez Canal area
November, 1979 - January 1980	Four SCU/FOM senior faculty members spend three months at Boston University working intensively with BU health education professionals in preparation for curriculum design and development
March, 1980	Consultant Ken Bloem visits SCU/FOM for initial consultation with the Dean and faculty concerning the development of the Group Practice; follow-up consultancy visits were made in June, September, and October, 1980, and in April, 1981.
March 10, 1980	AID contracts officer approves reimbursable program expenditures, subject to certain conditions, in advance of final C.A. award

March 1980	Early grant planning documents refer to 'Dean's Planning Unit', conceived as a mechanism to help FOM with 1) planning start-up and management of the school and 2) reporting to FOM USAID on progress under the grant. For a number of reasons this unit never became operational.	
May 1980	SCU Council accepts proposed framework for curriculum which adopts a problem-solving/problem-oriented approach to medical education within Egypt's six-year post-secondary school medical school framework	
May 1980	Cooperative Agreement between BU/HPI and the U.S. Agency for International Development is signed, giving approval to a two-phase, five-year award for development of "Suez Community Health Personnel Training"	
July 1980	Visit by William Dann to plan selected health services interventions, also discusses management issues with FOM leadership.	x
October 1980	Visit by Art Mushkin, management consultant, to FOM - early assessment of issues related to FOM management, recommendations to Dean	x
Summer 1980	Judy Salerno and Eileen Connor (Boston U. consultants) assigned as interim technical staff to FOM, while a long-term manager is being recruited.	
December 1980	Dr. A.R. Bassyouni, identified by FOM, takes job as BU Chief of Party and Management Consultant to the Dean.	
1981	Dr. Bassyouni's role re-defined to focus on grant management and group practice development: FOM begins looking for Egyptian senior management advisor.	x
Fall 1981	Secretaries hired to serve Dean's office, Vice-Dean's Office and Community Medicine Office.	
1981-1982	CA Co-Directors and USAID agree to the following: Until a FOM Manager is identified, 1) grant-funded management efforts will be focused on individual FOM units, e.g. library, AV unit, group practice, labs, etc., and 2) consultants to FOM, and training programs for FOM staff, will have a strong management orientation. Development of idea and papers on 'expanded group practice concept' as way to develop income-generating units at FOM.	
November 1982	Fathalla Hassan - designated for FOM management role - special management training program in Boston	
November 1984	[illegible]	

January 1985	Rabie Radwan, FOM Administrator and Ahmed El Labany, grant Adinistrator, attend special management training courses in Boston.
January 1985	Mohamed Salaeh and two fourth-year students take computer training in Boston
early 1985	Decision made to have management PIL and other local USAID agreements managed by Dr. Khallaf, consultant to FOM in health services.
mid-1985	"Phase I" computer software and hardware shipped to Egypt.
1985-1986	Selected secretarial and administrative staff from FOM attend language and administrative classes offered by SCU
January 1986	Rabie Radwan, Ahmed El Labany and other FOM staff attend selected management courses at AU/Cairo
March 1986	Dr. Mohamed I. Shehata hired as full-time management consultant to FOM, and develops plan for 1) management information systems development at FOM and 2) development of new management systems with the assistance of external consultants.
April 1986	Management workshop at FOMSCU - Drs. Richards, Zohair and Dewidar provide technical input to ed. leadership discussions for MHPE students and others.
July 1986	Consultant R. Puglisi develops model to assess costs of operating FOM program over time.
1986	FOMSCU Center for Research and Development established as autonomous FOM entity able to provide training and consulting services to other schools and institutions in medical education and health services. x
late 1986	"Phase II" purchases of hardware and software purchased for computer unit.
February 1987	Management consultant Shehata makes interim report to USAID on management activities at FOMSCU. x
1987	ISMAC consulting group working on management information systems for FOM under 6-month contract. Final report presented July 1987. x
	Organization and management consultants working simultaneously on other FOM systems development are unable to perform satisfactorily and their contract is terminated.

Grant Activities and Related Events

PROGRAM MONITORING AND EVALUATION

Dates/Activities		Report Available
March 1981	Christine McGuire of CED/U. Illinois visits FOM to discuss evaluation in medical education	
April 1981	Tymour Khattab and Fathy Makladi, FOM visit Chicago to look at evaluation program	
Summer 1981	CED invited to propose mix of consultation and training for FOM focused on evaluation, as are other members of the curriculum consortium	x
April 1982	Michael Seefeldt provides technical assistance to FOM in developing an overall student assessment program	x
September 1982	First annual conference to evaluate the FOMSCU curriculum, with presentations by Faculty members and international visitors.	
October 1982	Betty Risley, CED, makes first visit to assist with developing a student assessment program. Michael Seefeldt, CED, assists FOM with evaluation of Year 2 FOM curriculum.	
February 1983	Michael Seefeldt continues assistance with evaluation of Year 2.	
April 1983	Three FOM Faculty spend a month in Chicago in training on evaluation methodologies	
June 1983	Betty Risley visits FOM to work on student assessment. Michael Seefeldt visits FOM to consult on overall program evaluation, assist with preparations for Fall conference.	
September 1983	Second Annual Curriculum Evaluation Conference at FOMSCU.	
October 1983	Betty Risley visits FOM to work on student assessment program.	x
December 1983	Michael Seefeldt working on Year 3 evaluation.	x
February 1984	Betty Risley visits Egypt to work on student assessment program.	x
November 1984	M. Seefeldt provides technical assistance on program evaluation	x
June 1985	B. Risley - Student assessment workshop	x

June 1985	M. Seefeldt provides technical assistance on program evaluation	x
November 1987	M. Seefeldt and V. Neufeld - workshop to develop methodology for evaluating FOMSCU graduates	xx

Grant Funded Activities and Related Events

CURRICULUM DEVELOPMENT

Dates	Activities	Report Available
Spring 1980	FOM leadership surveying med. schools through WHO Network, to determine best curriculum. Visits made to various schools. Problem-based curriculum chosen during visit to Holland, June 1980.	
Summer 1980	2-mo. consultancy by Reed Williams, Southern Illinois University, to assist with curriculum development.	
July 1980	Consultancy by Peter Bouhuijs, (University of Limburg, Maastricht) and Rod Neame (New Castle U., Australia), to advise on curriculum development.	x
August 1980	Curriculum conference - Alexandria: FOM makes decision not to open the undergraduate program until 1981.	x
November 1980	FOM curriculum approved by Supreme Council of Universities.	x
January 1981	Consultant visits by Ascher Segall (BU), Vic Neufeld and Brian Haynes (McMaster).	
March 1981	Dr. Dharm Anand begins long-term assignment as curriculum advisor, with primary responsibility for community medicine/ public health.	xx
March 1981	Consultant visit by P. Bouhuijs, Henk Schmidt (MAastricht) - tutor training workshops.	
April 1981	FOM "Curriculum Consortium" holds its first meeting in London to plan long-term technical assistance.	x
June 1981	Supreme Council reviews curriculum to determine readiness of FOMSCU to open. Comments on basic sciences, Building 29. FOMSCU is given go-ahead.	x
Summer 1981	Consortium responsibilities proposed and agreed to: - problem-based curriculum development/ tutor training: McMaster & Maastricht - evaluation: CED/U. Illinois - coordination, library, media development: Boston University	
October 1981	FOMSCU officially opens undergraduate program, October 3, with 48 undergrad.	xx

	students.	
Fall 1981	Consultants from Cairo, Ain Shams, Al-Azhar Universities, hired to fill gaps in FOM program, begin working on regular basis.	x
November 1981	P. Bouhuijs, H. Schmidt (Maastricht): tutor training workshops.	x
January 1982	Two-month consultancy by Ron McAuley (McMaster to assist with clinical phase planning (years 4,5,6).	x
March 1982	International Seminar on Community Medicine, Ismailia.	x
September 1982	First international symposium to evaluate the FOMSCU curriculum.	xx
October 1982	FOMSCU opens second year with 64 students.	
November 1982	Dean John Sandson of BU makes visit to FOM.	
January 1983	Consultancy by Ray Koff, Herb Kayne (BU), P. Holland, D. Koziol (NIH) to help develop plan for research program at FOM.	x
Winter 1983	C. Kreinsen develops scientific methods course to be offered at FOMSCU (implementation later suspended).	
March 1983	Mahmoud Ali (McMaster) - two-month visit to further develop clinical phase of FOM curriculum.	x
September 1983	Second annual conference on the FOMSCU curriculum (attended by Consortium members).	x
February 1984	R. McAuley (McMaster) visits FOM to consult on clinical phase of FOMSCU curriculum	x
February 1985	R. McAuley (McMaster) visits FOM to consult on FOMSCU curriculum	x
March 1985	R. Williams (SIU) visits FOM to consult on overall curriculum planning.	x
June 1985	David Ozonoff (BU) - consultancy to help develop occupational/environmental health component of curriculum.	x
September 1985	Final meeting of Curriculum Consortium, Ismailia, and 'Symposium on Evaluation of Innovative Curricula for the Health Sciences' (Dr. Zohair hosting as Chairman of the WHO Network).	xx
February 1986	R. McAuley and P. McDonald provide technical assistance for workshop on clinical appraisal.	xx
February 1987	R. McAuley, consultancy to perform	

general review of undergraduate curriculum, general practice program.

October 1987 — First graduation ceremonies at FOM members of curriculum consortium group and other curriculum consultants invited.

Grant Funded Activities and Related Events

PARTICIPANT TRAINING RELATED TO CURRICULUM DEVELOPMENT

Dates	Activities	Report Available
May 1980	Drs. Zohair Nooman, Esmat Ezzat, Azzam and Hossam Hamdy go to Maastricht (U.Limburg) to discuss curriculum issues	
June 1980	Drs. Ayad and Tymour spend two weeks in Maastricht working on skills lab and curriculum development	
September 1980	Dr. Hassan Abu-Zeid visits Maastricht and Liverpool School of Tropical Med.	
October 1980	Dr. Zohair visits Liverpool, Boston, Southern Illinois University, McMaster University.	
April 1981	Dr. Rifaat Ghoneim and Saad Israel (MOH) attend Liverpool course on training for trainers in primary care.	
April 1981	Tymour Khattab and Fathi Makladi visit CED/U.Illinois and McMaster U. to plan evaluation and tutor training programs.	
June 1981	Eight FOM jr. faculty studying at Boston University attend workshops on problem-based curriculum at McMaster University.	
June 1981	Hassan Abu Zeid visits various schools to explore public health and epidemiology areas of curriculum development.	
February 1982	Fathy Makladi and Fatma Ali attend PBL workshops at SIU, Springfield, Illinois.	
October 1982	Moustafa A. Azziz and Assam Khalafalla attend educational fellowship program at McMaster.	
May 1983	Five FOM attend tutor training workshops at McMaster University.	
May 1983	Six FOM attend tutor training workshops at U.Limburg/Maastricht.	
June 1983	Three FOM attend tutor training workshops at U.Limburg/Maastricht.	
May 1984	Two FOM attend critical appraisal workshops at McMaster.	
October 1984	One FOM (studying in Boston) attends tutor training workshop at McMaster.	
June 1985	Four FOM attend problem-based learning workshop at U. Limburg/Maastricht.	
July 1985	Four FOM attend critical appraisal workshop	

Grant Funded Activities and Related Events

AUDIO-VISUAL/EDUCATIONAL MEDIA UNIT

Dates	Activities	Report Available
September - December 1980	Drs. El Dessouky and El Deeb undergo training at Dundee College of Technology in audio-visual skills lab and curriculum development.	
May 1981	Visit to Egypt by J. Glickman, T. Field of Boston University to begin planning development of AV unit at FOMSCU.	
October 1981	Follow-up visit by J. Glickman, T. Field and F. Delorey to assist with planning AV unit facility, equipment and staff training in tandem with curriculum development efforts.	x
September 1982	J. Glickman, F. Delorey, A. Vickery, J. Brems visit FOM to install equipment, train staff in specific skills related to AV unit, assist with putting curriculum conference on tape.	x
October 1982	Dr. A.R. El Deeb (FOM AV Unit Director) and 2 technicians, Miss Ferlha and Miss Azhar, spend about 4 weeks at BU ed. media unit in technical training.	x
Spring 1983	AV video studio equipment arrives at FOMSCU.	
September 1983	J. Glickman and F. Delorey attend FOMSCU evaluation conference and assist with audio-visual recording.	
January 1984	J. Glickman visits FOM to develop management systems for AV unit.	
March 1984	Issam El S. Moussa (Asst. Dir. AV Unit) spends 6 weeks at B.U. in technical and management training at Ed. Media Center.	x
June 1985	Dr. A. R. El Deeb during CME visit to Boston spends about 2 weeks in special training at BU Ed. Media Center.	
1986-1987	Equipment and supplies procured and shipped to Ismailia to complete the unit.	

Grant Funded Activities and Related Events

LIBRARY DEVELOPMENT

Dates	Activities	Report Available
June 1980	BU staff develop list of books and journals for FOM faculty library.	x
	Discussions about library systems (Library of Congress versus National Library of Medicine): FOM chooses LOC system.	x
August 1980	AU/Cairo library consultant hired at FOMSCU to organize books, train staff.	
September 1981	First shipment of books from US. N.B. FOM also purchases books on local market throughout life of project. Large numbers of students begin using library on regular basis. At this point there are about 5,000 books.	
	Journal lists organized and journals assembled in U.S. for quarterly shipment	x
1982	FOM begins looking for full-time librarian. Space expanded to include mezzanine.	
	Library staff begin regular training at AU/Cairo library.	
1983	AU/Cairo consultant resigns (ill health). FOM concerned that no full-time librarian has been found so far.	
late 1984	List of CA-funded journal subscriptions reduced from 145 to 40 titles.	x
1985	Professional librarian hired by FOMSCU. Begins work, mainly on satellite libraries.	
	25 books purchased for each of 20 health centers in Port Said, Ismailia and Suez, to serve as reference libraries in training units.	x
1986	Final year of journal subscriptions through C.A. FOMSCU receives microfiche equipment from Rockefeller Foundation and will be ordering journals for microfiche viewing.	
	Library roof collapses from water damage. During repairs, books are moved across the street and heavy student use of library continues. Repairs completed early 1987.	

Grant-Funded Activities and Related Events

HEALTH SERVICES IMPROVEMENT
(not including group practice, clinical infectious disease laboratory, or facility development)

Dates	Activities	Report Available
July 1980	William Dann, Exec. Dir., Norton Sound Health Corp. and management consultant, visits Egypt to begin planning for health services development activities	x
October 1980	William Dann return visit to provide further assistance with health services planning	x
November 1980	Three FOM and Six MOH participate in mobile seminar on primary care and emergency medical services in 6 sites around U.S. including Alaska, where they visit selected service delivery systems.	x
Spring 1981	Drs. Anand and Hassan working on community medicine, public health, providing review/assessment of community health centers.	
August 1981	Health Directors of Ismailia governorate and Port Fouad Hospital visit Norton Sound, Alaska to work on health care and nursing systems development.	x
February 1982	Community Medicine workshop - Ismailia: international group discusses policy and training issues around incorporating community medicine into the training program. Participants include: Rex Fendall, Liverpool School of Trop. Med.; Moshe Prywes, Dean at Beersheva; Dr. Villareal of University of Mexico Steven Joseph, at the time in private practice	x
early 1984	Dr. Abdel-Ghaffar Khallaf, former Under-Secretary for Health of Egypt, takes a long-term consulting assignment at FOM, assisting with liaison between FOM and MOH.	x
January 1984	Carolyn Kreinsen, BU staff member, begins 6 month assignment as FOM consultant. Duties include nursing curriculum development, group practice management, general assistance to FOMSCU Dean in health services development.	xx
Spring 1984	First Jr. Faculty Research Fund project, to improve medical records at Sheikh Zayed urban health unit, is completed.	
January 1985	Maged Khattab and Mohamed Azad visit selected	

	programs in Tunisia to observe medical records and rural primary care service systems	
Winter 1985	New Minister of Health asks Zohair for proposal for integrated medical education and health service program for the region.	x
late 1985 early 1986	Paper on development of Abu Sultan as a prototype health training and service center developed by M. Bicknell. Companion paper developed by Dr. Shehata on detailed financial and staffing patterns.	x
January 1986	Concept paper on 25 centers project to improve health services.	
February 1986	Two FOM students (fourth and fifth year) attend 6-week Certificate Course on Child Survival at Boston University	
Fall-Winter 1987	FOM graduates, under supervision of Dr. Shehata, doing comprehensive survey of MOH teaching sites, looking at state of facility, equipment, services, etc.	x

Grant Funded Activities and Related Events

INFECTIOUS DISEASE/CLINICAL MICROBIOLOGY

Dates	Activities	Report Available
December 1980	James Plorde, U. Washington, spends 10 days in Egypt working with the FOM on a plan for developing a clinical infectious disease and microbiology capacity at the school.	x
November 1981	James Plorde returns to Ismailia to develop a workplan for various components of the FOM infectious disease program.	x
January 1982	Mohamed Farid, Director-designate of the FOM laboratory, visits Seattle to plan training programs.	
Summer 1982	Mohamed Farid begins 9-month training, through a Peace Fellowship, at Seattle lab.	
January 1983	Fred Tenover and Sam Eng, U. Washington, begin 2-month installation and training assignment at FOM laboratory.	xx
March 1983	Jim Plorde and Joanne Gates visit lab to check on progress	x
March 1983	Larry and LaDonna Carlson, U. Washington, take over training exercise at FOM lab. Their visit lasts 3 months, until Farid returns.	x
Summer 1983	Farid returns to Ismailia to take on directorship of microbiology lab.	
April 1984	Jim Plorde and Sam Eng re-visit lab to assist with opening tuberculosis unit and with planning for future activities.	x
September 1984	Mohamed Farid visits Seattle laboratory for refresher training.	
April 1985	Jim Plorde spends 2 weeks in Egypt providing general assistance to Farid and lecture series on laboratory management in resource-constrained environments.	x

Grant Funded Activities and Related Events

GROUP PRACTICE

Dates	Activities	Report Available
March 1980	Ken Bloem, Assist. Administrator-of Lahey Clinic, visits Egypt to discuss development of a primary care group practice for the FOM	x
June 1980	Ken Bloem makes return visit to work on plans for group practice	x
October 1980	Ken Bloem makes return visit to work on group practice development	x
March 1981	Architectural contract signed for renovations of GP building.	
April 1981	Ken Bloem and Kathy Kunze spend two weeks working on group practice management and staffing, predicting financial self-sufficiency after 18 months of operations.	xx
June 1982	Ken Bloem - group practice development	x
October 1982	Linda Rodman, BU staff - working on staff and training, equipment issues	x
November 1982	$98,000 balance remaining in Phase I funds is transferred to group practice	x
November 1982	Ken Bloem - group practice development	x
December 1982	Group Practice officially opens.	x
January 1983	Linda Rodman, BU staff - nursing and other staff issues, equipment	x
February 1983	Ken Bloem - group practice development	x
early 1983	FOM discovers "irregularities" in use of group practice funds, leading to lengthy investigations by Egyptian Government and Boston University. (Funds are eventually largely returned.)	
May 1983	"Group Practice Mobile Seminar" takes group of FOM to observe selected group practices and HMOs in U.S. Participants include FOM group practice former medical director, new director and chairman of exec. board.	x
October 1983	Jeanette Morton, Nm. Dan & Assoc., Ken Bloem, M. Aramati and C. Kreinsen work on management and staffing at group practice	x
April 1984	All grant support to FOM group practice ends, with the exception of carry-over equipment	

	purchases (from Phase II).		x
April 1985	Group Practice is evaluated by G. Moore of Harvard U., K. Bloem, M. Aramati and Dr. A.G.Khallaf, former FOM consultant. Team praises successes of group practice, makes suggestions about improving internal management systems, and recommends the FOM not open new practices until management changes made.	x	
?	FOM group practice hires full-time administrator		
?	FOM renovates unit on ground floor of building in Suez, to create new group practice where Faculty will be living.		

Grant Funded Activities and Related Events

FACILITY DEVELOPMENT

Dates	Activities	Report Available
MINISTRY OF HEALTH UNITS/FOM TRAINING SITES		
Funded in Phase I (3/81) by USAID FRA with MOH. Funded in Phase II through the Cooperative Agreement with BU. Funded in Phase III by USAID FRA with FOM.		
See attached report by Ismailia grant staff showing progress of MOH facility renovations from 1980 through 1988.		
Consulting activities:		
July 1981	Susan Shaw, Architect, working with local consultant, provides design for renovating 6 rural units to add space for training and staff lodging.	x
BUILDING 29 (Faculty of Medicine main offices and classrooms)		
April 1979	Susan Shaw visits Ismailia to assist with renovation designs for Building 29, a bombed-out building on the new Suez Canal University campus (a large factory complex before the last war).	
?	Renovations begin on Building 29, under supervision of SCU Faculty of Engineering.	
Spring 1980	FOM using downtown offices of SCU in Nasr City In Ismailia, FOM operating out of small office donated by Governor in downtown Ismailia.	
Summer 1980	FOM rents additional space for offices in a villa in downtown Ismailia.	
Spring 1981	FOM begins using Faculty of Education building next door to Building 29) for offices.	
August 1981	Building 29 officially opened for use.	
October 1982	Susan Shaw provides post-occupancy evaluation of Building 29, recommends expanded library space and other improvements.	x
1983	FOM begins renovating space for equipment maintenance workshop.	
Summer 1983	Acoustical ceilings installed in 8 classrooms, one conference room and the AV center.	

1983	AV unit renovated to accommodate darkroom and studio equipment.
1986	Sound-proofed dividers installed in a number of classrooms, doubling their teaching space.
1987	Sound-proofed partitions installed in Vice-Dean's office, creating space for FOMSCU Center for Research and Development.
1987	Computer unit moved to renovated space in part of one of the labs.
1987	Building 29 Warehouse renovated for storage.

GROUP PRACTICE BUILDINGS

See attached facility report for timing of renovations of original FOM group practice, and subsequent extensions or new group practices.

FACULTY HOUSING

Some units were purchased with PL 480 funds during Phase I. Faculty housing was funded during Phases II and III by USAID agreements with the Faculty of Medicine.

TEACHING HOSPITAL

April 1983	Susan Shaw provided an architectural/engineering analysis of the feasibility of renovating a police barracks for use as a teaching hospital. This was at a point when the FOM was considering a French loan for hard currency to build a new teaching hospital.

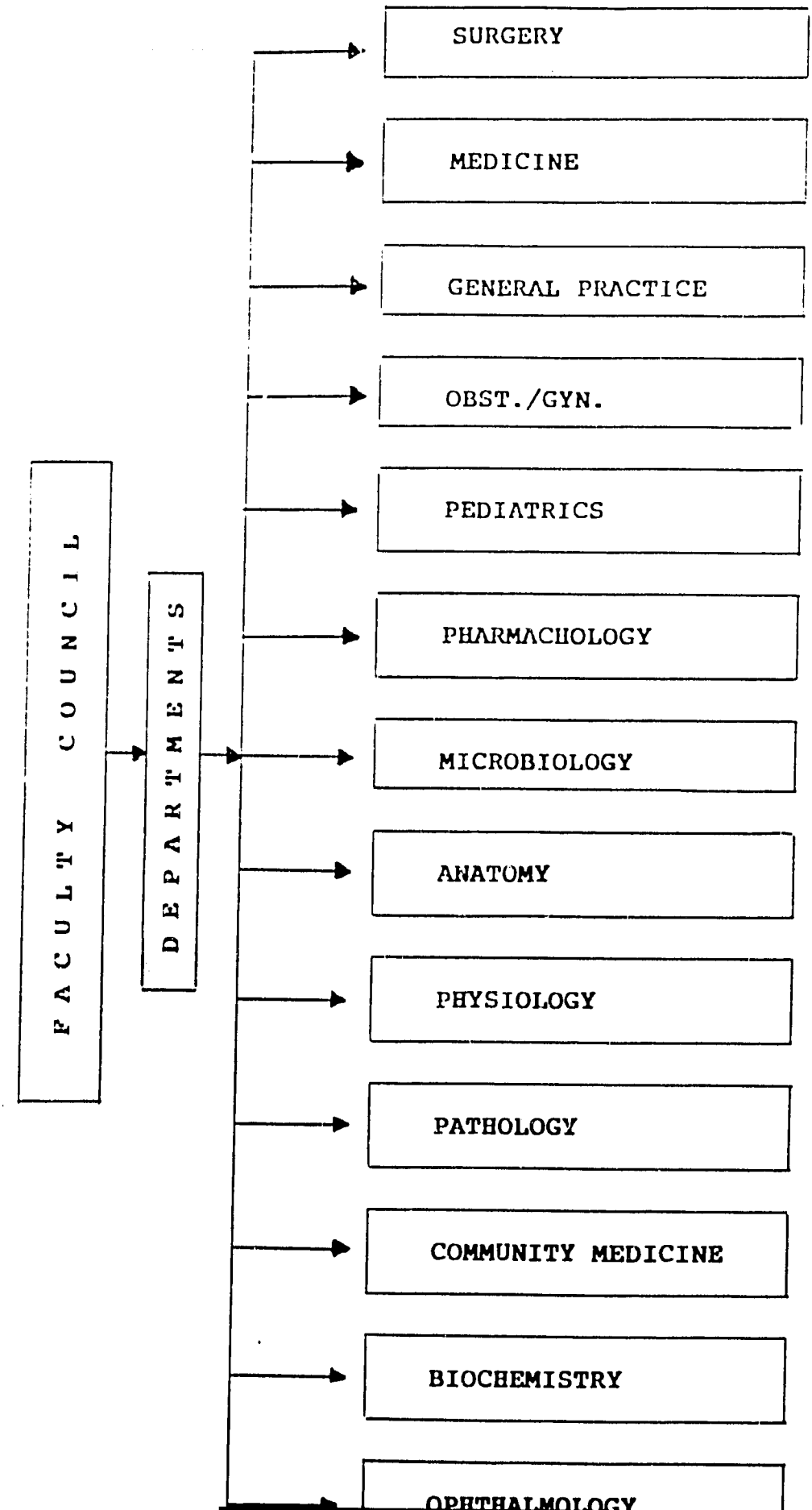
Grant Funded Activities and Related Events

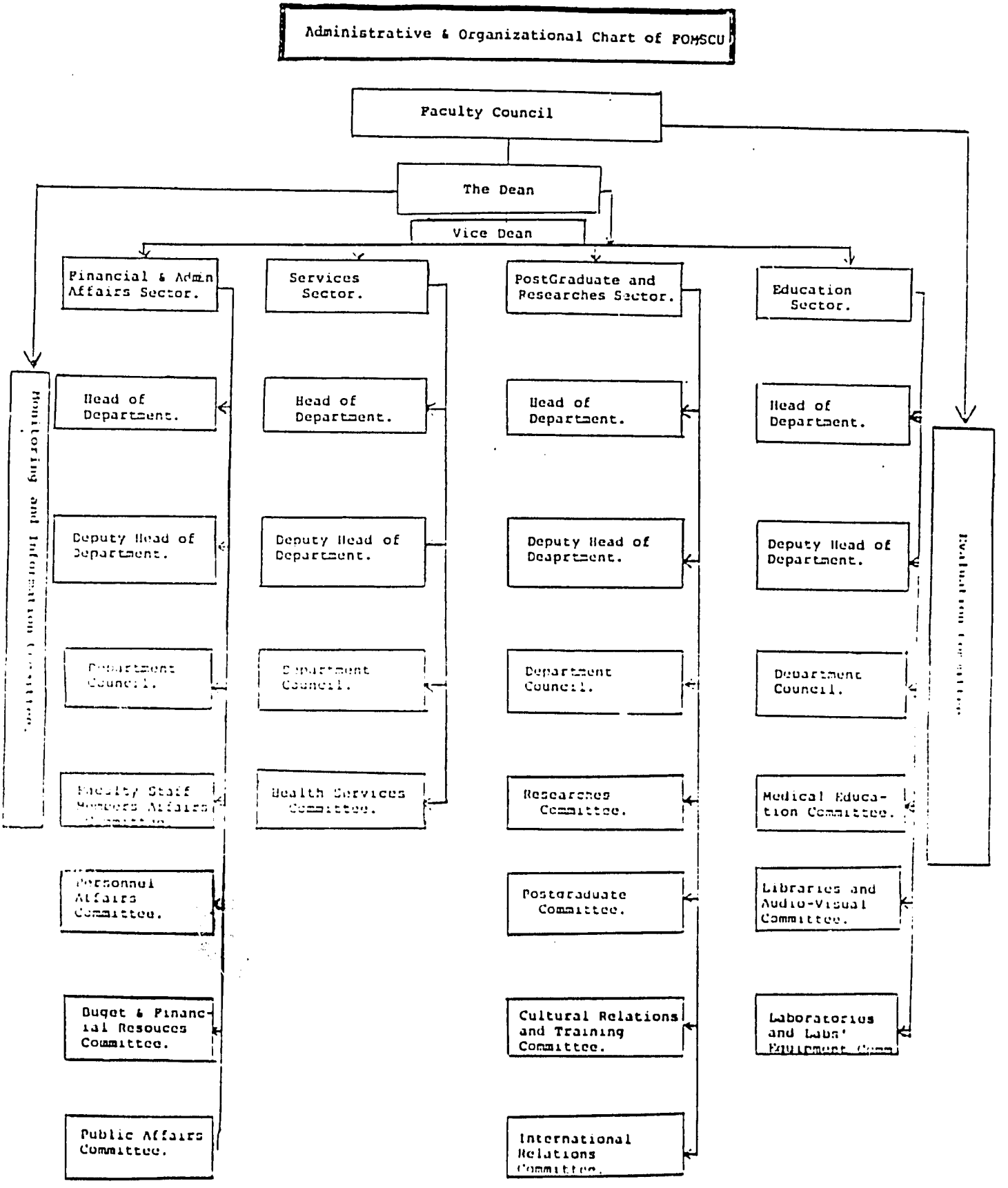
EQUIPMENT AND EQUIPMENT MAINTENANCE

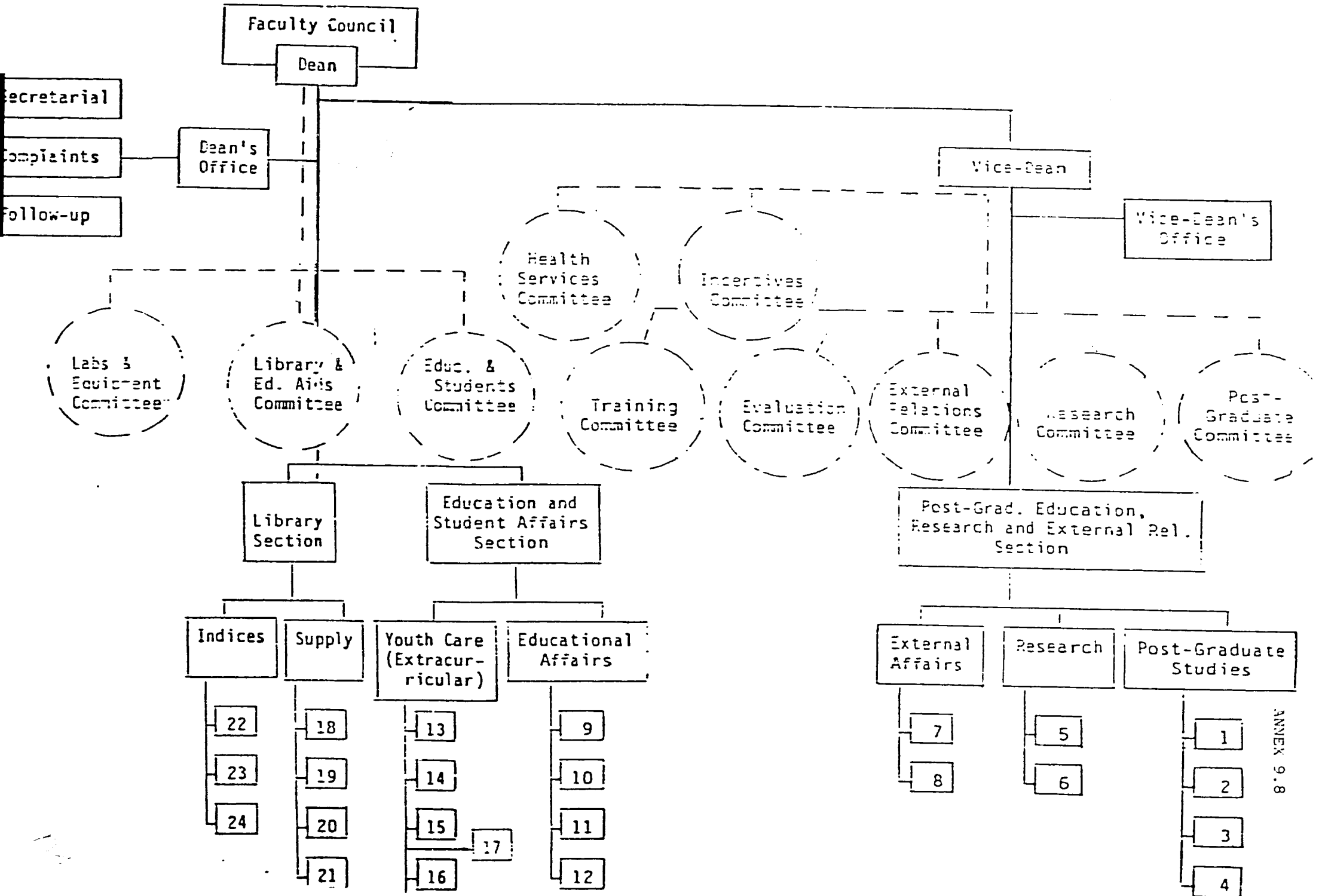
Dates	Activities	Report Available
June 1980	William McNary, Dean of Students at BU and Professor of Anatomy, visits FOM to advise on multi-purpose labs	x
Summer 1980	Subcontract developed with David Porter, of Greater Glasgow Health Board, who manages the MOH Equipment Maintenance and Training facility in Cairo (DME/Abbassia): purpose is to provide technical advice to FOM on equipment installation, maintenance, service and training of technicians.	
	Subcontract continues for 1-3 years, is ended due to disagreements with FOM staff over training and staffing issues	x
December 1982	Engineers Nadia and Soad begin technical technical training at DME in Cairo.	
1982-1983	Equipment maintenance activities continue through Glasgow sub-grant. FOM is seeking supervisor and working on difficult issue of employment/financial incentives for engineers and technicians.	
early 1984	FOMSCU completes renovation of large 3rd floor space in Bld.29 to house equipment maintenance workshop.	
	Technicians begin formulating lists of equipment and tools needed for the workshop.	
	Technicians asking for more training.	
	BU making sporadic shipments of equipment to Egypt (AV, group practice, teaching models, etc.). There are difficulties with finding U.S.-owned ships servicing Egyptian ports. Air shipments are expensive and the only U.S. carrier (TWA) is heavily overbooked.	

mid-1984	In austerity climate, SCU reduces FOM equipment budget to zero, necessitating use of grant to purchase equipment for FOM clinical teaching sites.
June 1985	William McNary makes return visit to FOM to assess status of labs, Building 29 and management issues.
Fall 1985	Engineer Ahmed Adry is hired through the PIL to supervise and train the technicians, and to oversee equipment maintenance activities. (Eng. Ahmed formerly worked at Maadi Military Hospital)
1985-1986	Several major shipments of equipment made for AV unit, occupational medicine department, group practice skills lab, computer unit.
1986	New list of equipment formulated for purchase under PIL SCUFOM-3, through a PSA. (See list provided by PIL staff)

9.8 FOMSCU ORGANIZATION CHARTS


FACULTY COUNCIL
DEPARTMENTS
SURGERY
MEDICINE
GENERAL PRACTICE
OBST./GYN.
PEDIATRICS
PHARMACHOLOGY
MICROBIOLOGY
ANATOMY
PHYSIOLOGY
PATHOLOGY
COMMUNITY MEDICINE
BIOCHEMISTRY


Administrative & Organizational Chart of POMSCU
Faculty Council
The Dean
Vice Dean
Financial & Admin Affairs Sector.
Services Sector.
PostGraduate and Researches Sector.
Education Sector.
Monitoring and Information Committee.
Head of Department.
Head of Department.
Head of Department.
Head of Department.
Deputy Head of Department.
Deputy Head of Department.
Deputy Head of Deaprtment.
Deputy Head of Department.
Department Council.
Department Council.
Department Council.
Department Council.
Faculty Staff Members Affairs Committee.
Health Services Committee.
Researches Committee.
Medical Education Committee.
Personnel Affairs Committee.
Postgraduate Committee.
Libraries and Audio-Visual Committee.
Buget & Financial Resouces Committee.
Cultural Relations and Training Committee.
Laboratories and Labs' Equipment Comm.
Public Affairs Committee.
International Relations Committee.
Evaluation Committee.


Faculty Council
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ompiaints
ollow-up
Dean's Office
Vice-Dean
Vice-Dean's Office
Health Services Committee
Incentives Committee
Labs & Equipment Committee
Library & Ed. Aids Committee
Educ. & Students Committee
Training Committee
Evaluation Committee
External Relations Committee
Research Committee
Post-Graduate Committee
Library Section
Education and Student Affairs Section
Post-Grad. Education, Research and External Rel. Section
Indices
Supply
Youth Care (Extracur-ricular)
Educational Affairs
External Affairs
Research
Post-Graduate Studies
22
23
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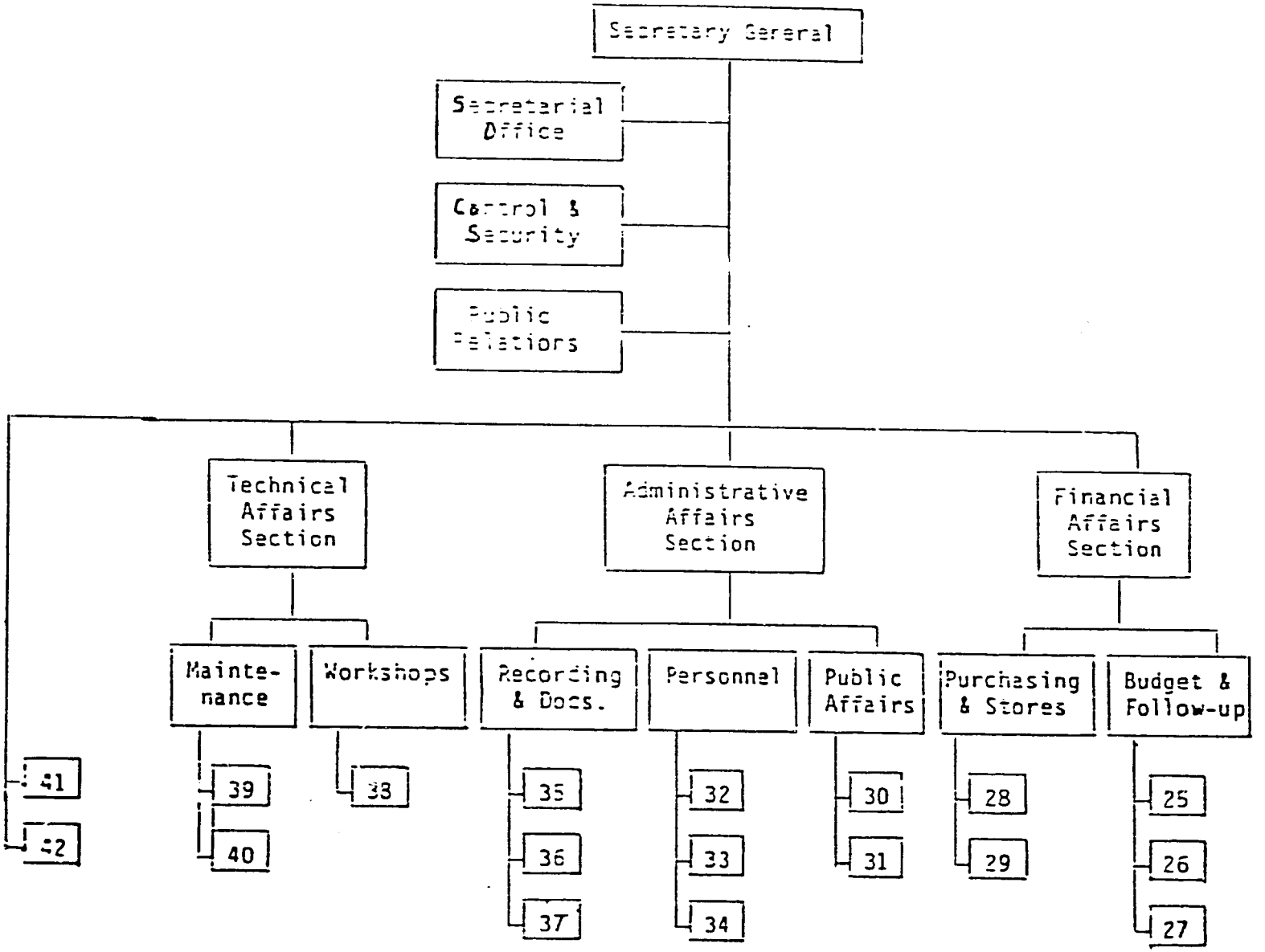
ANNEX 9.8


Secretary General
Secretarial Office
Control & Security
Public Relations
Technical Affairs Section
Administrative Affairs Section
Financial Affairs Section
Maintenance
Workshops
Recording & Docs.
Personnel
Public Affairs
Purchasing & Stores
Budget & Follow-up
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ANNEX 9,a

FCMSCU Organizational Chart — CODE

1. Registration
2. Studies and Examinations
3. Demonstrators Training
4. Foreign Students
5. Internal and External Research
6. Research and Scientific & Financial Reporting
7. Cultural Relations
8. Missions and Educational Leave
9. Registration of
10. Registration of Undergraduate Students
11. Study & Examinations
12. Graduates
13. Student Services
14. Sports Activities
15. Social and Cultural Activities
16. Technical Activities
17. Scouts, Trips & Camps
18. Books
19. Journals/Serials
20. Library Services
21. Audio-Visual Aids & Photography
22. Publications
23. European Indices
24. Arabic & Oriental Indices
25. Budgeting
26. Budget Follow-up
27. Cashier
28. Purchasing
29. Stores
30. Information
31. Internal Services
32. Faculty Members Affairs
33. Personnel Affairs
34. Wages
35. Incoming & Outgoing Post
36. Typewriting & Photography
37. Document Storage
38. Warehouse
39. Equipment Maintenance
40. Electrical Work & Building Maintenance
41. Follow-up
42. Statistics

The Supreme Council
of Universities.

Department of Statistics

Statement
Total Numbers of the Staff Members
& their Assistants at the Faculties
of Medicine in Egyptian Universities
in the year 1985/86

NAME OF FACULTY	NO. OF STAFF MEMBERS	STAFF ASSISTANTS
Cairo FOM	730	372
Alexandria FOM	415	312
Ain Shams FOM	560	427
Asiut FOM	184	184
Tanta FOM	188	169
El-Mansoura FOM	238	132
Zagazig FOM	170	293
Banha FOM	83	286
Monofia FOM	21	26
El-Menia FOM	18	109
SCU/FOM	46	114
TOTAL	2653	2424

The above statement does not include members of staff who are seconded or on scientific assignments for periods exceeding six (6) months or those on study vacations or have fellowships abroad to get a Doctoral Degree.

The Supreme Council
of Universities.

Department of Statistics

Statement
Total Numbers of the Staff Members
& their Assistants at the Faculties
of Medicine in Egyptian Universities
in the year 1986/87

NAME OF FACULTY	NO. OF STAFF MEMBERS	STAFF ASSISTANTS
Cairo FOM	769	351
Alexandria FOM	451	339
Ain Shams FOM	604	373
Asiut FOM	216	220
Tanta FOM	194	187
El-Mansoura FOM	264	124
Zagazig FOm	196	335
Banha FOM	102	292
Monofia FOM	26	84
El-Menia FOM	32	56
SCU/FOM	62	95
TOTAL	2916	2456

The above statement does not include members of staff who are seconded or on scientific assignments for periods exceeding six (6) months or those on study vacations or have fellowships abroad to get a Doctoral Degree.

FOM / SCU Faculty Characteristics

DEPARTMENT	PROFESSOR	ASSISTANT PROFESSOR	LECTURER	ASSIST. LECTURER	DEMONSTRATOR	VISITOR SPECIAL.	
						UNIV. STAF	MOH STAFF
Medicine :							
Internal Medicine	2	3	2	11	-	1	-
Respiratory Medic.	-	-	-	-	-	1	1
Psychiatry	-	-	1	3	-	2	-
Clinical Pathology	-	3	-	6	-	1	-
Radiology and phys.	-	2	-	3	-	6	-
Dermatology	-	2	-	1	-	1	-
Physical Medicine	-	-	1	-	-	1	-
Forensic Medicine	-	-	-	-	-	1	-
Surgery :							
General Surgery	1	-	6	3	-	-	-
Orthopedics	1	1	5	5	-	-	-
Urology	-	-	2	-	-	-	-
Neurosurgery	-	1	1	-	-	-	-
E.N.T.	-	1	-	3	-	1	-
Anaesthesiology	-	-	1	8	-	2	-
Opthalmology	-	-	1	2	-	2	
Gynacology & Obstetrics	1	2	2	4	-	2	

ANNEX 9.9

DEPARTMENT	PROFESSOR	ASSISTANT PROFESSOR	LECTURER	ASSIST LECTURER	DEMONSTRA-TOR	VISITOR SPECIAL.	
						UNIV. STAF	MOH STAFF
nagment Skills							
d Administration	-	-	-	-	-	-	8
ealth Administ.	-	-	-	-	-	-	3
edical Record	-	-	-	-	-	1	-
omputer Science	-	-	-	-	-	1	-
nvironmental Health	-	-	-	-	-	1	-
ysics	-	-	-	-	-	1	-
TOTAL	7	20	40	73	9	43	16
					GRAND	TOTAL	208

ANNEX 9.9

DEPARTMENT	PROFESSOR	ASSISTANT PROFESSOR	LECTURER	ASSIST LECTURER	DEMONSTRA-TOR	VISITOR SPECIAL.	
						UNIV. STAF	MOH STAFF
iatrics	1	1	1	7	-	2	-
enetics	-	-	-	1	-	-	-
hology	-	-	5	4	1	2	-
robiology							
acteriology	-	1	3	4	1	-	-
arasitology	-	1	-	2	3	1	-
mmunology	-	-	1	-	-	-	-
rmacology	-	-	2	3	-	1	-
tomy	-	-	-	3	-	2	-
istology	-	-	-	2	-	1	-
ytology	1	-	-	-	-	-	-
siology	-	-	2	4	1	1	-
eral Practice	-	-	-	4	-	-	1
chemistry	-	2	1	3	1	1	-
munity Medicine	-	-	2	7	1	4	-
ccupational Med.	-	-	2	-	-	1	-
iostatistics	-	-	-	-	1	1	1
pedemiology	-	-	-	-	-	-	2
dical Sociology	-	-	-	-	-	2	-

ANNEX 9.9

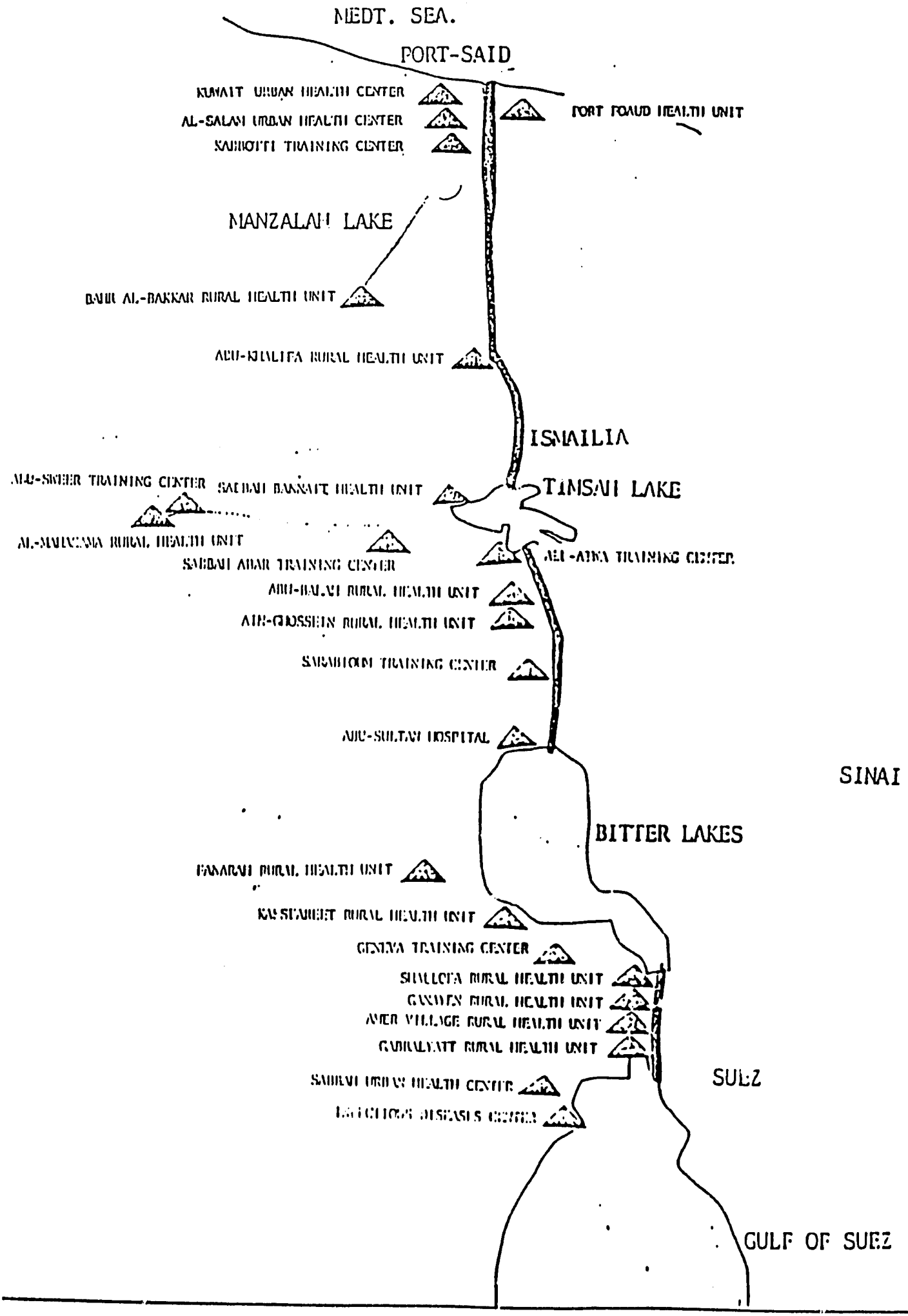
FACULTY MEMBERS BY RESIDENCE
(INCLUDING DEMONSTRATORS)

A. Total:	**158**		
Resident in Ismailia	96		
Resident in Port Said	20		
Resident in Suez		15	
Resident in Cairo		27	
B. Basic Sciences:			
Total	**45**		
Resident in Ismailia	25		
Resident in Port Said	3		
Resident in Suez		1	
Resident in Cairo		16	
C. Clinical Sciences			
Total	**113**		
Resident in Ismailia	70		
Resident in Port Said	18		
Resident in Suez		14	
Resident in Cairo		11	

FACULTY OF MEMBERS AND DEMONSTRATORS

WHO LEFT THE SCHOOL

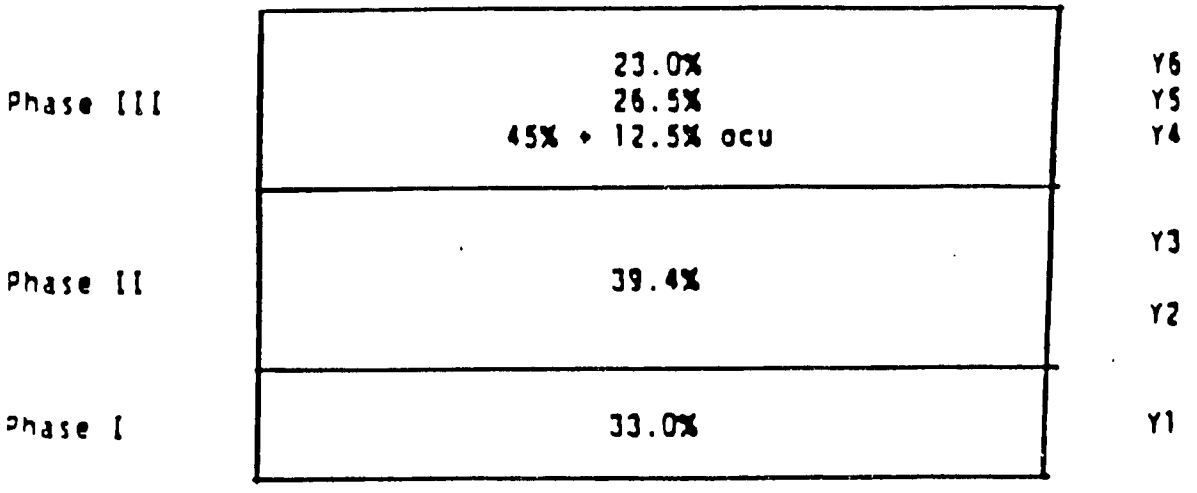
Professors	1
Assistant Professors	1
Lecturers	7
Assistant Lecturers	50
Demonstrators	13
Died	4
Total	76



HEALTH UNITS' RENOVATION PROJECTS IN SUEZ CANAL AR

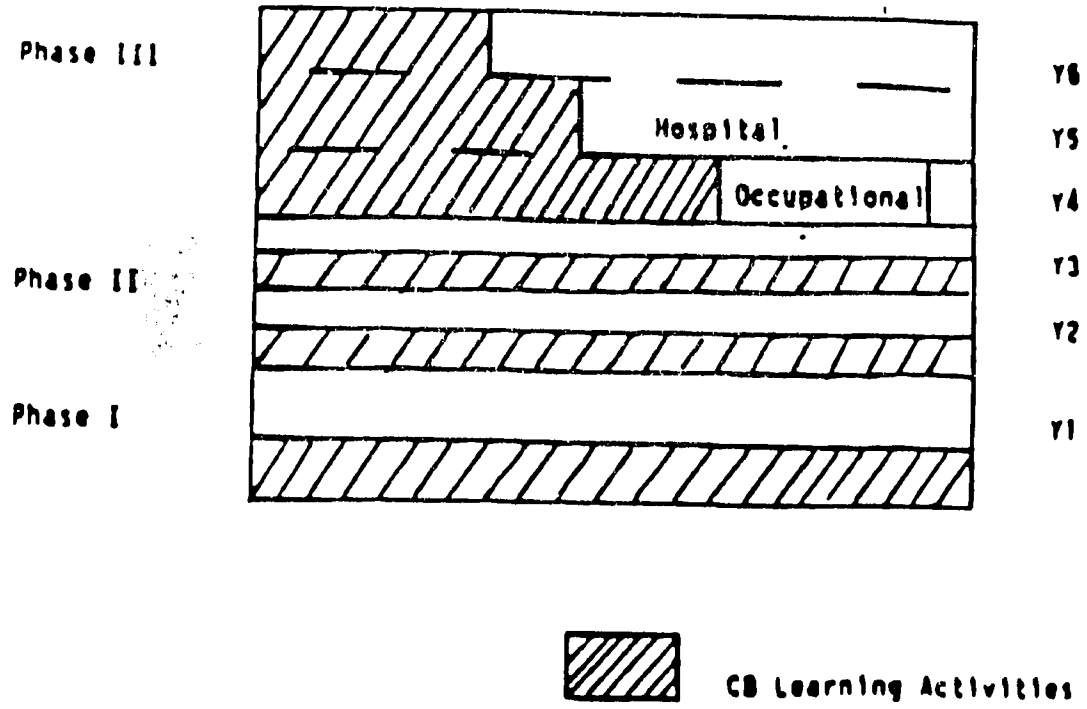
9.11 UNDERGRADUATE CURRICULUM SUMMAR

Outline of hours spent in community-based learning activities as percent of curriculum at FOM/SCU.



35.6% of the curriculum

Outline of distribution of community-based training as percent of curriculum at FOM/SCU.



EXAMPLE OF LINKAGE OF OBJECTIVES ALONG THE 3 PHASES

ANNEX 9.11

CURATIVE ASPECTS OF OPTIMAL PHYSICIAN PERFORMANCE (OPP)

- Diagnosis
- Management
- Referral
- Communicable diseases
- Emergency problems
- Chronic diseases
- Ageing problems
- Critically ill

III

SKILLS

- History taking
- Clinical exam

PROBLEM SOLVING

Using basic sciences and skills to solve the patient problem.

II

.Communication skills

.Attitudes

.Few clinical skills

Basic Knowledge (P.B.)

- Body structure and function
- Interaction of patho-gens with the body.

I

Communication skills

Human Biology — Environment

Adaptive Mechanisms

PREVENTIVE ASPECTS OF O.P.P.

- Recognition of endemic & infectious diseases in the community.
- Recognition of environmental factors in disease
- Services as MCH, nutrition.

III

Surveys

Clinical Epidemiology

Intervention

Upgrading health care delivery system.

II

COMMUNITY DIAGNOSIS

I

Identification of health problems

Health delivery system functions

Knowledge of environmental factors

FIELD TRAINING DISTRIBUTION OF STUDENTS AT DIFFERENT HEALTH UNITS

PREPARED BY DR. AMANY REFAAT

Phase I: 2 days/week/35 weeks.

Start regularly from 2nd block.

2 groups (8 students each) are attached to the urban health units at Ismailia.

1. El-Sheich Zaid.
2. El-Salam.
3. El-Shahadaa.
4. El-Sabah Banat.

Each group work for one day in the unit and the other day doing some field activities related to the block.

They work with field tutor.

Phase II: Year 2, 3. 2 days/week/72 weeks.

Students work together (both year 2, 3) in small groups attached for the whole academic year. 36 (they change the groups in next year).

They are attached at the 3 governorate (according to their address).

Port Said

1. El-Kwait (urban).
   El-Arab group.

It includes a group of MCH clinic, a health office, a school health unit and endemic disease center. They are located at the area of Arab district.

The students of Kwait/Arab are rotating together where they acquire the clinical abilities at Kwait, and doing other preventive and administrative activities.

2. El-Kabati.
   El-Manakh group.

The same rotations. They are distributed in small groups of 6-8 student/tutor.

Ismailia

1. El-Sheich Zaid (urban).
2. El-Shahadaa (urban).
3. El-Salam (urban).
4. El-Sabah Banat (urban).
5. El-Sabah Abar (rural).
6. Abu Sweir (rural).

7. El-Mahsanna (rural).
8. Abu Atwa (rural).
9. Abu Sultan (rural).

(El-Dabahia is cancelled at the start of the year because of tight space).

Suez

1. El-Sabah (urban).
2. El-Arbain (urban).

In Ismailia, Suez students are distributed as small groups of 4-6/tutor.

Phase III

Year 4

Groups of 4-5 students spend 9 weeks rotations.

9 weeks in rural block at Ismailia
- Abu Atwa.
- Abu Sweir.
- El-Wasfia.
- El-Sabah Abar.
- El-Gezira, El-Khadra (recently added).

Another 9 weeks in urban block at Ismailia
- El-Sheich Zaid.
- El-Salam.
- El-Shahada.
- El-Saba Banat.

Year 5

Students are attached for 9 weeks rotations. 4-5 students groups at urban health units at one of the three governorates.

Ismalia
- **El-Shahada.**
- **El-Sabah** Banat.

Suez
- **El-Arbain.**

Port Said
- El-Kwait.
- El-Manakh group.

Year 6

Students spend 4 weeks in small groups at urban.

Port Said
- El-Kwait.

Ismailia
- El-Shahada.
- El-Sabah Banat.

FIELD SURVEYS AND STUDIES NEEDED TO IMPROVE HEALTH SERVICES AND EDUCATIONAL ACTIVITIES IN RENOVATED PRIMARY HEALTH CARE UNITS IN SUEZ CANAL REGION

Project Director

Prof. Z. Nooman

Principal Investigator

Dr. M.I. Shehata

Work Team

First Graduating Class

Objectives

This study aims at:

1. Surveying the primary health care training units in Suez Canal Area.
2. Finding out the opinions, attitudes, satisfactions and suggestions of both providers and consumers of health services and educational activities.
3. Assessing health units functions through selected indicator procedures and activities.
4. The final goal is to identify critical functional defects common to all health units and specific to each unit and the specific ways in which these defects can be improved to achieve optimal functioning in service and education. The specific measures identified will serve as a basis for subsequent action by all concerned bodies.

Scope of the Study

1. The twenty four renovated primary health care units (urban and rural) in the three governorates in Suez Canal region (Port Said, Ismailia and Suez) will be the site for survey.

Surveying activities would include the following:

a) Facilities:

* Place (site, condition of the building and infrastructure, old and renovated, space, cleanliness, order).

* Equipment, utilization status, condition to identify defects, maintenance status ...)
* Supplies including drugs (standard types and quantity, actual supplies, actual used, storing and keeping ...)
* Personnel (staffing) standard, present, vacant, away for long period, date joining unit, training ...
* Budget and expenditure (from government and other sources, including the three budget sectors I,II,III.

b) Services and their utilization: all types of services whether preventive or curative provided by different types of personnel working in different functional sections and activities within the student units.
c) Available basic demographic and morbidity data of common reasons for attendance to units.

2. A random sample of primary health care team members in these units, health services consumers, field tutors and FOM students will be investigated concerning their opinions, attitudes, level of satisfaction and suggestions.

3. Selected indicator activities and/or procedure performed in the study units will be investigated to assess the level of performance and spotlight defective areas and components; for example, sterilization process which includes different aspects to be assessed as:
   - Management (fixing a system, training personnel and supervision).
   - Knowledge and technical competence for nurses.
   - Aspectic techniques as followed by doctors and nurses.
   - Maintenance of equipment and instruments.
   - Financing, ... etc...

4. Education in the training unit:
   - Field work: The gathering of data took place from december 5,1987 to February' 88.

   - The results included in this report are partial and preliminary, covering only a few sections of the study. The final report will be available in the coming months.

STUDENTS INTERVIEW OPINIONS OF STUDENTS ABOUT TRAINING AND HEALTH SERVICES IN PRIMARY HEALTH CARE UNITS

Main Characteristics

The Survey was carried out on 116 students, 46.6% students were from the second phase and 53.4% of students were from the third phase. The M:F ratio was 2:1 (i.e., 78 males and 38 females). Most of them were under training in urban units (68.1%).

Availability of Equipment and Materials used by the Students during training

67.3% of students stated that the equipment and materials needed for training are available (21.6%) or available to certain extent (45.7%). The rest of students stated that they are not available (12.0%) or are not available to certain extent (20.7%).

Efficiency of Equipment

30.8% of students stated that the equipment are in order and half of students stated that they are in order to certain extent. The rest of students stated that it is out of order.

Library

Most of the students stated that it is easy to reach the library of units for reading inside the unit (48.8%) or easy to certain extent (23.6%).

The presence of library in the unit did not improve the level of physicians and working team in the unit (85.2%) as stated by the students.

Nearly half students stated that the library have an effect on the training process, the other half gave a negative statement (46.2% and 53.8% respectively).

Factors Affecting the Training Process

The following are the main factor as stated by the students:

1. Lacking of cooperation between FOM and MOH units (64.9%).
2. Administrative management of unit MOH and of FOM (54.9%).
3. No relation between service and training in the unit (53.9%).
4. States of unit (50.0%).

Presence of the Students Delay the Service Performance

Most of the students stated that their presence in the unit did not delay the performance of service (50.9%) or did not to a certain extent (2-4%). One of the student stated

that their presence delay (1 student only) or delay too certain (18.9%) the cause of such delay may be large number of students in the units (89.5%, 17 students), time taken by physicians to explain (90.0%); large number of patients (85.7%), time of work is relatively small (55.5%) and lastly no synchronization between training and service (95.2%). Beside there may be other causes than mentioned above.

Fitness and Sufficiency of the Registries for the Activities

More than two-third of students stated that the registries are either unfit or unfit to certain extent in most of activities as shown in the following table:

Activity	Unfit	Unfit to certain extent
Basic information about users	20.0	48.7
Administrative and Statistical	21.2	37.2
Educational & training process	21.9	41.2
Scientific research	61.5	57.6
Technical follow up of physicians	25.7	56.2

The Extend the Students Gain from Health Team in the Units to Fulfill the Educational Objectives

Clinical Objectives: Half of the student stated either gain (14.8) or gain to certain extend (40.9%) and the other half stated that they did not gain (21.3%) or did not gain to certain extend (22.6%).

Administrative Objectives: The student opinion was nearly the same as that for clinical objectives (i.e., 44.3% gain and 55.7% did not gain).

Scientific Objectives: Two third of students stated that they did not benefit (34.5%) or did not benefit to certain extend (28.4%) from health unit team as regard attaining the scientific objectives.

Training Process: Most of students stated that the health team facil'tate to them the training process (80.9%). Only 20 students stated that the health team did not facilitate to them the training process.

The Extend the Student Gain from the Field Teacher

The students stated that they gained much from field teacher concerning both clinical (81.1%) and scientific (94.0%) objectives. On the other hand gain little (37.4%) as regards the administrative objectives.

(Proportion of students stated either benefit or benefit to certain extend to fulfill objectives).

The Extend of Success in Attaining the Educational Objectives in the Following Sections

Outpatient Clinics: Only 9 students stated that they did not succeed (0.85) or did not succeed to a certain extend (7.1/%).

School Health Service: 61.0% of students stated that they succeed (21.0%) or succeed to a certain extend (40.0%) in attaining the educational school health service objective. There is a high proportion of students (13.3%) stated that did not or did not to certain extends (25.7%) attain to educational objectives.

Material and Child Activities: 82.0% of students stated that they attain (42.5%) or attain to certain extend (39.7%) to educational objectives in MOH.

Health Office Activities: 40 students stated that they did not succeed in attaining the educational objective at health office (15.5%) or to certain extend (20.9%). The rest two-thirds of students stated either attain success (24.5%) or attain success to certain extend (39.1%).

Laboratory Activities: Most of students stated that they succeed or succeed to certain extend in fulfill the laboratory educational objectives (80.1%).

Reception Section: One-third of students stated that they succeed or succeed (15.7%) to a certain extend (16.7%) in attaining the objectives. The rest of students (67.6%) either did not succeed (42.2%) which is a high proportion or did not succeed to a certain extend (24.4%).

Small Operating Theater (room): The students opinion follow the same opinion as in reception section with little variations (69.5% succeed and 30.5% did not succeed in attaining education objectives).

In summary, students stated that they succeed in attaining educational objective in outpatient, school health, MOH and laboratory sector, while failed in health offices, reception and small operating theater.

Role of Field Teacher and Specialist (F.T.)

Other Health Service: 19.0% of student stated that the F.T.s offer the health services in PHC units, 40.5% of students stated the F.T.s offer the service to certain extend. The last 40.5% of student stated that F.T.s did not offer the services.

Regularity of F.T.s in Offering the Service: Most of student stated that F.T.s were regular to a certain extend (61.1%) and 19.4% of students stated that F.T.s are regular. 41 students stated that the F.T.s are irregular.

Effect of the Role of F.T.s on Educational Process: 98.4% of students stated that the work of F.T.s in the PHC units have an effect (69.3%) or effect to certain extend (20.1%) on the educational process. Less than the 10.0% stated that the F.T.s did not affect the educational process.

Positive Effect of F.T.s on Health Services: 88.6% of students stated that the effect of F.T.s in the PHC has a positive effect on the service in the unit. Only 13 (11.4%) stated that the F.T.s service did not affect the standard of health service.

Field Teacher and their Basic Responsibilities: 87.0% of student stated that F.T.s do their job positively in management and organizing the educational process.

Opinion about F.T.s to be from General Practice of Faculty of Medicine: High proportion of students did not agree 43.6% and 10.9% did not agree to certain extend (i.e., more than half of students). This need further explanation why?

Positive Effect on Level of Service: 88.2% of students stated that the visits of clinical specialist have a positive effect on rising the level of health services offered by the unit.

Positive Effect on Level of Training: Only one student stated that the visits of clinical specialist have no effect to certain extent on training. All stated, that the visits of clinical specialist have positive effect (90.0%) and to certain extent (9.1%).

Physician and Health Team of the Unit

Problems and Difficulties Affect Students Training: The important factors (difficulties) that affect the training process as stated by students (Yes affect or affect to certain extent) are ordered as follows:

Item	%
- Physician are not trained to be trainers	92.1
- Physician are not concerned with the training objectives of the students.	90.3
- Low level of physicians on health team	90.1
- No communication between physician and field teacher	79.3
- Irregularity of physician and health team	78.1
- Shortage of time of presence of physician	78.1
- Low cooperation of physician to solve administrative and organization problem to students	74.6
- No communications between students & physician	72.0
- Awareness of physician about their private work	71.8
- General Practitioner Master Degree	67.4
- Awareness of physician about their prestige	63.0

N.B.: Physician = Doctor of the PHC unit.

Effect of Presence of General Practitioner, Master Degree:

On Students: 78.8% of student stated that he offers a better training (44.7) or certain extend (36.1%).

students stated that post graduate with Master Degree has no effect on training (16.5% no effect, 4.7% no effect to certain extent).

On Service: 75.0% of student stated that the post graduate have a better effect on the service (40.0%) or to certain extent (35.0%).

Average Number of Days Student Stayed in the Unit: Most of students stated that they stay in the unit two days/week. This applies to the second and third stages (97.9% and 95.7% respectively).

Average Number of Hours Student Stayed in the Units: Most students (88.4%) stayed 4 hrs/day in unit while the rest stayed minimum 3 hrs/day. In the second stage, two-third of students stayed 4 hrs/day and the rest stayed 3 hrs/day.

Regularity of Student: All students stated that they are regular in their arrival and departure from the unit (85.3% regular and 14.7% regular to certain extent).

FIELD SURVEYS AND STUDIES NEEDED TO IMPROVE HEALTH SERVICES AND EDUCATIONAL ACTIVITIES IN RENOVATED PRIMARY HEALTH CARE UNITS IN SUEZ CANAL REGION

Project Director
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INTERVIEW OF FOM FIELD TUTORS (F.T.) ABOUT TRAINING AND HEALTH SERVICES STATUS IN PHC UNITS

The sample comprises 45 field tutors, the main characteristics are as follows:

PERSONAL INFORMATION

Age

Out of 45 field tutors studied, 44.5% are below the age of 35 years, 33.3% between 35-<40 and 22.2% are 40 years and above.

Sex

The M:F ratio is 4:6. Males constitutes 82.2% of the sample (37 F.T.).

Duration Physicians Worked as F.T.

The mean duration the physicians worked as F.T. is 4.02 ± 1.25 yrs (x ± SD). More than half (57.8%) of them worked 4 years and above as F.T.

Specialty of F.T.

F.T. are distributed by specialty as follows: 10 internal medicine (22.2%), 9 surgery (20.0%), 11 academic (24.5%), 10 supporting specialties (22.2%), two pediatricians and three general practitioners (6.7%).

Training as F.T. and its Location

Three-quarter were trained as F.T. in Egypt (75.6%). 13.3% got their field training both inside Egypt and abroad. Five were not trained at all as F.T.

Last Unit the Interviewed worked in as F.T. for Full Training Term

A little more of the interviewed faculty members worked for the last full educational term as F.T. in Urban PHC units (25:55.6%), compared to 20 (44.4%) who provides filed training at rural units.

Level of Cleanliness and Arrangement of Health Units

Half of the F.T.s stated that the level of cleanliness was either fit (11.1%) or fit to a certain extent (35.6%). Half stated that the units were either not fit to a certain extent (37.6%) or unfit (15.5%).

Availability of Equipment and Material the Student Need during Training in PHC

Most of F.T.S. stated that the availability of equipment and material is either suitable (27.3%) or suitable to a certain extent (50.0%). While those state it is not suitable (4.5%) or not suitable to a certain extent constitute 18.2%.

LIBRARY

Effect of Presence of Library in Facilitating the Educational Process to F.T.S.

11 F.T.S. did not respond to this question. Among 34 F.T.S. answered, 55.9% stated that the presence of library does not facilitate the educational process (29.4%) or not facilitate to certain extent (26.5%). The rest (44.1%) stated that the library facilitate (41.2%) or facilitate to certain extent (2.9%).

To What Extent Library Helps Physician and Workers in PHC Unit

Nearly half of F.T.S. (21 field tutors) did not respond to this item. Only four (16.6%) stated that library help workers in PHC unit.

Did the Presence of Library Facilitate the Training Process to Students

Among those who respond (26 F.T.S.), 48.3% stated that the library facilitate the training process to students (20.7%) and facilitate to certain extent (27.6%).

Easiness for F.T. to Use Library

Most of F.T.S. stated that it is easy to reach the library to read (29.7%) or easy to certain extent (33.3%). 6 F.T.S. said it is not easy to reach the library.

Is it Correct for F.T. to Stay with Students and Chosen Number of Patients for Training in a Separate Room away from Place where the Unit Services is Carried

Most of F.T.S. stated it is a correct way (44.4%) and (15.6%) stated that it is correct to certain extent. The rest of F.T.S. stated it is not correct (17.8%) or not correct to certain extent (22.2%).

SUITABILITY OF PERIOD OF TRAINING IN PHC UNITS

Most of field tutors stated that the period for training in PHC Units is suitable for the three stages of educational process, i.e., the proportion of F.T.S. stated it is suitable for the three stages as follows: 81.3%, 82.9% and 87.1% respectively.

FACTORS AFFECTING THE EDUCATIONAL PROCESS IN UNITS

Lacking of Information between Faculty, Units and MOH Local Authorities

71.1% field tutors stated that this factor affect the educational process and 15.6% stated it is affected to a certain degree. 13.3% stated it is not affected (2.2% or not affected to a certain extent).

Units are not Under Faculty Administration

81.4% of F.T.S. stated that this factor affect (62.8%) or affect the educational process to certain extent (18.6%) while the rest stated it is not affect (4.6%) or not affect to certain extent (14.0%).

Atmosphere of Work in the Unit

14 F.T.S. stated that the unit atmosphere did not affect the educational process (2.2%) or do not affect to certain extent (29.6%). The rest of F.T.S. stated it affect (47.7%) or affect to certain extent (20.5%).

Distinct Relation between the Provision of Services and Training of Students

It is a main factor as 57.8% of F.T.S. stated that it affect or affect to a certain extent (24.4%). Only 8 F.T.S. stated either not affect (6.7%) or not affect to certain extent (11.1%).

EFFECT OF PRESENCE OF STUDENT IN PHC UNITS

Presence of Students Led to Improving the Service

88.6% of F.T.S. stated that the presence of students led to improve (50.0%) the service or improve it to certain extent (38.6%). 5 F.T.S. stated that the presence of student has no effect on service.

Presence of Students Led to Handicap the Service

Only 7 field tutors stated that the presence of students retard offering the service in the unit. They claimed that this is due to many students in the units (2.4%), time taken by students to examine cases (11.1%), many patients in unit need service (8.9%), restricted time available for work

(8.9%); no organized schedule for service and training (8.9%).

SUFFICIENCY AND FITNESS OF MATERIAL IN PHC UNITS FOR EDUCATIONAL PROCESS

Health Problems for Community

The F.T.S. stated that the material in PHC unit are sufficient and fit for educational process about health problems in the community (55.6%) and sufficient and fit to a certain extent (24.4%). One of them say it is not sufficient or fit and 17.8% stated it is not sufficient to a certain extent.

Family and Individual Health Problem

F.T.S. stated that the PHC are sufficient (53.3%) or sufficient to certain extent (28.9%) while only eight stated that it is either not sufficient (2.2%) or not sufficient to certain extent (15.61%).

Material

F.T.S. stated that the PHC materials are sufficient (54.5%), sufficient to certain extent (13.6%), not sufficient to certain extent (20.5%) and not sufficient (11.4%).

From the above, the field tutors stated that the material available in PHC units are sufficient and fit for educational process (53% - 56%) and fit to a certain extent (13.6% - 28.9%).

UTILIZATION OF MEDICAL REGISTRIES

Most F.T.S. stated that the medical registries are not utilized efficiently (59.0%) or to certain extent (25.6%). Only six stated that they utilized efficiently (5.1%) or efficiently to certain extent (10.3%).

EXTENT OF BENEFIT FROM FIELD TUTORS

Most field tutors stated that the students benefit from them from clinical (73.3%), scientific (72.7%) points of view and to less degree from administrative point of view (27.9%). If the proportion of F.T.S. stated that the students benefit to certain extent, the above proportions will be 91.1%, 95.4%, 95.5% and 72.1% respectively.

Facilitate Training of Students

Most of F.T.S. stated that the unit team facilitate (29.5%) or facilitate to certain extent (54.6%) the training of the students. The rest (15.9%) stated that they not facilitate (2.3%) or not facilitate to certain extent (13.6%).

EXTENT OF SUCCESS TO ATTAIN EDUCATIONAL OBJECTIVES

Out—Patient Clinics

Among those who respond the proportion of success or success to a certain degree vary from 78.6% in third stage of education to 98.0% in 2nd stage. Sporadic F.T.S. stated that outpatient clinic did not attain success.

School Health Sections

70.0% of F.T.S. stated that school health sections attained success or success to certain extent in 1st and 2nd stages and 82.6% in the 3rd stage. The proportion of F.T.S. claim that these sections not attained success vary from 17.4% to 30.0% in the three stages.

Maternal and Child Care Sections

Most F.T.S. stated that MOH section attained success (44.0% to 63.6%) or attained success to certain extent (27.3% to 40.0%). One to four F.T.S. stated it is not.

Health Offices

As stated by F.T.S., third stage attained more success (83.8% : 53.8% satisfactory / 30.8% satisfactory to certain extent) than first stage 70.0% and second stage (62.0%).

Pharmacy

First stage of E.P. did not attained success from pharmacy (72.8%), however, 2nd and 3rd stages attained success or success to certain extent ranging 65.4% to 68.0%.

Laboratory

50.0% of F.T.S. stated that students of second stage attained success, this proportion is lower in third stage (46.2%) and first stage (30.0%). Those who claimed that no success attained in the three stages vary from 8.3% in 2nd and 3rd stages to 30.0% in the first stage. The rest of F.T.S., their opinion lie in between.

Reception Room

Most of F.T.S. in the three stages stated that the success attained is low (60.0% to 77.4%).

Simple Surgical Procedures

Again as in reception room, the level of success is low in all stages (0.0% to 9.1%).

SHARING IN PROVIDING HEALTH SERVICE IN THE UNIT

51.1% of F.T.S. stated that they share in providing services in health unit, 24.4% share to certain extent and the rest either not share (8.9%) or not share to certain extent (15.6%).

SHARING AND REGULARITY IN OFFERING THE SERVICE

Affect the Education Process

Most F.T.S. claimed that it affect (76.7%) or affect to certain extent (14.0%). Only four stated it is not affect (2.3%) or not affect to certain extent (7.0%).

The Service Offering at Units

92.9% of F.T.S. stated that it affect the service offered in the unit. Others stated it did not affect the service to certain extent (7.1%).

OPINION OF FIELD TRAINERS ABOUT THE IDEA THAT F.T.S. BE FROM GENERAL PRACTITIONER SECTION

One fifth of F.T.S. did not agree and 11.4% did not agree to certain extent. The rest were either agree (54.5%) or agree to certain extent (13.6%).

GRADUATION OF FIELD TUTOR AS FIELD TUTOR (F.T.S.)

The F.T.S. approved constitute 54.1% of them and approved to certain extent by 29.7%. The rest stated that it is not fit (2.7%) and not fit by 13.5%.

The areas which need more training as stated by those who said unfit (6 F.T.S.) are: clinical 33.3%, administrative 66.7%, scientific 33.3% and special areas 33.3%.

REGULARITY OF PRESENCE OF F.T.S. AT UNIT

81.8% of F.T.S. stated that they are regularly present at PHC units. 8 said not why ?

Time lost in transportation	37.5%
Unit atmosphere is not encouraging	37.5%
Work starts late after patient and health workers leave the unit	25.0%
Unit is out of his specialty	37.5%
Job done not fit his prestige	37.5%
The place work is not administratively attached to the faculty	37.5%

EFFECT OF VISIT OF SPECIALISTS TO PHC UNITS

On Raising the Service Level

77.3% of F.T.S. stated that the visits of clinical specialists to PHC units has an effect in raising of the health service level. In addition 15.9% stated it has an effect to certain extent.

On Raising the Training Level of Students

With the exception of two F.T.S. The rest of F.T.S. stated that the visits has either effect (86.4%) or an effect to certain extent (9.1%) on the training level of the students.

PROBLEMS AFFECTING TRAINING OF STUDENTS

The main five problems affecting the training process of the students as stated by field trainers are:

- Physicians of PHC did not train as trainers to students (77.8%).
- Low technical level of performance of physicians and health team in units (65.9%).
- Irregularity of presence of physician and health team in the unit (62.2%).
- Short-time period of the presence of physician and health team in the unit (56.8%).
- Administrative problems between the physician and the health team (46.5%).

The rest of problems are scarceness of physician to affect their private work (44.4%), non-confidence in physicians by the training of students in units ((44.2%), physicians in the units did not get master of general practice (39.0%), non-sufficient contact between unit physician and the field trainer (28.9%).

ASSIGNMENT OF PHYSICIANS WHO GOT GENERAL PRACTITIONER MASTER DEGREE LEAD TO

Better Training Service to Students

Most F.T.S. stated that physicians got M.S. in the unit affect (67.6%) or affect to certain extent (16.2%) the training service to the student.

Better Health Service to Population

Most F.T.S. stated that physician got M.S. in the units affect (62.2%) or affect to certain extent (24.3%) the health service to population.

REGULARITY OF ATTENDANCE OF STUDENTS

51.1% of F.T.S. stated that students are regularly attendant at PHC units, and regular to certain extent (42.4%). Only 3 F.T.S. stated that they are not regular in attendance.

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INTERVIEW OF CONSUMERS

Age and Sex Distribution

The consumers sample included 3540 persons, all purposely are 15 years old or more to be able to answer the interview questions. 47.9% are between 15- < 35 years, 40.4% between 35-55 and 11.7% of 55 years or more.

Males conrituted 55.3% of the total sample members, while the rest (44.7%) are females. However, this does not represent the actual sex distribution of actual PHC units attendants. Sometime after the start up of the field work, the males (total interviewed in the units is 2289:1584 females and 705 males). So it was decided to choose an additional random sample from the male local community served by each unit in order to be able to get actual representation of male and female opinions, attitudes and suggestions (male opinions and suggestions are of relative importance in this part of the study because of their dominant role in decision making concerning participation in costs and management of PHC units). The end result is a total respondents number of 3540:1956 males and 1584 females.

Visits to PHC Units

The greatest majority of consumers (84.5%) visited the units during the year 1987. No much differences were found in rural and urban areas nor in different governorates.

Overall Satisfaction with the Services Provided

A little less than half of the respondents (48%) to the question about satisfaction with the level of services provided by the PHC unit expressed their full satisfaction, besides 35.7% who showed satisfaction to some extent. The unsatisfied, completely or partially, constitute 16% of respondents. There are also 416 who either did not answer or could not give a definite answer and they constitute 11.7% of the whole sample.

More of urban people (56.7%) are satisfied completely with level of PHC services than of rurals (44.4%).

Opinion about Different Aspects and Component of Services

Generally speaking, the respondents expressed their satisfaction with all components and aspects of PHC services except for one.

Doctors give patients chance to explain their complaints and exchange talks with them (35%); doctors examine their patients (76.4%).

Nurses functioning well (88.9%); consumers confident in laboratory work and test results (79.7% in general, only in

Port Said rural unit there is a majority (53.5%) who are not confident). The only one component of the services that is not satisfactory as felt by the consumers is "medicines" where the majority of respondents (57.4%) said that these are either deficient, they have to buy from private pharmacies and/or PHC unit medicines are not effective. However, in urban units the situation seems to be better where 56.1% of the consumers are satisfied (thanks to urban Port Said units whose consumers showed 72.7% satisfaction with medicines), compared to only 36.8% in rural units. Because of this, Port Said governorate is the only one where the majority of consumers (67.1%) expressed their satisfaction as regards medicines, while in the other two governorates dissatisfaction in predominant (63.7% both Ismailia and Suez).

The Most Unsatisfactory Service

When the consumers were asked about the most unsatisfactory service provided by the PHC units, a little more than half of them (1941) responded, while the remaining half (1599) did not respond. This shows that, in spite of the general level of satisfaction expressed before in the previous answers, there is some sort of at least relative dissatisfaction concerning specified activities in the PHC units and collectively those consumers who expressed specific dissatisfaction with certain activities constituted 54.8% of all interviews.

Services	Rank of Dissatisfaction					
	In general	Rural	Urban	Ismailia	Suez	Port Said
Medicines	1	1	1	1	1	1
Out-patient	2	2	2	2	2	3
Laboratory	3	3	5	3	5	2
Emergency	3	4	3	4	3	4
Immunization	5	5	8	5	7	6
MCH	6	6	9	6	8	9
School Health	7	7	7	8	4	5
Health Office	8	8	4	7	6	6
Family Planning	9	9	6	9	8	8

Reasons Given for Dissatisfaction (with the most unsatisfactory service)

The most frequent reasons given for dissatisfaction with each of the different services provided in PHC units are as follows in order of frequency. However, variations were found in different rural and urban units in different governorates:-

Medicines: 1. Not enough medicines (82.8%)

Immunization
1. Overcrowding and disorder (37.5%).
2. Bad organization, timing problems and irregularity (23.4%).
3. Unavailability of resources e.g. syringes (20.9%).
4. No enough vaccines (4.6%).
5. Uncleanliness (4.5%).

MCH
1. Not ohtsical examination (18.4%).
2. No health education or instructions, and non-functioning of educational kitchen (13.8%).
3. No qualified nurses oriented for such work (12.3%).
4. Unsufficient care given for mother and child (7.6%).
5. The unit is not providing or not providing to satisfactory level antenatal care/delivery (7.6%).
6. Unpunctuality of nurses (7.6%).

School Health
1. Not enough attention (carelessness) to this service (25.9%).
2. No examination/no careful examination/no examination for every one (18.5%).
3. This service is not available at all at the unit (18.5%).
4. Inaccuracy of periodic examination for students (7.4%).
5. No health visitor available (7.4%).

Health Office
1. Responsible employees unavailable during working hours (40%).
2. Complicated routine work/hinder work/don't finish what is requested at once (37.5%).
3. Uncleanliness (10%).
4. Carelessness, corruption, and unclear instructions for work (10% altogether).

Family Planning
1. No examination/no accurate examination (20.8%).
2. No health education/ no F.P. Seminars (20.8%).
3. Not enough contraceptives of different types (12.6%).
4. No loops (8.2%).
5. This service (F.P.) is not provided at all in the unit (8.2%).
6. No contraceptive pills available (8.2%).

Attitude Towards Seeking Health Services

When consumers were asked about their attitude for seeking health services when first feel ill, they mostly said they go to the PHC unit (55.5%, however, the percentage was only 46.2% in urban areas compared to 59.8% in rural areas). About one third of respondents said they go to private doctors, clinics (15.6% to specialists and 15% to G.P.S.).

Opinion about Financial Participation of Consumers

When consumers were informed that the amount of money allocated by the government for free health services in PHC units is not sufficient to cover the costs of their health needs and that this is one of the important factors of unsatisfactory performance of provided services, then they were asked if they agree on financial participation to cover costs of curative services, a great majority, three quarters of them, agreed on the principle. The only group who gave a different tone are those of Port Said city (urban) as they mostly (60%) are against financial participation, otherwise the remaining respondents everywhere have even a higher percentage of approval than the general percentage.

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INTERVIEW OF PRIMARY HEALTH CARE PROVIDERS PHYSICIANS*

48 physicians working in Primary Health Care Units in Suez Canal Zone were interviewed. Their distribution among governorates is as follows:

Table 1. Distribution of Provider by Sex and Place of Work

	Rural		Urban		
	Males	Females	Males	Females	Total
Ismailia	16	2	1	9	28
Suez	3	3	1	4	11
Port Said	1	-	3	5	9
Total	20	5	5	18	48

The following are the main finding of the interview:

Sex

Male/female ratio among physicians is 1.08. Males work mainly in rural units (80.0%), while females work mainly in urban units (78.3%). Table 1.

Age

The majority of physicians (95.9%) are in the age group 25-45 years (54.2% in age group 25-35 and 41.7% in age group 35-45). Only two physicians are in the age group 45 + years. Table 2.

Marital Status

Two third of physicians are married, while the rest are singles.

Health Status

Physicians working in the PHC unit are mostly healthy (89.6%). Only 5 physicians, 4 in Ismailia and one in Suez complain of certain chronic and/or serious medical condition.

Residence

About half of the physicians (47.9%) live within the district of the town in which the unit is located. One third live in the houses attached to the units, while one fifth live outside the vicinity of the unit's district or town.

* Other members of the health team have been interviewed, the results are not yet available.

However, most of rural physicians (60%) live in the houses attached to the unit compared to only 4.3% of urban doctors. Most of the latter (87%) live within the units of the district or town in which the unit is located. The majority of Port Said physicians (66.7%), and of Suez physicians (54.5%) live within the viscinity of the units, district or town compared to (39.3%) of Ismailia doctors.

Does the Physician's Family Stay with Him?

Data show that 34 physicians stay with their families (70.8%).

Socio—Economic Status

The standard of socio-economic status of physicians, according to the scale used in the study, is generally high (79.1% high and 16.7% moderately high). Only two showed lower standards. The scale used was designed mostly to fit also paramedicals and other personnel working in PHC units. Thus the high socio-economic level of physicians is actually a relative one.

Level of Postgraduate Training

The majority of G.P.s, according to the scale used, proved to be of low postgraduate training level (58.3%), besides 29.2% who proved to be of moderately low level. However, more of the moderately low were presented among rural physicians (100%, 50% and 44.4% in Port Said, Suez and Ismailia respectively), while more of the low trained appeared among the urban doctors (100%, 87.5% and 80% in Suez, Port Said and Ismailia respectively). The only two physicians of high training are working in rural Ismailia and Suez units.

Level of Experience

Again interviewed G.P.s showed, according to the scale used, shift towards the lower side of the scale: 41.6% low and 35.4% moderately low level of experience. 60% of urban Suez physicians are of moderately high level, while 50% of Ismailia and Port Said urban doctors are low. On the other side 100% of Port Said rural physicians (one doctor), 50% of those in Suez and 38.9% of those in Ismailia rural units are of low level.

Opinion about their Technical and Scientific Level

About 90.0% of the physicians stated that their level is good (42.2% suitable and 46.7% suitable to certain extent). Two of them said that their level is not suitable while the remaining 3 stated that their level is not suitable to certain extent.

Reasons given by PHC Physicians for Attendance of Consumers

Doctors in general (60.4%) believe that the main reason, for attendance of consumers to PHC units is "the need for one or another of the services provided by these units". There is agreement among doctors in rural and urban units working in different governorates about that. The next reason given is "to get some medicines". The third reason given is "reassurance about the health status" except in Suez wherethe third reason given is "to meet neighbours and friends".

Proportion of Trivial Cases

The proportion of trivial cases that attended the units is estimated to be less than 25.0% by about 48% of physicians. 33.3% of physicians stated that the proportion is ranging from 25-49%.

Common Conditions Presented to G.P.s in PHC Units

Responding G.P.s put the following illnesses as the most common cases they met in PHC units in the following order of frequency:

1. Diarrheas.
2. Upper respiratory tract conditions.
3. Otitis media.
4. General weakness and loss of weight.
5. Gastro-intestinal symptoms.
6. Rheumatic pains and inflammations.
7. Skin inflammations.
8. Diabetes mellitus.
9. Impetigo.
10. Symptoms of genito-urinary tract.
11. Scabes.
12. Headache.
13. Bronchitis.
14. Abscesses and subcutaneous inflammations.
15. Conjunctivitis.
16. Injuries, bruises and abrasions.
17. Bronchopneumonia and pneumonia.
18. Bilharziasis.
19. Tenia capitis.
20. Deficiency of vit. D.
21. Eczyma.
22. Bronchial asthma.
23. Menstrual disorders.
24. Unknown fevers.

No significant differences were found between rural and urban physicians. However, doctors in Port Said were much modest in evaluating their scientific and technical level as only 14.3% of them said "it is suitable". Suez physicians on the other side revealed a more optimistic opinion as 60% of them believed to have a suitable level. Ismailia physicians came in between (42.9%).

Opinions about Suitability of Equipment

About half of the physicians stated that the equipment of the units is either not suitable at all (22.3%) or unsuitable to certain extent (24.4%). The other half find it suitable (28.9% completely suitable and 24.4% suitable to some extent). However, equipment of urban units is believed to be relatively of lower level than that of rural units (57.1% compared to 45.8% unsuitable at all or unsuitable to certain extent in urban and rural units respectively). In spite of that, 75% of Suez urban physicians believe that the equipment is completely suitable.

Opinions about Employment Status

The majority of doctors (58.1%) are totally satisfied with their employment status, besides 16.3% who are satisfied to some extent. Complete satisfaction is more evident in urban units (85%) much more than in rural units (34.8%). The majority of physicians in the three governorates expressed their satisfaction. However, 50% of Suez doctors are unsatisfied absolutely about their employment status.

Reasons given by PHC Physicians for Unacceptable Performance

The leading three reasons given for unsatisfactory performance are as follows in succession: The big number of attendants (33.3%), most of cases are trivial (23.8%) and deficiency in resources (19.04%). In rural units the big number of attendants (25%) and the unsuitable work environment (25%) come on the top, followed by: "most of cases are trivial" (12.5%); "deficient resources" (12.5%), "deficient training on PHC activities" (12.5%). In urban units the "big number of attendants" is the leading reason given for unsatisfactory performance (38.46%); followed by "most cases are trivial" (30.76%); then "deficient resources" (23.07%). In Ismailia governorate the top reason given is "big number of attendants" (30.76%); followed by "deficient resources" (23.07%); and then comes "trivial cases" (15.38) and "unsuitable work environment" (15.38%). In Suez the "big number of attendants" come first (60%) followed by "trivial cases" (20%) and "deficient resources" (20%). Two third of Port Said physicians stated that the reason of unsatisfactory performance is that most cases are trivial while the remaining third related it to unsuitable work environment.

Reasons given by PHC Physicians for Unsatisfactory Achievement of Training Objectives in the Units

As Regards Antenatal Care

The reasons given are ranked as follows:

1. Deficiency of resources.
2. The unavailability of faculty members in the unit.
3. Deficiency in experience.

As Regards Health and Disease Patterns and Problems

The following reasons are given in the same rank: deficiency of resources, unavailability of faculty members in the unit, the limited number of attendants and the belief that attendants do not reflect the actual community problems.

As Regards Technical and Administrative Aspects

Teh following reasons were given in the same rank: insufficient experience, absence of clear system and the insufficient knowledge of doctors about administrative aspects.

As Regards Preventive Aspects

The only one physician (in Ismailia) who stated that the unit is not suitable for achieving training of medical students concerning preventive aspects said that the main reason for that failure is that attendants do not reflect the actual community health problems.

As Regards Control of Endemic Diseases

The main reason given is deficiency of resources

As Regards School Health

The main reason given is deficiency of resources followed by the big numbers of attendants and absence of clear system.

Fitness of Capabilities of Units Physicians to Work as Field Trainers for Medical Students

The majority of doctors find themselves completely fit as field trainers (59.5% in general; 52.2% in urban units and 66.7% in rural ones). The majority of doctors in Suez (63.6%) and in Ismailia (63%) are of the same opinion while in Port Said, equal percentages (44.5%) are of the opinion of total fitness or fitness to some extent.

Attendance of Orientation and Training Courses for Field Training

Generally speaking the greatest majority of physicians (79.2%) did not attend training courses to orient them to work as field trainers for medical students. The same situation was common among rural and urban doctors working in different governorates.

Reasons that could Affect Cooperation of Unit's Physicians to Provide Training for Medical Students in PHC Units (Arranged according to their Frequency)

1. Training interferes with (hinders) original work of provision of health services (26.2%).
2. No recognized status for the MOH field trainers within the University System (19.4%).
3. Available time in the unit is not enough (17.5%).
4. Financial incentives are not enough (12.6%).
5. Training capabilities are limited (9.7%).
6. Relation with FOM is unsatisfactory (5.8%).
7. Technical level of the unit's physicians is not fit for the purpose of training students (3.9%).
8. The behaviour of the students towards the physician and/or primary health care team and/or patients is unsatisfactory (1.9%).

Other reasons altogether formed 2.9% of the total reasons given. Not much difference in order of the frequency of reasons was found between rural and urban doctors nor in different governorates. It is worth mentioning that the notion given about the unsatisfactory behaviour of students only appeared in Suez governorate in both rural and urban units.

Opinion about use of Health Card/File

Fourty-two of the 47 physicians who defined their opinion about use of health card/file for consumers as individuals or families in PHC units expressed that it is important. Only 2 (who work in Suez, one rural and one urban) did not recognize any importance to the use of such card/file.

Opinion about the Presence of Referral System

Again here the greatest majority of G.P.s interviewed (87.2%) agree upon the importance of presence of referral system between different levels of health care. This concensus was found both among rural and urban doctors and in different governorates.

Reasons given for Unsatisfactory use of the Present Records

The most frequent and important reason given for unsatisfactory use of records in different activities is simply "the absence of such records or its unavailability all

the time". However, some other reasons are given which differed to some extent from one activity to another.

- For the out-patient: "the records to be used are not clear", the "big number of attendants (over crowding)", the "corruption in the recording system" if any, and "reluctance in retrieval of patients records". For the MOH services: "the recording is not part of the doctor's work".
- For family planning: "the small number of attendants", and "corruption in the recording system" if any.
- For the reception room (emergency): "the records to be used are not clear", the "corruption in the recording system" if any and "reluctance in retrieval of patients records".
- For control of endemic diseases: "the corruption in recording system" if any existed.

Suggestions given to Improve use of Records

The following suggestions are given by those who responded to this part of the interview from those who said that they did not use the records or use it scarcely:

- For out-patient: to provide clear records, to provide enough records all the time, organizing the work, supervision, and providing enough doctors, nurses and clerks.
- For MOH activities: to provide enough records all the time.
- For family planning: organizing the work.
- For reception (emergency): to provide enough records all the time.
- For control of endemic diseases: to provide enough records all the time.

Evaluation of Physicians to the Services Provided by the PHC Units

In general, the majority of G.P.s expressed their satisfaction (full or to some extent) with the level of all the services provided by the PHC Units. However, when full satisfaction is considered alone, a majority was found only for the following services in succession:

1. Immunization (88.1%).
2. Health office (80%).
3. School health services (61.9%).
4. MOH services(59.1%).
5. Dental services (54.8%).
6. Outpatient services (53.3%).

For the other services, less than 50% showed full satisfaction (as shown in front of each between brackets): family planning (47.6%), control of endemic diseases (46.3%), emergency (38.1%), pharmacy (33.3%), and laboratory (31.8%).

Complete dissatisfaction was expressed by about one quarter or more of physicians concerning the level of the following services: laboratory (27%), emergency (24%) and pharmacy (22%).

Opinion about the Free Health Care System

A little more than half of the PHC physicians (54.2%) stated that the free health care system is a failure with more of them (35.4%) stated that it is a complete failure. However, about 46% stated that it is successful (35.4% to some extent and 10.4% fully successful).

Reasons given for Failure of the Free Health Care System

The main reasons given by PHC physicians for failure of the free health care system are as follows:

1. "Absence of health concensus and abuse by consumers" (33.3%).
2. "Deficiency of drugs" (19%).
3. "Unsatisfactory performance of physicians" (14.3%).

Rural physicians gave "absence of health consensus and abuse by consumers" as the main reason (33.3%) followed by "unsatisfactory performance of physicians". Urban doctors gave "deficiency of drugs" and "absence of health concensus and abuse of consumers" as the leading reasons (33.3% for each) followed by "No financial barriers (16.7%). The two physicians in Port Said who agreed that the free health care system is a failure gave the following reason: "absence of health concensus and abuse by consumers".

Half of the Suez doctors who agreed that the free system is a failure gave the reason: "absence of health concensus and abuse by consumers", while 25% of them gave "deficiency of drugs" as a reason and the another 25% gave "no financial barriers" as the most important reason. One third of Ismailia physicians who said the system is a failure gave the reason: "unsatisfactory performance" (20%); followed by "deficiency of drugs" (13.3%).

Suggestions to Remedy the Failure of Free Health Care System

The following are the main suggestions given in succession:

1. Raise of the nominal fee for the ticket introduce fee for service/economic curative care for reasonable prices (41.2%).
2. "Provision of enough medicine" (17.6%).
3. "Cancelling of the free system" and "improvement of resources" (11.8% for each).

Suggestions given to Remedy the Failure of Current Economic Health Care System

The main suggestion given is to provide sufficient medicines. Other suggestions given came in the same rank including: raising the fees, actual improvement of services through the collected money, suitable timing, reasonable revenue to providers and availability of resources. In the same rank some suggested to cancel this system.

Opinion about Introduction of a Sort of Health Insurance System in PHC Units (Fixed Small Premiums)

The majority of PHC physicians (76.8%) agree about introducing some sort of health insurance system. Not much difference was encountered between rural and urban doctors nor in different governorates.

WHEN THE PHYSICIAN ARRIVES AND DEPARTS? DAILY WORKING HOURS

It is evident that there is some element of inconsistency between different answers of these questions about time. One can generally conclude from analysis of the different answers altogether that about half of the physicians start between 9-10 a.m. and end by about 12-1 p.m. with total of about 3 hours daily work.

9.16 FINANCIAL SUSTAINABILITY

FOM/SCU EXPENDITURES (IN L.E.)

Title	FY 84/85 (Actual)	FY 85/86 (Actual)	FY 86/87 (Actual)	FY 87/88 (Est.)	FY 88/89 (Est.)
I. GOE Salaries & Allowances	1,537,000	1,777,000	2,111,000	2,475,148	2,902,110
II. GOE Other Operating	149,266	212,536	252,018	312,203	402,741
III. GOE Capital	15,000	12,000	0	9,000	12,000
Sub Total	1,701,266	2,001,536	2,363,018	2,796,351	3,316,851
Title II as % of I + II	8.9%	10.7%	10.7%	11.2%	12.2%
FOM/SCU Generated Revenues Expended			21,000	71,000	96,000
Total Title II Expenditures			273,018	383,203	498,741
Title II plus Generated Revenues as % of I + II			11.6%	13.7%	15.1%

FOM/SCU TITLE II LINE ITEM EXPENDITURES (NON–PERSONNEL OPERATING COSTS) (IN L.E.)

Title	84/85 (Actual)	85/86 (Actual)	86/87 (Actual)	87/88 (Est.)	88/89 (Est.)
A. Title II GOE					
Library Materials &	58,265	100,956	124,000	159,960	206,348
Supplies	15,228	13,790	34,836	32,038	41,330
Spares & Maintenance	29,191	40,045	34,334	44,291	57,135
Transport	23,015	22,040	13,237	17,076	22,028
Post, Tel & Telex	612	1,400	1,779	2,295	2,960
Printing	2,372	1,624	645	832	1,073
Awards & Followships	18,749	23,581	32,708	42,193	54,429
Misc.	1,834	9,100	10,479	13,518	17,438
Total	149,266	212,536	252,018	312,203	402,741
B. FOM/SCU Earned Revenue Funded (see Annex 8.12-3)	n/a	n/a	21,000	71,000	96,000
C. Project Funded (see Annex 8.12-4)	n/a	n/a	23,000	55,000	29,000
D. Total			296,018	438,203	527,741
E. % Annual Increase				48%	20%

GENERATED FOM/SCU FUNDS AVAILABLE TO COVER TITLE II COSTS (IN L.E.)

Revenue Source	86/87 (Actual)	87/88 (Est.)	88/89 (Est.)
Group Practice[1]	5,000[5]	32,000	48,000
Computer Center	6,000	7,000	9,000
Audio-Visual	2,000	2,500	3,000
Microbiology Lab[2]	0	3,000	6,000
Pathology Lab[3]	2,000	2,500	3,000
Housing Rental[4]	6,000	24,000	27,000
Total	21,000	71,000	96,000

1 Excludes salary supplements paid directly to professional and administrative staff of FOM/SCU.

2 This unit, to meet its revenue generation potential, requires vigorous administrative oversight.

3 This unit has extraordinary potential as the referral services of FOM/SCU develop.

4 Increase reflects new units just becoming available. FOM/SCU ability to increase rents may be limited and for purposes of faculty/staff retention it may want to rent somewhat below market.

5. Excludes 15,000 of earned revenues allocated for start up costs of Sues Infectious Disease Center

USAID SUPPORTED FOM/SCU OPERATING EXPENSES (NON–PERSONNEL ONLY) (IN. L.E.)

Expense Items	86/87 (Actual)	87/88 (Est.)	88/89 (Est.)
Expendable Mab/Led Supplies[1]		29,000	29,000
Cairo Leased Phone Lines	17,000	18,000[2]	
Telex Lease	3,000	3,000[3]	
Non-project Telex Charges	3,000	5,000[3]	
Total	23,000	55,000	29,000

1 $65,706 of purchases from the 1987 equipment PSA are estimated to be expendable supplies stockpiled for use over the next 5 years. The LE equivalent (147,180) is allocated equally over five years beginning with 87/88. This serves to buffer expenditures for 5 years and will not become a true GOE budget demand until 92/93.

2 To be discontinued

3 To be assumed by FOM/SCU in GOE budget beginning 88/89 (8,000 L.E.)

FORECAST OF EQUIPMENT MAINTENANCE COSTS (IN L.E.)

A. BEST SCENARIO

Year of Purchase	Current Value[1]	Estimated Maintenance Cost by Fiscal Year[4] 87/88	88/89	89/90	90/91	91/92
80/81[2]	172,429	n/a	n/a	n/a	n/a	n/a
81/82[2]	344,892	n/a	n/a	n/a	n/a	n/a
82/83[3]	120,785	12,079	12,079	12,079	12,079	12,079
83/84	120,785	8,455	12,079	12,079	12,079	12,079
84/85	120,785	6,039	8,455	12,079	12,079	12,079
85/86	120,785	3,624	6,039	8,455	12,079	12,079
86/87	120,785	1,208	3,624	6,039	8,455	12,079
Total	2,083,292	31,404	53,103	83,215	110,912	136,193

1 Based on an analysis of the PSA, all expenditures for equipment were reduced by 14% to correct for equipment expenditures that were more properly classified as consumables. Exact equipment expenditures by time period are known for 80/81, 81/82, 87/88. The remaining balance is allocated evenly over the intervening years. Project staff report this to be a reasonable assumption.

2 Group Practice equipment not applicable here as equipment maintenance is being fully funded by the Group Practice from its revenues.

3 Equipment purchased from 82/83 onward has been adjusted to reflect only essential equipment needed for teaching and research.

4 Maintenance cost/year as % of replacement cost
Yr.1 = 0%, Yr.2 = 1%, Yr.3 = 3%, Yr.4 = 5%, Yr.5 = 7%, Yr.6 = 10%

B. WORST SCENARIO

Year of Purchase	Current Value1	Estimated Maintenance Cost by Fiscal Year[5] 87/88	88/89	89/90	90/91	91/92
80/81[2]	172,429	n/a	n/a	n/a	n/a	n/a
81/82[2]	344,892	n/a	n/a	n/a	n/a	n/a
82/83[3]	120,785	12,079	12,079	12,079	12,079	12,079
83/84	120,785	8,455	12,079	12,079	12,079	12,079
84/85	120,785	6,039	8,455	12,079	12,079	12,079
85/86	120,785	3,624	6,039	8,455	12,079	12,079
86/87	120,785	1,208	3,624	6,039	8,455	12,079
87/88	1,082,829	10,828	32,485	54,141	75,798	108,283
Total	2,083,292	44,645	77,176	107,288	136,193	168,678

1 Based on an analysis of the PSA, all expenditures for equipment were reduced by 14% to correct for equipment expenditures that were more properly classified as consumables. Exact equipment expenditures by time period are known for 80/81, 81/82, 87/88. The remaining balance is allocated evenly over the intervening years. Project staff report this to be a reasonable assumption.

2 Group Practice equipment not applicable here as equipment maintenance is being fully funded by the Group Practice from its revenues.

3 Equipment purchased from 82/83 onward has been adjusted to reflect only essential equipment needed for teaching and research.

5. Maintenance cost/year as % of replacement cost
Yr.1 = 1%, Yr.2 = 3%, Yr.3 = 5%, Yr.4 = 7%, Yr.5 = 10%, Yr.6 = 10%

FUTURE YEAR FUNDING SHORTFALL AND OPTIONS FOR FOM/SCU EQUIPMENT MAINTENANCE (IN L.E.)

	87/88	88/89	89/90	90/91	91/92
A. BEST SCENARIO					
Forecast of Equip. maintenance costs (from Annex 8.12-5)	31,404	53,103	83,215	110,912	136,193
Regular GOE Title II Funds Available (See Annex 8.12-2)	44,291	57,135	73,704	95,078	122,651
Estimated shortfall	0	0	9,511	15,834	13,542
B. WORST SCENARIO					
Forecast of Equip. maintenance costs (from Annex 8.12-6)	44,645	77,176	107,288	136,193	168,628
GOE funds available (See Annex 8.12-2)	44,291	57,135	73,704	95,078	122,651
Estimated shortfall	354	20,041	33,584	41,115	45,977

INCREASED PRODUCTIVITY AND LONG-TERM FINANCIAL VIABILITY THE GROUP PRACTICE CONCEPT

I. PRINCIPLES OF THE GROUP PRACTICE

The establishment of the Faculty of Medicine at Suez Canal University required the development of the capability to provide many clinical and technical services to support the educational functions of the school. Organizations and individuals outside either the medical school or the university required of these services are also required by. Therefore, sale of these services to such clients represented an important potential source of revenue for the support of the educational activities of the Faculty of Medicine.

Yet, the existing financial and administrative structure of the University prevented the realization of much this potential by creating a series of disincentives that discouraged productive behavior by individuals or organizations within the University. FOM/SCU was unable to pay its professionally, technically, or administratively skilled personnel salaries that were competitive with what they could command in the private sector. As a result, the University not only had a great deal of difficulty attracting and retaining qualified personnel, but it also had difficulty persuading its employees to devote their energies to the performance of university business.

The revenue generated by selling clinical and technical services was identified as a source of funds that could be used to reward and encourage productivity, and offset the disincentives created by the low level of university salaries for selected university faculty and staff. For these purposes, FOM/SCU set up a group practice to be staffed by FOM/SCU faculty.

Thus, primary care clinical services provided by the Group Practice were the first to be sold to clients outside the university. The framework that defined the organizational and administrative relationships and the financial relationships between individual members of the Group Practice and the organization, and between the Group Practice and other units of the FOM/SCU, has evolved into the "Group Practice Concept". Plans were made for the model of the Group Practice Concept to be adapted and applied to other units of the Faculty of Medicine, including (but not necessarily limited to) the microbiology, hematology, parasitology, clinical pathology, and chemistry laboratories, the audio-visual center, the equipment maintenance department, and rental housing.

The two guiding principles of the Group Practice Concept are as follow:

- The professional, technical, and administrative skills of FOM/SCU faculty and staff are used to support the teaching, research, and other activities necessary to carry out the educational objectives of FOM/SCU.
- Revenue generated by the sale of professional and technical services outside FOM/SCU are used to support activities necessary to carry out the educational objectives of FOM/SCU, and to increase the amount of revenue available for this purpose.

In accordance with these principles, funds generated by the sale of services are distributed to FOM/SCU faculty members who work at the Group Practice and to organizational units in FOM/SCU in a manner that contributes to the educational objectives of FOM/SCU and rewards professional excellence and productivity. Therefore, although no person or organizational unit is guaranteed a share of the income generated by the sale of services, these funds are apportioned among faculty, staff, and organizational units for the following purposes:

1. to support the teaching and research activities of FOM/SCU;
2. to underwrite the operations of an administrative unit capable of providing a complete range of administrative services to the entire FOM/SCU;
3. to pay the operating and capital expenses of the revenue-producing unit, including expenses for services purchased from other revenue-producing units within FOM/SCU and
4. to reward highly productive individuals in the revenue-producing unit and encourage them to maintain high standards of productivity.

II. MECHANICS OF THE GROUP PRACTICE CONCEPT

The administrative and financial framework created to regulate revenue-generating units of the FOM/SCU of Medicine had to take into account the requirements imposed by Egyptian law, the regulations of Suez Canal University, and USAID. Egyptian Law and SCU regulations place constraints on the ability of revenue-generating units to distribute funds in accordance with the principles outlined above. Therefore, the activities of the Group Practice are directed by an executive board, which has responsibility for monitoring and administering the finances of each of these units.

A principle purpose of USAID funding for FOM/SCU was to enable the FOM/SCU to establish itself as a viable, self-supporting institution. Therefore, USAID's normal practice is to provide funds to establish educational and support activities, and to require FOM/SCU to take responsibility for providing the operating budget for these activities. FOM/SCU could not afford, however, to provide the funding for the

additional operating expenses that were be incurred the while Group Practice was being transformed from a consumer to a generator of revenue. Therefore, to justify the necessary subsidy of the operating costs, USAID required that the finances of the Group Practice be monitored closely, and that it make steady progress toward profitability.

To adhere to the principles of the Group Practice Concept and meet the combined requirements of Egyptian Law, University regulations, and USAID, the Group Practice has a completely separate accounting system. This facilitates effective financial planning by enabling the Administrative Unit and Executive Board to monitor closely the revenues and expenditures of the Group Practice. Separate accounting systems also provide for efficient distribution of revenues to the Group Practice and individuals in the FOM/SCU.

To establish the principle of supporting FOM/SCU programs out of generated revenue, the revenue of the Group Practice is distributed from the beginning of operations according to the principles of the Group Practice Concept. Revenue is divided on a percentage basis between the FOM/SCU and the Group Practice, with the amount accruing to each based on anticipated steady-state revenues and expenses. The rational for this distribution is that it maximizes the incentive for achieving and exceeding projected levels of productivity, because the funds available for rewarding high productivity increase as a percentage of generated revenue as productivity increases.

Funds distributed to the Office of the Dean of the FOM/SCU will be used to support activities which contribute to the educational objectives of FOM/SCU:

- Funding for teaching and research, including salaries, equipment and supplies;
- Expansion and maintenance of educational resources and training materials, particularly for the library, clinical teaching sites, and skills training lab;
- Development and operation of an administrative unit that will provide a complete range of administrative services to FOM/SCU, including purchasing, personnel, accounting, and inventory functions.

Funds allocated to the revenue generating unit will pay for salaries, equipment, supplies, funded depreciation, services purchased from other FOM/SCU revenue-generating units, and for bonuses for highly productive employees of the unit.

Because revenue will be distributed on a percentage basis, individual employees will be motivated to increase their productivity in order to increase their income. Increased productivity will increase revenue (which should quickly exceed expenses), and the amount of funding available for support of educational programs will increase.