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PROJECT PAPER

TECHNICAL HEALTH INSTITUTE _ SYRIA

276 - 11 - 570 - 019

PROJECT PAPER

TECHNICAL HEALTH INSTITUTE-SYRIA

(276-11-570-019)

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AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

1. TRANSACTION CODE

A

A ADD
C CHANGE
D DELETE

PP

2. DOCUMENT CODE

3

3. COUNTRY/ENTITY

SYRIAN ARAB REPUBLIC

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 digits)

2760019

6. BUREAU/OFFICE

A. SYMBOL
NE/S

B. CODE
03

7. PROJECT TITLE (Maximum 40 characters)

TECHNICAL HEALTH INSTITUTE

8. ESTIMATED FY OF PROJECT COMPLETION

FY 81

9. ESTIMATED DATE OF OBLIGATION

A. INITIAL FY 78

B. QUARTER

C. FINAL FY 80

(Enter 1, 2, 3 or 4)

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$) -

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
APPROPRIATED TOTAL	1893		1893	5630		5630
GRANT	1893		1893	5630		5630
LOAN						
1						
2						
1ST COUNTRY		208	208		1541	1541
OTHER DONOR(S)						
TOTALS	1893	208	2101	5630	1541	7171

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY		H. 2ND FY		K. 3RD FY	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
1) SSA	501	562		1893		2433		1304	
2)									
3)									
4)									
TOTALS				1893		2433		1304	

A. APPROPRIATION	N. 4TH FY		O. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE
	P. GRANT	Q. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
1) SSA					5630		
2)							
3)							
4)							
SSA	TOTALS				5630		

MM YY
18 719

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

2

1 = NO
2 = YES

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE

Gordon B. Ramsey
Gordon B. Ramsey

TITLE

Director, USAID/Syria

DATE SIGNED

MM DD YY
02 14 78

15. DATE DOCUMENT RECEIVED IN AID W OR FOR AID W DOCUMENTS. DATE OF DISTRIBUTION

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B. Recommendations

It is recommended that this project and its funding be approved for upgrading and expanding the training of auxiliary health personnel required to adequately staff Syrian clinics, dispensaries, health centers, and hospitals.

Grant	\$ 5,629,800
FY 1978	1,893,100
FY 1979	2,433,200
FY 1980	1,303,500

C. Description of the Project

The grant will finance short and long-term advisors to assist Syrian counterparts in revamping the administration of the Technical Health Institute (THI) and in revising its curricula. Laboratories in the THI's new building will be equipped and training aides suitable to the revised curricula will be purchased. A core group of instructors and graduates of the THI will be trained in the United States or in countries in the region. The technical advisors will also fill in for the Syrian instructors during their absence in training, provide on-the-job training for instructors who do not

receive training outside Syria, and assist returning trainees to integrate themselves into the staff of the THI.

The SARG will finance the operating costs of the THI, including the cost of furnishing the THI's new building, the salaries of instructors in training, and the stipends of students admitted to the Institute. The SARG has already financed the cost of constructing the Institute's new building.

D. Summary Findings

This is a three-year project (FY78-FY80) which will help the SARG's Ministry of Health to upgrade and expand the training of auxiliary health personnel by providing technical advice, training and commodity support to the new Technical Health Institute in Damascus.

The THI is a critical element in Syria's health system. The training it now provides is inadequate in terms of the numbers of students it produces and the quality of education offered. The SARG gives the development of the Institute a high priority as evidenced by its investment of a substantial sum of money in a new physical

facility and its request to AID for assistance (annex D). Because Syria's health care system is weak in many respects, particularly planning, the project must incorporate a certain amount of preliminary planning which might not otherwise be necessary. Additionally, the weakness of the health system in toto, makes it likely that the graduates of improved courses will not be utilized to maximum efficiency at first. However, a better trained graduate will have an immediate impact on the quality of care available at existing facilities which are understaffed. As the effects of AID and other donor activities in the health sector are felt, the utilization of THI graduates will improve.

The project will provide the following:

- a. Technical Assistance of 284 wm distributed as follows:
 - 6 U.S. full-time Arabic speaking instructors/advisors, each for three years (216 wm); a full-time U.S. team leader/director, working with the Syrian Director, for three years (36 wm); and approximately 10 short-term consultants for a total of 20 wm. These advisors will teach and work as counterparts to the THI teaching staff to improve the teaching quality, while the Syrian participants are abroad for training. They will also assist in further assessing technician demand and in revising the curricula and suggesting

other new programs. Furthermore, two U.S. experts for a total of 12 work months are also required for installing and maintenance of the equipment.

b. Long term training (up to two years each) is needed for approximately 26 Syrian participants in the U.S. or third countries. These trainees will then return and become the full-time instructors in each program of the Institute. Other types of training such as in-services training and refresher courses will also be provided for all staff by the U.S. instructors/advisors.

c. Commodities: Equipment, teaching aides, books, vehicles, and laboratory facilities needed for the different programs will be provided.

Part 2: Project Background and Detailed Description

A. Project Background

The Syrian Arab Republic has a public health system under the Ministry of Health delivering services at three levels--hospitals, health centers, and dispensaries. A large percentage of the population, currently estimated at 75%, are eligible by law for free care within the government system. The law provides this free care to low-income families, students, and some labor and civil service groups. In addition, the Ministry of Health in collaboration with the Ministry of Local Government Affairs is responsible for inspection and licensing of food preparation and marketing institutions and vaccination campaigns.

The Syrian health sector as a whole is difficult to define qualitatively because of the large private component, as well as because of the equally difficult to quantify but significant expenditures for health made by ministries other than the Ministry of Health, particularly the ministries of Higher Education, Education, Defense and Social Affairs and Labor. However, analyses of the 1976 Syrian National Budget shows S.P. 65 million (\$ US 17 million) allocated directly to the Ministry of

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Health. Ministry of Health figures show an additional S.P. 140 million (\$ US 36 million) going to health services in the mohafazats (provinces, of which there are fourteen). The mohafazat figures are not combined with the Ministry of Health funding in the national budget because they are directly funded from general allocations made to each mohafazah and are under the control of the Director General of each mohafazah rather than the Ministry of Health. Taking these two diverse sets of budget projections, direct public health services related to the Ministry of Health total S.P. 240 million, or 1.7% of the budget. If the University Hospitals are added, the total becomes S.P. 268 or 1.9% of the National Budget.

The main health sector objectives of the fourth five-year plan (1976-1980) are 1) to increase the hospital bed/patient ratio from 1.4 to 1.7 per 1,000 population; 2) to construct 81 new health centers (increasing the number from 210 to 291); to expand and upgrade the 12 existing nursing schools; 4) to construct 10 polyclinic centers in large Mahafazats, to serve 40,000-50,000 persons each; 5) to upgrade and expand training of

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auxiliary health personnel; and 6) to provide health insurance to state employees and their families, public sector employees, and low income groups.

1. Population Characteristics

Syria's crude birth rate is 48/1000 with a gross reproduction rate per woman of 3.68. The rate of population growth is currently estimated at 3.3%. The infant mortality rate is reported at 110-115/1000 and may be considerably higher due to non-reporting of births and subsequent deaths within the first two weeks of life. Childhood mortality is high at about 14.5 deaths/1000. Morbidity statistics on hospital admission indicate principally enteric, upper respiratory, and viral disorders among children.

While common medical opinion, supported by hospital morbidity statistics, indicates serious malnutrition problems during the weaning period until about two years of age, no recent studies have been done on the problem. In 1973 a small, urban biased sample showed 6% of children at less than 60% of normal weight, 12-15% between 60-80% and the balance made 90% of normal weight, with female children having rates of malnutrition about twice that of males.

Hospital records for 1976 for all age groups indicate the prevalence of the most common diseases as follows:

(Total cases 198,666)

<u>Causes of Hospital Admission</u>	<u>% of Cases</u>
Complications of Pregnancy, Child birth	18.9
Accidents, poisoning, and violence	19.8
Diseases of the digestive system	12.7
Infectious and parasitic diseases	8.2
Diseases of the circulatory system	3.7
Diseases of the respiratory system	2.9
Nutritional and metabolic diseases	0.9
Malignant neoplasm	0.5
Arteries and cerebrovascular diseases	0.4

Iron deficiency anemia, hookworm disease, schistosomiasis, occasional leishmaniasis, malnutrition, typhoid fever, diphtheria, whooping cough, diarrhea, and dehydration in infants and children, occasional neonatal tetanus, TB (very prevalent), trachoma, malaria (largely imported cases), vast amounts of trauma, bronchitis and pneumonia, ulcer disease, amebiasis, and rarely echinococcus are among the diseases commonly noticed. A severe cholera outbreak occurred in 1977.

The Syrian Government reported 2,841 positive cases, 2,587 carriers and 87 deaths. Accurate diagnosis is often difficult because laboratory facilities, particularly in rural ambulatory settings, are inadequately equipped and staffed. Additionally, with some very impressive exceptions, basic laboratory diagnostic aids, even when available, appear to be inappropriately, utilized by physicians. The most serious laboratory deficiencies appear to be in clinical bacteriology and parasitology.

2. Health Services

In 1976 there were 31 government hospital, 76 private hospitals, and four sanatoria. In addition, in 1976 there were 37 ministry of health dispensaries, 210 health centers, and 16 MCH centers. The utilization rate of existing facilities is low and the services rendered chiefly curative, rather than preventative.

In 1971 a government decree laid out the system of services which should be provided. It basically relies on the government hospital as referral centers and as out-patient clinics for the immediate area.

The next level of service is provided at an integrated preventive/curative health center, designed to serve a population of no more than 25,000. A third level, that of dispensaries serving populations of 5,000 is project as part of the overall plan.

The theoretical system seems logical and well designed. In practice, hospitals are poorly administered and maintained, health centers are understaffed, curative-oriented, and ill-equipped, and the system as a whole suffers from a lack of planning and administrative control. The SARG is currently working in a number of areas to improve the current situation.

3. Manpower

Medical school admissions have increased dramatically over the past few years at Damascus and Aleppo. Lattakia will graduate its first class in 1979. By 1980, around 1,000 physicians a year should be graduating. Compulsory rural service for physicians and a high return rate to major urban areas seems to indicate that the physician supply should be adequate in both public and private clinical practice. Since

civil service doctors supplement meager government salaries with legal outside private practices, the supply of public health physicians is not likely to be adequate.

There is widespread concern over the availability and quality of nursing. In general, nurses appear relatively unwilling to work in hospital situations and to provide "hands on" care. Cultural factors place the nurse in a position of being considered something less than a professional. The World Health Organization is currently working with the Ministry of Health to improve nursing school curriculum and nursing services.

Auxiliary medical personnel are currently in short supply, and, when available, not utilized properly. A key institution attempting to meet this need is the Technical Health Institute. The THI graduates approximately 125 technicians per year and offers two-year courses in the fields of anesthesia, laboratory, x-ray, pharmacy, and environmental sanitation. The entrance requirement is a science division

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baccalaureate. The only other similar institution training mid-level technicians in Syria is the Intermediate Medical Institute affiliated with the Aleppo Medical School which graduates approximately 134 technicians yearly in anesthesia, laboratory techniques and x-ray.

4. Facilities and Equipment

The government health delivery system suffers almost universally from a lack of regular maintenance and timely repairs. Even installation of new equipment is sometimes hard to achieve. While both the hospitals and health centers appear to have the proper equipment for operating a substantial amount of the equipment is currently non-functioning or has never functioned. This problem has been recognized by the Ministry of Health, which requested AID's assistance in ameliorating the situation. Consequently, the SARG and AID signed a grant agreement (Project 006) in 1976 to improve medical equipment repair and maintenance as well as health surveys and health planning capabilities.

5. Management and Administration

Within the MOH public health system there is demons-

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trated a minimal capacity to design and implement construction projects and to administer personnel and supply system. Beyond this, the system is almost totally lacking in information on which to base forward planning and in planning and control management capability.

There are only two individuals in the SARG associated with health planning tasks, one in the MOH and one in the Ministry of Planning, neither of whom has been trained for this task. The health budgeting and programming system appears to function solely on the basis of hastily compiled estimates of annual requirements for existing programs in the case of annual operational budgets and a six-month programming cycle for the five-year capital development budget which is participated in by only a few MOH decision makers. The two budgeting processes are independent and result in capital development projects being proposed and implemented prior to consideration of their operational requirements.

Basic policy decisions in general appear to be made on the basis of very little study or analysis while actual operation of the system is done by health

center and hospital directors (physicians) who are not given performance objectives and are not adequately supervised. No component of the health delivery system appears to be systematically evaluated.

Health status information and vital statistics are non-existent or grossly unreliable. A considerable capacity for collecting population characteristic information exists in the Central Bureau of Statistics but it is not usually applied to the health sector. A lesser capability exists in the Ministry of Health itself where two trained professionals work at the central ministry level and eleven trained assistants work at the provincial level. At the current time they are being utilized solely to compile routine hospital statistics and mortality statistics supplied by the Ministry of Interior's department of civil registration.

6. Family Planning

Prior to 1974, Syria had no formal family planning program of any kind. Possibly as the result of the growing awareness of the serious implications of the very high population growth rate which became known after the 1970 census was completed, the Syrian Family Planning Association (SFPA) was created in June

1974. The decree by the Ministry of Social Affairs announcing the creation of the Association was published in the SARG Official Gazette in the same month. The President of the Association is Dr. Madani El-Khiyami, the Minister of Health; the Vice President is Mrs. Hajer Sadek, President of the Syrian Women's Union; and the Secretary is Dr. Aref El-Yafi, Director of the Office of International Affairs, Ministry of Health.

The Association is a voluntary one. The only support it receives from the Syrian Arab Republic Government (SARG) is the moral backing of Drs. El-Khiyami and El-Yafi. The services offered by the Association through a few centers of the Ministry of Health are disguised under the medical umbrella, i.e., family planning services are offered along or camouflaged by other health services rendered at the same time. Such a practice has been deemed necessary because the SARG, due to various political and religious considerations, has not yet formulated an official family planning policy.

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Since CY 1976, the SFPA has been operating 7 family planning clinics, distributed as follows: Damascus 3; Aleppo 2; and Lattakia 2. Each clinic is staffed with one physician (GYN/OB), one nurse/midwife, and one clerck. Women come to these clinics voluntarily where they are given a medical check-up and the appropriate contraceptive.

In early 1977, three additional clinics were established by the Association, one in each of the Muhafazats of Hassakeh, Deir El-Zor, and Idleb where the populations are largely rural. Furthermore, negotiations with the Syrian Wolen's Union are currently proceeding satisfactorily for the establishment of one clinic in the Muhafazat of Der'aa. It is expected that this clinic will be established and will become operational during 1978.

The Association delivers most of its FP services free of charge, through its clinics referred to above, and also through selected health centers of the Ministry of Health. These latter centers

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are afflicted with major problems in the area of staffing (medical and para-medical), equipment, transport, organization, etc...

7. Nutrition

A relatively serious nutritional problem appears to exist in Syria. Small preliminary surveys indicate that the incidence of acute malnutrition may be as high as 6% in male children and 15% in female children. At the current time almost no programs address this problem, with the exception of a government factory to produce weaning foods, scheduled to come on line in 1979. To direct SARG policy toward this problem will require a vigorous, aggressive approach to defining the problem, identifying solutions and implementing programs. One such proposal has been prepared by AID and given to the Ministry of Health. It is hoped that a project will be developed for implementation in FY 1979.

8. The A.I.D. Role

The 1977 ABS included a PID for health services training. The PID was approved in September of 1975 and at the request of the Syrian government a health

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reconnaissance team from AID/W visited Syria for two weeks in November 1975 to identify sector issues and areas of potential A.I.D. support, to confirm lines of action proposed in the PID, and to write a detailed scope of work for future project design efforts. From this report the Syrian government selected four areas for design focus: auxiliary manpower training, health statistics, health planning, and medical equipment maintenance and repair. In May¹⁹⁷⁶, a team of five experts in these areas spent three weeks in Syria working on project design. As a result of this effort, a project entitled "Development of Health Services" (006) was signed in June 1976. This project provides \$ 749,000 over three years to finance technical assistance, commodities and training in the three following areas: health statistics and survey, health planning, and medical equipment repair and maintenance. The advisors for the health planning and health survey components of the project arrived in Syria in October, 1977 to assist the Ministry of Health in the implementation of this activity.

9. The Technical Health Institute (THI)

The following sequence of events will show the development of the THI, which is now operated by the Ministry

of Health and administered by a Director and his assistants:

- (a) December 20, 1960: The Ministry of Health, Department of Rural and Environmental Health, started a one-year program for training sanitarians or public health workers. Students with five years of basic education were admitted to this course.
- (b) June 1, 1965: The one-year course referred to above was modified, and a "Sanitarians School" was established within the Department of Rural and Environmental Health, Ministry of Health. Admission to this school was raised to nine years of basic education. However, the program remained the same.
- (c) April 4, 1966: The sanitarians school was renamed The Institute of Environmental Health. Duration of training/admissions requirements remained the same.
- (d) 1966-1967: In addition to the regular course offered by the Institute of Environmental Health, an advanced one-year course in sanitation, inter-country WHO/UNDP-sponsored, was offered. A secondary school or Baccalaureate diploma (12 years

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of education) was required for admission to that advanced course, which lasted for a period of three years.

- (e) 1967: The Institute of Environmental Health was renamed the Technical Health Institute, which continued to offer the WHO/UNDP - sponsored, more advanced course referred to above. In addition, admission requirement to the regular one-year course was raised to 12 years of education.
- (f) 1969: The WHO/UNDP - sponsored course was terminated. Furthermore, the regular one-year course in environmental health was changed to a two-year program. In addition, a new category (laboratory technician) was introduced. Likewise, the duration of this new course was 2 years, and twelve years of education were required for admission.
- (g) 1970-1971: The Technical Health Institute added three new categories in radiography, anesthesia, and pharmacy with the same training and admission requirements.
- (h) 1976-1977: A sixth course in physiotherapy was started, with the same training and admission requirements.

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In addition to the involvement of WHO/UNDP in sponsoring the advanced, one-year course in public health or sanitation referred to earlier, SARG signed in 1973 an agreement with WHO/UNDP for a three - year project to provide five advisors to the Institute and six fellowships for training abroad. However, this project was not successful for several reasons. The new building was not completed by the target date. The preparation and appointment of full-time instructors was not achieved, except on a limited scale. The six trainees, who spent from six to twenty-four months abroad have not been enough to influence effectively the level of training and to produce desired changes in the curricula of the Institute. The five experts provided under this agreement could not contribute enough, either because of a short stay or because they could not communicate with students and staff because they were not Arabic-speaking.

At present the Institute is receiving no support except what it receives from various sources within the MOH budget. One trainee studying radiography in the United Kingdom is expected to return by June 1978 and another in the same field in Sudan is expected to finish by December 1978. There are also four candidates recently

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selected to study radiography in East Germany for three years.

Other international agencies have not offered support. A few donors sporadically make some form of contribution as in the case of the four scholarships for training in radiography in East Germany, as mentioned above.

The THI currently offers six courses or programs in the fields of Public Health (previously called Environmental Health or Sanitation), Laboratory Techniques, Radiography, Anesthesiology, Pharmacy, and Physiotherapy, with a total of about 120 graduates each year. All six programs have the same admission requirements, a Baccalaureate diploma in science (12 years of education). Table III shows the total number of graduates in the various programs from 1972-1977.

The student body is composed of both sexes of Syrian Nationals aged 18-25 years, selected for admission on the basis of the needs expressed by health officials of the various districts (Mohafazats) of the country. Some 25-30 students are admitted to the first year of each program with some fluctuations in numbers from year to year. All students reside in or around Damascus; each

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receives a monthly stipend of S.P. 110 (\$28.21) for living expenses plus S.P. 150 (\$38.46) as an annual allowance for books, etc.

Teaching, all in Arabic, is currently conducted at two rented building with a few classrooms used in a third one. One of the building provides facilities for the administration of the Institute and contains two small laboratories; the other has the classrooms for theoretical teaching. In 1978 the institute will move into a new and impressive 7-story building which thus far has cost about S.P. 5,000,000 (\$ 1,282,052), and which can accommodate up to 600 students per year in the various programs, roughly double the current number of students.

The teaching staff consists largely of part-time instructors recruited from the hospitals, private clinics, pharmacies and other health facilities in the Damascus area. Full time teachers in the true sense of the word do not now exist. Those few who received training abroad and are employed by the Institute, do little teaching but assist in the supervision of their respective programs. Practical training in all the programs inside

and outside the premises of the Institute is extremely weak, poorly organized and inadequately supervised. Teaching methods are unsatisfactory, and instruction is not supported by modern teaching aids and materials.

The SARG has selected 30 candidates who are currently taking English language training, all are scheduled to complete their language training by at least August 1978. Of these, 26 will be considered for technical training under this project in the United States or in third countries in the region. These candidates have been selected by the Ministry of Health and are the best currently available, represent a minimum care of adequately trained instructors required by the THI. The selection of these candidates was based on academic records and performance since graduation from the THI. Their bio-data is shown in Table I which shows that 13 candidates have had teaching experience at the Institute, ranging from 1 to 8 years; five candidates have had experience in one of the largest hospitals in Syria; ten candidates have had experience in the Directorates of Health in various Mohafazats; and two candidates have had experience in the central Ministry of Health.

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As can be seen from Table 2, which is self-explanatory, the deficit in certain specialties may be made up from the excess in another one.

However, it should be emphasized that the U.S. Technical Advisors and the Director of THI will have the option to reassess the number of trainees required in each field of specialization, review the qualification of the 26 candidates, and make such changes as may be necessary, including the elimination of some of the 26 if any prove to be unqualified or to have inappropriate backgrounds. Furthermore, AID retains the right to reject any potential trainee candidate judged by AID to be unqualified.

Table 1. List of Candidates for English Language Training.

5/1

<u>Name</u>	<u>Date of Birth</u>	<u>Year of Graduation From THI</u>	<u>Specialization</u>	<u>Current Employment</u>
1. Issam Mutaem	1952	1976	Lab.Tech.	THI
2. Nabil Ghazal	1943	1971	Lab.Tech.	THI
3. Mamdouh Kheyti	1954	1975	Lab.Tech.	THI
4. Nayel Mohamead	1946	1972	Lab.Tech.	THI
5. Zakaria Qowssi	1952	1974	Lab.Tech.	Damascus Hospital
6. Mamdouh Ozorbi	1940	1971	Lab.Tech.	THI
7. Zaher Sheikh-Elardh	1950	1971	Lab.Tech.	Damascus Hospital
8. Haytham Samarah	1946	1971	Lab.Tech.	THI
9. Mohammad Baba	1951	1973	Lab.Tech.	Damascus Direct.Health
10. M.Saleh Khanzadah	1945	1971	Envr.Hlth	THI
11. M.Adnan Hmayyer	1948	1973	Envr.Hlth	THI
12. Khalid Doubani	1950	1973	Envr.Hlth	Damascus Direct.Health
13. Mustafa Hashash	1952	1974	Envr.Hlth	Damascus Direc Health
14. Riyadh Zaytouni	1948	1973	Envr.Hlth	Sweida Direct.Health
15. Abdul-Ghani Hawari	1948	1973	Envr.Hlth	Damascus Direct.Health
16. M.Haytham Muzayyek	1942	1969	Envr.Hlth	THI

Table 1. Continuation

<u>Name</u>	<u>Date of Birth</u>	<u>Year of Graduation from THI</u>	<u>Specialization</u>	<u>Current Employment</u>
17. Mulhem Al-Derar	1950	1972	Pharm.	THI
18. M.Eid Hanafi	1952	1974	Pharm.	Ministry of Hlth
19. Bashir Kassab	1951	1973	Pharm.	Damascus Direct.Health
20. M.Said Hannawi	1953	1975	Pharm.	Damascus Direct.Health
21. Marwan Aishah	1953	1975	Pharm.	Damascus Direct.Health
22. Hussein Awad	1955	1974	Pharm.	Quneitra Direct.Health
23. Samir Mousli	1951	1974	Pharm.	Ministry of Health
24. Shahadeh Shnan	1950	1973	Pharm.	Damascus Direct.Health
25. Hisham Tahhan	1946	1973	Anesth.	THI
26. Tayssir Fallouh	1947	1972	Anesth.	Damascus Hospital
27. Adnan El-Sabeq	1951	1974	Anesth.	Damascus Hospital
28. Kassem Khateab	1949	1973	X-Ray	THI
29. Ahmad Shahean	1952	1976	X-Ray	Damascus Hospital
30. M.Bilal Abou-Humaid	1951	1972	X-Ray	THI

Table 2. Number of Candidates in various Specialties as
Compared to Projected training

<u>Field of Specialization</u>	<u>Number Current-ly in English Language Training</u>	<u>Projected Training</u>	<u>Excess or Deficit</u>
Laboratory Techniques	9	5	+ 4
Environmental Health	7	4	+ 3
Pharmacy Technicians	8	4	+ 4
Anesthesiology Technician	3	4	- 1
X-Ray Technicians	3	4	- 1
Phisio-Therapy Technicians *	0	5	- 5

* This specialty was introduced at the Institute in 1977-1978 school year.

7/2'

Table 3

Number of Graduates in Various Programs of the THI

<u>Year</u>	<u>Env. Hlth</u>	<u>Lab. Tech</u>	<u>Radio- graphy</u>	<u>Phar- macy</u>	<u>Anes- thesia</u>	<u>Total</u>
1971-72	20	27	16	22	18	103
1972-73	47	33	17	36	24	157
1973-74	18	16	2	23	24	83
1974-75	22	20	17	28	12	99
1975-76	25	27	18	29	17	116
1976-77	25	30	22	30	22	129
	-----	-----	-----	-----	-----	-----
Total	157	153	92	168	117	687

an assistant director for academic affairs, a supervisor for each of the Institute's six program areas, and an equipment maintenance and repair specialist.

- b. The staff of the Institute will have been strengthened by the employment of full-time instructors who will have received U.S., third country, or on-the-job training. Part-time instructors to supplement the full-time staff will be hired on a regular contracting basis, and will have received some training also.
- c. The curriculum for each of the Institute's six program areas will have been revised to provide up-to-date instruction suitable for the positions to be filled by the THI graduates. A curriculum for core courses common to more than one of the six areas will be developed and in use. The THI will have the capacity to continue the process of curriculum revision and updating.
- d. The THI will have modern teaching laboratories, a library, audio-visual and other training aids, and the capability of producing at least some of

B. Detailed Description

This project is based on two general studies which provided background on the health sector and led to the identification of auxiliary health personnel training as a priority need. A more detailed study of the THI was conducted for AID by the American University of Beirut and is attached as Annex B.

1. Sector Goal

To improve the delivery of health care, especially to the poorer people in rural and low-income urban areas.

2. Project Purpose

To upgrade and expand the training of auxiliary health personnel at the Technical Health Institute (THI).

3. Planned Outputs

At the end of this project the THI will have been strengthened in the following ways:

- a. The administration of the THI will be completely overhauled and rationalized with a full-time professional administrative staff consisting of a director, an assistant director for administration,

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the aids it will need as the curriculum changes over time.

- e. The THI will have the capacity to train up to 600 auxiliary health technicians yearly, fully qualified in six major areas of specialization, for assignment in clinics and health facilities around the country.
- f. The THI will be capable of rendering services such as refresher courses to the health care community and adding new areas of specialization to its program.

4. Planned Inputs

A. SARG Contribution

- a) With the exception of imported equipment, a fully operational physical plant and alternative facilities until the new facility is operational
- b) A budget for the Institute sufficient to cover all costs of operating and maintenance on an expanded basis.
- c) Appropriately qualified Syrian staff to fill administrative and teaching positions.

d) All local support costs associated with the AID financed technical advisors in cash or in kind.

B. U.S. Contribution

a) 32 work months (WM) of short-term advisory services

b) 252 WM of long-term advisory services

c) Training in the U.S. or third countries for approximately 26 instructors

d) Laboratory equipment, vehicles, audio-visual equipment, training aids, and reference books.

C. Narrative Description

The THI's new building should be ready in October, 1978, in time for the 1978-1979 school year. Only the laboratories which depend on AID-financed equipment will not be ready. In order to adequately prepare for the 1978-1979 school year, AID assistance should commence as soon as possible, e.g., during the summer of 1978.

Early implementation during this preparatory period,

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shall include a small planning/survey group (2-3, short-term advisors plus the director/team leader) which should visit Syria to undertake the following tasks:

- a) Review SARG plans for expanding health facilities, particularly dispensaries and health centers.
- b) Review the current staffing of existing dispensaries, health centers and hospitals.
- c) Analyze the duties carried out by each type of auxiliary health worker at each type of health facility.
- d) Prepare rough projections for the demand for each type of auxiliary health worker, and draft job descriptions for each type, taking into consideration the type of health facility at which the work is performed.

The long-term team leader/director who will be an advisor to the Syrian Director and his two assistants, plus a short-term financial management advisor will undertake the following tasks:

- a) Develop a table of organization for the Institute

- b) Develop a budget and accounting system.
- c) Review the resources and capabilities of the Institute and the training requests from the Mohafazats and determine how many students can be admitted during the forthcoming school year.
- d) Determine the actual number of instructors required for the school year, taking into account the departure of 26 trainees and the availability of six advisors/instructors provided by the U.S. contractor.

The six advisors/instructors and their Syrian counterparts, i.e., the six program area supervisors, the assistant Director for Academic Affairs and a short-term laboratory equipment advisor will undertake the following tasks:

- a) Determine the curricula, including core courses, taking into account the limited resources available to the Institute.
- b) Prepare draft lists of equipment required for

the laboratories which will be developed into specifications for procurement.

- c) Begin developing plans for on-the-job training and curricula revision

Subsequent Implementation

It is expected that the instructor/advisors will have to carry a relatively heavy teaching burden during the first school year given the absence of the 26 trainees and the likelihood that the THI will not be able to recruit the full complement of instructors. Their teaching load however should not be allowed to become so heavy that they cannot devote themselves to training their counterparts, supervising instructors and working on curriculum development. The real work on curriculum development will not, however, begin until the results of the planning/survey group are available. This study should provide at least a rough projection of the demand for six types of paramedical personnel and a basic picture of what these people are expected to do when they enter the work force. Centrally, the THI administration will be in a position to focus more closely on instructor

staffing levels and the program supervisors and instructor/advisors will be able to tailor curriculum revisions to actual needs. The work of curriculum revision is not an especially complicated matter since the basic knowledge and techniques required in each area are very standardized around the world. However, modifications will be necessary to take into account any special requirements of the Syrian health system and the level of competence of entering students. Over the course of the three years of the project, the instructor/advisors can be expected to spend less and less time teaching and more time on curriculum revision, the development of a school library, the development of training aids, and the training of or development of programs to train instructors.

Two key functions within the administrative structure must be developed. The first function is budget and accounting. The THI has never had its own budget allocation. Such an allocation will be a Condition Precedent to Disbursement in the Grant Agreement. Short-term advisory assistance will be provided initially and at appropriate intervals during the first

year of the project. The second function is graduate follow-up and evaluation of programs. The Institute needs a system for keeping track of its graduates and using feed back from them to evaluate the training it has given them. The technical assistance contractor will also help THI set up such a system..

Part 3: Project Analysis

A. Technical Analysis

The need for auxiliary health workers in all parts of the country is urgent. Although the need can not be assessed in precise quantitative terms at this time due to lack of basic data, the order of magnitude of the problem can be described. Almost all hospitals and health centers now functioning in Syria are now understaffed. It is estimated that Syria requires an additional 5,000 hospital beds necessitating increased numbers of hospital technicians and health workers. Added to that requirement, and more significant as a long term policy, is the need for these workers in the health centers. These centers provide preventive, curative and first aid health services for urban and rural communities each having a population of 5,000-25,000. At least seven auxiliary medical personnel have to be attached to each health center, all of whom must be graduates of this Institute.

At present, there are 210 health centers. The plan, stated in the Decision of the Minister of Health, No. 14/T, dated December 3, 1972, is to increase this number to 1600 by providing one health center for every

5,000 persons instead of the present ratio of 1;25,000. This plan therefore requires the training and assignment of 10,300 health workers to the centers. There are currently 447 workers and 125 are being trained each year. Some of the short-fall will be met by the increased graduates of the THI.

From the above it is clear that the demand for graduates of THI will exceed the school's capabilities for several years to come. The preliminary survey called for in the project will provide a better basis for planning the mix of students in the six areas over the next several years by which time the SARG's health planning capability should be sufficiently enhanced by the previously mentioned on-going AID project to make possible a more refined and detailed plan for the THI.

Annual admission levels to THI are based on requests from the mohafazats. Students entering the school in effect become government employees and must work where assigned by the government two years for every one year of training. To the fullest extent possible, graduates are assigned to positions in their areas of origin. Experience has shown that the requirement that THI graduates return to their home provinces is generally effective. Applications for admissions to THI have far

exceeded the number of openings in past years and with improvements in the school there should be no lack of qualified applicants.

Finding qualified teachers for the school, both full-time and part-time, may represent more of a problem initially. - However, at the moment there are 26 potential instructors, some of whom have taught at the institute and some of whom are recent graduates, taking English Language training in order to be prepared for the AID financed U.S. training program under this project. Additional instructors should be available from past and future Institute's graduates and from other medical facilities. The recent 20% increase in salary schedules along with better physical facilities and the opportunity to work with U.S. advisors should make employment at the THI more attractive than it has been in the past.

Environmentally the project will have no negative effects and should have some very positive effects (See Annex F). The building is already built. The only potentially harmful aspects of the THI are the disposal of chemicals and specimens used in the laboratories. The presence of US advisors will ensure that the school develops proper

procedures for disposal of these items. On the positive side, the project will result in better training of more environmental health technicians.

تطور عدد المستوصفات والمراكز الصحية ١٩٦٧ - ١٩٧٦
NUMBER OF HEALTH CENTERS AND DISPENSARIES
1967 - 1976

Table 5.

Years	Health centres for basic Services	الراكز الصحية للخدمات الاساسية	Rural Health Centres	المركز الصحية الريفية	Trachoma Eradication	التراخوما	Ancylostomiasis Eradication	مكافحة الاكلانوسيا	Schistosomiasis Eradication	مكافحة بيلهارسيا	Thenificoon Control	مكافحة الترع	Malaria Eradication	استئصال براءه	T. B. Control	مكافحة السل	M.C.H. Centers	رعاية الطفولة والامومة	Ministry of Health dispensaries	السنوات
1967	1	—	1	1	1	3	1	10	3	48	204	1967								
1968	—	7	1	—	3	—	14	3	53	201	1968									
1969	—	7	1	—	3	—	12	4	66	207	1969									
1970	—	7	1	—	2	—	14	6	54	204	1970									
* 1971	43	3	1	—	2	—	13	8	42	170	* 1971									
1972	100	6	1	—	3	—	13	8	27	114	1972									
1973	155	1	1	—	2	—	13	11	21	62	1973									
1974	191	—	1	—	3	—	13	11	16	34	1974									
1975	192	—	1	—	7	—	13	12	16	38	1975									
1976	210	—	1	—	7	—	13	12	16	37	1976									

The starting date for developing the dispensaries into health centres for basic services.

* يبدأ تطوير المستوصفات ومراكز رعاية الطفولة والامومة الى مراكز صحية للخدمات الاساسية .

B. Financial Analysis

1) Financial Rate of Return

Since the project will not result in revenue producing activities, a financial rate of return analysis is not provided.

2) Recurrent Budget Analysis

The THI does not have a proper budget and accounting system. It receives funds from various sources for different purposes. It is therefore impossible to provide a recurrent budget analysis without a lengthy and detailed audit. As a Condition Precedent to Disbursement, the SARG will be required to provide the THI with its own annual budget allocation (a verbal commitment to do so has been obtained). As part of the project, AID will provide the Institute with advisory assistance in setting up a budget and accounting system.

3) Project Costs

See Tables Nos. 6 and 7, pages 47 and 48

TABLE 6

SUMMARY OF COST ESTIMATE AND

FINANCIAL PLAN (US \$000)

SOURCE	AID		SARG		GRAND TOTAL
	FX	LC	FX	LC	
<u>AID Inputs</u>					
a. Contract T.A.	3,025	-	-	-	3,025
b. Training	640	-	-	-	640
c. Equipment	1,333	-	-	-	1,333 ***
d. Vehicles	120	-	-	-	120
e. Contingency at 10%	512	-	-	-	512
<u>SARG Inputs **</u>					
a. Salaries & per diem				1,125	1,125
b. Construction, Furniture, and Rent				316	316
c. Maintenance, repair and supplies				100	100
TOTALS	5,630			1,541	7,171

* Dollar equivalent

** The SARG is also financing the cost of the new THI building.

*** To be selected by THI and contractor. Excludes expendable and locally procurable items, such as chemicals, reagents and glassware.

TABLE 7

U.S. DOLLARS

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<u>U.S. CONTRIBUTIONS</u>	<u>YEAR I FY 78</u>	<u>YEAR II FY 79</u>	<u>YEAR III FY 80</u>	<u>TOTAL</u>
1. Six Instructors/Advisors, 36 WM each	800,000	800,000	800,000	2,400,000
2. Director/Team Leader, 36 WM	125,000	125,000	125,000	375,000
3. Equipment Installation/Maintenance Experts, 12WM		70,000	70,000	140,000
4. Short-term Experts, 20 WM (12WM, 4WM, 4WM)	70,000	20,000	20,000	110,000
5. Training 26X 24 PM each (192,308,124 p.m)	180,000	290,000	170,000	640,000
6. Commodities	546,000	787,000	-	1,333,000
7. Vehicles 7(1 bus, 3 station wagons, and 3 field vehicles)		120,000	-	120,000
8. Contingency at 10%	<u>172,100</u>	<u>221,200</u>	<u>118,500</u>	<u>511,800</u>
TOTAL U.S.	1,893,100	2,433,200	1,303,500	5,629,800
 <u>SARG CONTRIBUTIONS</u>				
1. Salaries of Staff, Employees, students and per diem	192,000	230,000	703,000	1,125,000
2. Construction Completion, Furniture and Rent	4,000	261,000	51,000	316,000
3. Maintenance and other Supplies	<u>12,000</u>	<u>30,000</u>	<u>58,000</u>	<u>100,000</u>
TOTAL SARG	208,000	521,000	812,000	1,541,000
TOTAL	2,101,100	2,954,200	2,115,500	7,170,800

C. Social Analysis

The primary source of employment for graduates of the THI will be in hospital located in urban and rural areas, and in dispensaries and health centers located predominantly in rural areas. (See Table -4-, above). These facilities are part of the total health care system which provides free medical services to approximately 75% of the total population, in accord with Syria's socialist form of government.

In urban areas, namely the seats of the Mohafazats, the following categories of the population are given indigent health cards which entitle them to receive free medical services:

1. Any person or head of a household whose monthly income is less than 400 Syrian Pounds.
2. All students (primary, secondary and university).
3. Members of the armed forces, including policemen.
4. Most civil service employees
5. Members of the following unions: Laborers, veterans, farmers, and martyrs.

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6. All emergency cases referred to government hospitals and health centers, irrespective of the level of income.

In rural areas, on the other hand, free medical services are offered to all the population, i.e., those residing outside the seat of the Mohafazah. For this category of the population, the health card is not required irrespective of their level of income.

Because of the poor quality of health care currently available, many low-income people prefer to use their limited resources for private health care (See Table 8, page 55). Improvements in the current health system should draw more of these people into free government sponsored health facilities.

The proposed project, along with other activities financed by AID and other donors in the health sector, will gradually shift the emphasis of health care from the private to the public health care system, and from curative to preventive treatment. Consequently, the health centers and dispensaries will gradually become better sources of maternal and child care, family planning information, and other social and health services. Thus,

the availability of trained personnel at these facilities is clearly a critical component of this process.

Regarding women in development, the THI is open to both sexes equally. Approximately 15% of the Institute's student body to date has been women. This percentage should increase as more women receive education and seek higher levels of training. This is especially true in the case of the Institute because the health field appears to be one of the first areas of employment which attract women. Women professionals already play a critical role in the Ministry of Health and represent a substantial portion of currently employed health workers. More generally, the project will result in the availability of better care for women since a key function of the health centers as set forth in Decree 14/T is maternal and child care, nutrition education, and family planning.

D. Economic Analysis

Any activity which reduces morbidity in the general population will have the effect of decreasing lost work time, increasing work effectiveness, and in general increasing productivity. To the extent that the activities in this project increase the effective delivery of

health services and increase the attention of Syrian leadership on policies concerning preventive programs, there should be a positive reduction in morbidity. There should also be economic savings in less time lost at work or other productive activities because of illness.

Since a cost-benefit analysis is not possible for this project because of its overwhelming social nature, we cannot indicate a precise rate of return. However, some estimates that can be used in an economic analysis are as follows:

- (1) Cost of training per graduate of THI (including depreciation and operating expenses), assuming 300 graduates per year: SP 27,000
- (2) Cost of training for seven staff per health center: SP 189,000. Assuming staff work ten years in such centers: SP 18,900 per year
- (3) Cost of one year's operation of health center (including salaries of staff, utilities and supplies): SP 200,000

(4) Total cost of health center service: SP 218,900
(225,000)

(5)* Cost per beneficiary per year

(a) At present service levels, one center/25,000

persons: SP 9 (Less than the cost of one physician's
visit to a hospital.)

(b) At projected service levels, one center/5,000

persons: SP 45 (Less than the cost of 1 day in the
hospital including reasonable tests.)

Regarding returns to direct beneficiaries, i.e., students at the THI, their salaries upon graduation is comparable to salaries of graduates of similar institutes. The basic starting monthly salary (excluding family and other benefits) is 595 Syrian Pounds, and the ceiling is 1160. For physicians in the government sector, the starting monthly salary is 795 S.P. and the ceiling 1950 Syrian Pounds. Based on the different levels of skills between THI graduates and doctors, the relative salary levels are reasonable. (Practically all doctors and most THI graduates however, supplement their salaries in private practice).

* Includes drugs, laboratory tests and X-Rays. For comparison see Table 8, page 55.

It might be noted that the waiting period for a step increase within grade is normally 2 years. However, the participants will get a step increase every year while in training status outside Syria. Furthermore, if the trainees were to be awarded a B.S. degree upon completion of their training, the monthly salary ceiling will be raised to 1820 Syrian Pounds.

As concerns the people treated by the health system, the returns will be substantial. As stated earlier the availability of trained health personnel in government-sponsored facilities will gradually shift the emphasis of health care from the private to public health care system. Thus the magnitude of savings to the low-income people becomes clear as one examines the "service charge schedule" outlined in Table 8, page 55

TABLE 8.

Service Charge Schedule for Health Centers and
Hospital for Non - Indigents

<u>Type of Treatment</u>	<u>Fees in Syrian Pounds</u>
1. Medical examination by a general practitioner (GP)	10
2. Medical examination by a specialist	20
3. Consultation with other physicians, each	30
4. Legal consultation	35
5. Daily visit paid by a GP to a patient in the hospital	15,
6. Daily visit paid by a specialist to a patient in the hospital	20
7. Autopsy in health center or hospital	50
8. Autopsy outside health center or hospital	100
9. Suite room in the hospital	75
10. 1st Class room with private bath and telephone	60
11. 1st Class room without private bath and telephone	40
12. 2nd Class room with private bath (2 beds)	35
13. 2nd Class room without private bath (2 beds)	30
14. 3rd Class room (3-4 beds)	20
15. General ward (5 beds or more)	15

Table -8: Continuation

<u>Type of Treatment</u>	<u>Fees in Syrian Pounds</u>
16. ECG	30
17. EEG	50
18. X-Ray	15-250
19. X-Ray Consultation	15
20. Laboratory test	3-60
21. General surgery	30-1500
22. Anesthesia	25% of the operation fees
23. Operating room	20% of the operation fees
24. Ambulance (depending on distance)	25-150

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Part 4: Implementation Arrangements

A. Analysis of the Recipient's and AID's Administrative Arrangements.

1. Recipient

The responsibilities of the Minister of Health include the preparation and implementation of health legislation, development of programs for specific problem areas, training of medical personnel (in cooperation with the Education Ministries), operation of public health facilities, and implementation of international health programs and cooperative agreements.

The Superior Health Council is composed of prominent Syrian leaders from the academic world, the government, and the military. It is a policy and decision making body, which, is chaired by the Prime Minister. It provides coordination and guidelines for national health policy, as well as maintaining liaison with appropriate ministries such as the Ministry of Health and the Ministry of Agriculture and Agrarian Reform (which supervises veterinary inspection of meat), and the Ministry of Higher Education (which provides support to medical schools).

Programs of the Ministry of Health include national campaigns

against malaria, tuberculosis, and other communicable diseases, construction and expansion of health facilities, operation of training programs for paramedical workers, operation of programs for prevention and control of non-communicable diseases, programs for cardiovascular disease, dental, and mental health. Specifications are established for the quality and content of pharmaceutical preparations and other medical materials. Basic sanitary measures are also promoted. There is no significant research capability and limited capability to assist or coordinate international public health programs.

The Ministry of Health will be responsible for the implementation of the project. The Ministry has three vice-ministers. The vice-minister in charge of Research and Planning Affairs will be in charge of this project, and the planning unit which is being established under an ongoing AID project (Development of Health Services - Syria 276-11-570-006) will also be involved.

The Ministry of Health has demonstrated a capacity to implement projects. It is within its capacity to supply the office space and other support for technical advisors and to successfully go through the bureaucratic process to complete the construction, furnishing and staffing of the new THI building. The THI as it presently exists is

described in detail in Part 2 Section A9 of this paper.

2. A.I.D.

The project has been designed to minimize USAID monitoring responsibilities. The contractor will be responsible for supervising individual team members. Each advisor will account for his/her activity and, in collaboration with MOH counterparts, for reports and evaluations. Work will be implemented under a host-government contract, with the contractor responsible for recruiting consultants, procuring commodities, and arranging for training in the U.S. or elsewhere. A USAID officer will manage the project in the field. However, AID/W support will be required for liaison with contractors and advice on procurement of commodities and training programs.

B. Implementation Plan

1. Implementation Schedule

1. Authorization of the Grant	March	1978
2. Drafting of scope of work/RFP	March	1978
3. Execution of Grant Agreement	April	1978
4. Publication of CBD notice for contractor	April/May	1978
5. Evaluation of RFP's and selection of contractor	May/June	1978
6. Ratification of Grant Agreement	July	1978
7. Satisfaction of CPs	July	1978
8. Negotiation and execution of contract	August	1978
9. Arrival of Contract advisors and survey/planning team	September	1978
10. Planning/Survey Team report completed	October	1978
11. School Year begins	October	1978
12. Equipment lists completed	December	1978
13. Training programs designed, trainees selected	December	1978
14. Trainees depart for US or third country to begin programs in Spring semester	February	1979
15. Equipment Specification/Orders placed	January	1979
16. Equipment received and installed	September	1979
17. Detailed evaluation of curricular/staffing/administration	August	1979
18. School year begins (1979/80)	October	1979
19. Curriculum revision/staff training/preparation of training materials continue	October 79-June 1980	
20. Some trainees return	January	1980
21. Detailed evaluation of curricular/staffing/administration	August	1980
22. School year begins	October	1980
23. Balance of trainees returned	January	1981
24. Final evaluation of THI	August	1981
25. Advisors depart and project terminates	September	1981

2. Implementation Methodology

a) Technical assistance - The SARG will contract for required services utilizing Handbook 11 procedures. The source of services will be the U.S. (000). The American University of Beirut (AUB) (an eligible U.S. source contractor), Development Associates, CEDH, and Westinghouse are believed to have the capability of providing the required services. The selection process will permit other institutions to compete for the contract.

b) The technical assistance contractor will arrange all training and administer the program. Training may take place in the U.S., at AUB or other suitable third country institutions.

c) Commodities - The technical assistance contractor, acting as agent for the SARG, is intended to handle procurement. This decision can only be made after the contractor is selected since the decision will be based on the relative competence of the contractor and the cost of using the contractor. All equipment will be of U.S. source and origin except for training materials and reference materials for the library which should be in Arabic to the maximum extent possible. AID procurement regulations permit non-US sources to be used for training material when such material is required in a foreign language. Likely sources of training material are the Sudan, Egypt, Lebanon, and Jordan.

C. Evaluation Arrangements for the Project

1. Project Evaluation - A detailed review and evaluation of the THI project will take place during the August, summer holiday period at the end of each of the three full school years covered by the project

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(i.e. 1979, 1980, 1981). The project evaluations involving AID, SARG and the contractor will be part of process of reviewing the changes made during the previous school year and planning for the coming school year will be conducted by the staff and advisors of the THI.

2. THI Evaluation Capability - As part of the restructuring of THI's management and administration, the technical advisors will assist THI to develop a graduate follow up program to provide data on the effectiveness of its training.

3. Health System Evaluation - The impact of the project on the health system can be evaluated only in the context of evaluations of the total system. Such evaluations are beyond the scope of the THI and are properly the job of the Ministry of Health.

D. Conditions Precedent and Covenants

1. Conditions Precedent to Initial Disbursement

- a. The SARG will establish a separate budget allocation within the Ministry of Health budget for the THI
- b. The THI will hire on a full time basis and have available the following personnel:
 - i. The Director of the THI
 - ii. Two Assistant Directors
 - iii. Six program area supervisors

2. Conditions Precedent to Commodity Procurement

- a. One equipment management and maintenance supervisor

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3. Covenants

a. The SARG will provide alternative facilities until the new THI facility is fully operational .

b. The THI and MOH will make satisfactory arrangements with health institutions for the practical training of students.