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**UNCLASSIFIED**

**391-0475**

**42**

**AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20525**

**PROJECT PAPER  
PACIFICAN - PRIMARY HEALTH CARE  
391-0475**

**SEPTEMBER 1982**

**UNCLASSIFIED**

**AGENCY FOR INTERNATIONAL DEVELOPMENT**  
**PROJECT DATA SHEET**

1. TRANSACTION CODE: **A** (A = Add, C = Change, D = Delete) Amendment Number: \_\_\_\_\_ DOCUMENT CODE: **3**

2. COUNTRY/ENTITY: **Pakistan**

3. PROJECT NUMBER: **391-0475**

4. BUREAU/OFFICE: **ASIA** (141) **04** Primary Health Care

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM DD YY **09/30/87**

7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4):  
 A. Initial FY **82** B. Quarter **4** C. Final FY **85**

8. COSTS (\$000 OR EQUIVALENT \$1 = RS 12.16)

A. FUNDING SOURCE	FIRST FY <b>82</b>			TYPE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	1,894	3,606	5,500	5,502	14,498	20,000
(Grant)	( 1,894 )	( 3,606 )	( 5,500 )	( 5,502 )	( 14,498 )	( 20,000 )
(Loan)	( - )	( - )	( - )	( - )	( - )	( - )
Other U.S.						
1. Host Country	-	3,700	3,700	-	35,750	35,750
2. Other Donor(s)						
<b>TOTALS</b>	<b>1,894</b>	<b>7,306</b>	<b>9,200</b>	<b>5,502</b>	<b>50,068</b>	<b>55,750</b>

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ESF	533	510	-	-	-	20,000	-	20,000	-
(2)									
(3)									
(4)									
<b>TOTALS</b>						<b>20,000</b>	<b>-</b>	<b>20,000</b>	<b>-</b>

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): **530 540 562**

11. SECONDARY PURPOSE CODE: **580**

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BRW	R/H	INTR	NUTR	TNG	ENV
B. Amount	13290	110	1,000	1,000	4,200	400

13. PROJECT PURPOSE (maximum 400 characters):  
 To improve the quality and expand the coverage of Primary Health Care services in the rural areas.

14. SCHEDULED EVALUATIONS: Annually MM YY **09/83** MM YY **09/84** Final MM YY **07/87**

15. SOURCE/ORIGIN OF GOODS AND SERVICES:  000  943  Local  Other (Specify) **Participant Training 9**

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of 1 page PP Amendment)

17. APPROVED BY: **Donor M. Lion** (Signature: *Donor M. Lion*)  
 Title: **Director, USAID/Pakistan**

Date Signed: MM DD YY **04/22/87**

18. DATE DOCUMENT RECEIVED IN AID/W. OR FOR AID/W. DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

PROJECT AUTHORIZATION

PAKISTAN

Primary Health Care  
Project No. 391-0475

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Primary Health Care Project for the Islamic Republic of Pakistan involving planned obligations of not to exceed U.S. Dollars Twenty Million (U.S. \$20,000,000) in grant funds over a five (5) year period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project.

2. The Project is designed to assist the Government of Pakistan to improve the quality and expand the coverage of Primary Health Care services in the rural areas. Components to be financed include: (a) program management; (b) medical technician and community health worker training; (c) program operations; (d) research and evaluation; and, (5) accelerated Expanded Program of Immunization.

3. The Project Agreement(s) which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

a. Source and Origin of Goods, Services and Shipping

Goods and services financed by A.I.D. under this Project shall have their source and origin in the Cooperating Country or in the United States except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States and the Cooperating Country.

b. Third Country Participant Training

Third country participant training sponsored by A.I.D. under this Project shall, except as A.I.D. may otherwise agree in writing, be only in the Limited Free World List, Geographic Code 901.

**c. Conditions Precedent to Initial Disbursement for  
the Accelerated Expanded Program of Immunization  
(E.P.I.) Prior to September 30, 1984**

Except as A.I.D. may otherwise agree in writing, prior to disbursement under this Grant for the Accelerated E.P.I. program prior to September 30, 1984 or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, acting through its Federal Ministry of Health (MOH), shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

i. a Federal Advisory Council has been established to review the program of activities under the Primary Health Care Project and to provide guidance to the provinces to implement these activities;

ii. membership of the Federal Advisory Council includes the Secretary MOH (Chairman); Director-General Health, MOH (Vice-Chairman); Joint Secretary, Federal Ministry of Finance, Planning and Economic Affairs; Secretaries of Health for the four provinces; and, Chief of the Health Section, Planning Division, Federal Ministry of Finance, Planning, and Economic Affairs;

iii. the Federal Advisory Council is required to meet no less than twice annually;

iv. the Federal Advisory Council has held at least one meeting;

v. Primary Health Care Steering Committees have been established in each of the four provinces for the purpose of reviewing the Project;

vi. membership of the Primary Health Care Steering Committees includes the following Provincial officers: the Secretary of Health (Chairman); the Director of Health Services (Vice Chairman); the Additional Secretary, Finance; and the Chief of the Health Section of the Planning and Development Department;

vii. the Primary Health Care Steering Committees are required to meet no less than twice annually;

viii. each of the Primary Health Care Steering Committees has held at least one meeting; and,

ix. the Federal Basic Health Services Cell in the Federal Ministry of Health has staffed the following positions: the Deputy Director-General (Basic Health); the Assistant Director-General, Training; and the Assistant Director-General, Operations.

d. Condition Precedent to Disbursement for Architectural and Engineering (A&E) Services

Except as A.I.D. may otherwise agree in writing, prior to the disbursement of funds by A.I.D. under the Grant or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made for architectural and engineering services with respect to each of the 13 medical technician training schools, other than for site investigations, the Grantee shall establish, in form and substance satisfactory to A.I.D., its right to ownership or adequate and sufficient use and occupancy of the land site proposed for the buildings.

e. Conditions Precedent to Disbursement for Construction of Medical Technician Training Schools

Except as A.I.D. may otherwise agree in writing, prior to disbursement under the Grant or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made for actual construction or renovation of any medical technician training schools in a province, the Grantee acting through the MOH, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

i. the Provincial Government of the province wherein the medical technician training school for which disbursement is sought is located has initiated the formation of both administrative and technical posts for its training schools; and,

ii. the Provincial Steering Committee of the province wherein the medical technician training school for which disbursement is sought is located has recommended approval of a budget allocation for each school which the Committee has determined to be adequate and appropriate for the operation of each school.

f. Conditions Precedent to Disbursement for Furniture and Equipment for Medical Technician Training Schools

Except as A.I.D. may otherwise agree in writing, prior to the disbursement under the Grant for furniture, equipment, audio-visual aids and transport for the medical technician training schools in any province or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, acting through the MOH, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

i. the Provincial Government of the province wherein the medical technician training school for which disbursement

is sought is located has created both administrative and technical posts for the staff of the training schools, and has initiated recruitment; and,

ii. the Provincial government of the province wherein the medical technician training school for which disbursement is sought is located has undertaken sufficient advertisement for recruitment of students for the training schools, and that all female high schools have been timely notified and provided information as to the next scheduled medical technician classes.

g. Conditions Precedent to Disbursement for the Accelerated E.P.I. on or After September 30, 1984

Except as A.I.D. may otherwise agree in writing, prior to the disbursement under the Grant on or after September 30, 1984 for the Accelerated E.P.I. or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, through its MOH, shall furnish in form and substance satisfactory to A.I.D., evidence that:

i. a Federal plan of operations for Primary Health Care has been prepared and approved by the Federal Advisory Council;

ii. Provincial plans of operation have been prepared for each of the provinces, approved by the cognizant Provincial Steering Committee and are being implemented;

iii. baseline health surveys to record morbidity and mortality patterns and the status of delivery of curative and preventive health services have been conducted; and,

iv. performance targets set forth in Project Implementation Letters for the preceding twelve-month period have been substantially met with respect to:

(a) program management;

(b) medical technician and community health worker training;

(c) program operations; and,

(d) research and evaluation.

h. Conditions Precedent to Disbursement for the Accelerated E.P.I. on or after September 30, 1985

Except as A.I.D. may otherwise agree in writing, prior to the disbursement under the Grant for the Accelerated E.P.I.

on or after September 30, 1985 or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, acting through the MOH, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

i. the Federal Advisory Council and Provincial Steering Committees have been institutionalized and have had at least two meetings to review progress and implementation of the Primary Health Care Project in each of the United States fiscal years since it has been formed.

ii. at least 16 Federal and Provincial level health officials responsible for Primary Health Care (Basic Health Services) have been trained overseas in management systems including analysis and evaluation;

iii. at least 85 Medical Officers posted at Integrated Rural Health Complexes, District Health Officers and Divisional Deputy Directors who deal with Primary Health Care (Basic Health Services) have been trained in management and oriented in the Primary Health Care Project;

iv. logistics/support systems and procedures have been reviewed and revised as necessary and operating manuals for Integrated Rural Health Complexes have been adopted, published, and distributed in each of the four provinces;

v. ninety percent of the physician and para-medical tutors in the program have been trained or retrained in the revised curriculum and training methods;

vi. eighty percent of the medical technicians trained and deployed by December 30, 1985 have trained an average of 10 community health workers who in turn are supported and regularly supervised by medical technicians;

vii. procedures have been adopted in each province to insure that medical technicians and community health workers have been provided and are using transport, medical kits, uniforms and other commodities procured under the Project;

viii. at least 40 percent of the medical technicians that have been trained and deployed are females;

ix. double round surveys/evaluations have been conducted in project years three and four to establish the impact of the project on morbidity, mortality, and immunization status; and,

x. at least 53 additional Integrated Rural Health Complexes (29 in the Punjab, 12 in the Northwest Frontier, 7 in the Sind and 5 in Baluchistan) are operational. For purposes of this Authorization, an operational Integrated Rural Health Complex (IRHC) is defined as one in which:

(a) at least 80 percent of the authorized doctors and medical technicians are in place and working, and community health workers have been trained in accordance with Section h.vi, above;

(b) at least 80 percent of the required standard drugs are available at all times;

(c) at least 80 percent of the required standard equipment is on hand and in operating condition;

(d) a functional vehicle is available for ambulance and supervisory services with sufficient funds provided for P.O.L. and routine maintenance services throughout the fiscal year; and,

(e) a laboratory is equipped and staffed to do routine examinations of blood, urine, stools and sputum.

1. Covenant as to Participant Training

The Grantee shall make every reasonable effort to require that each participant trained outside of Pakistan under this Project works in Primary Health Care activities in Pakistan for not less than three times the length of time of his or her training program provided, however, that in no event shall the participant be allowed to work for less than one year from the date of the participant's return to Pakistan. This covenant shall not apply to training of less than 45 days duration.

Approved: \_\_\_\_\_

*Donor M. Lion*

Donor M. Lion  
Director  
USAID/Pakistan

Date: \_\_\_\_\_

*Sept 22, 1982*

PRIMARY HEALTH CARE PROJECT

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LIST OF ABBREVIATIONS

ADG	Assistant Director General
ADHO	Assistant District Health Officer
ADP	Annual Development Plan
BHS	Basic Health Services
BHU	Basic Health Unit
CHW	Community Health Worker
DG	Director General
DDG	Deputy Director General
DHS	Director Health Services
DDHS	Deputy Director Health Services
DHC	District Health Officer
DPT	Diphtheria-Pertussis-Tetanus
FX	Foreign Exchange
FY	Fiscal Year
GDP	Gross Domestic Product
GOP	Government of Pakistan
IRHC	Integrated Rural Health Complex
LHV	Lady Health Visitor
LT	Long-Term
LC	Local Costs
MO	Medical Officer
MT	Medical Technician
MLHW	Mid-Level Health Worker
MCH	Maternal-Child Health
PFY	Pakistan Fiscal Year
PHC	Primary Health Care
P&D	Planning and Development
UNICEF	United Nations Children's Emergency Fund
WHO	World Health Organization

## I. SUMMARY AND RECOMMENDATIONS

### A. Recommendations

#### 1. Funding

It is recommended that an ESF grant of \$20.0 million be authorized for the Primary Health Care Project, which has a Project Assistance Completion Date (PACD) of September 30, 1987.

#### 2. Geographic Code

The Project authorization should specify that, except as A.I.D. may otherwise agree in writing :

a. Goods and services financed by A.I.D. under this Project shall have their source and origin in the United States (A.I.D. Geographic Code 000) or Pakistan.

b. Ocean shipping for all commodities financed by A.I.D. under this Project shall be only on flag vessels of the United States or Pakistan.

c. Participant training financed by A.I.D. under this Project shall be only in countries included in A.I.D. Geographic Code 901 (Limited Free World).

#### 3. Waiver

It is recommended that a source/origin waiver from A.I.D. Geographic Code 000 to Code 935 be approved by the Assistant Administrator for Asia to permit the procurement of ten right-hand drive diesel pick-up trucks and eighteen right-hand drive diesel 12-passenger vans and spare parts. A copy of the waiver request is included in Annex C.1.

### B. Summary Project Description

In 1977, the Government of Pakistan (GOP), recognizing that it was impossible to adequately respond to the health problems in the country with a physician-based system of medical care, launched a rural health program involving the use of paramedics. The GOP's program, which received support from A.I.D. under the Basic Health Services Project (191-0415) between 1977 and 1981, was based on a system of Integrated Rural Health Complexes (IRHCs) consisting of three tiers as follows :

1. a Rural Health Center (RHC) staffed by one male and one female doctor and male and female medical technicians (MTs);

2. satellite Basic Health Units (BHUs) staffed by one male and one female MT; and,

3. one male and one female Community Health Worker (CHW), trained and supervised by the MTs in the nearest BHUs, and living and working in their own village to serve up to 1,000 villagers.

While the previous A.I.D. Project fell short of its ambitious objectives, it did achieve the following results:

1. It introduced a cadre of health providers that was previously non-existent;

2. It firmly established the concept that properly trained paramedics could provide effective, simple, curative and preventive health care;

3. A six-volume, competency-based curriculum for MTs was developed and adopted and, by the end of the project, a total of 85 MT tutors, 124 MTs, and 55 CHWs were trained and deployed;

4. 6 RHCs and 24 BHUs were constructed and fully staffed, resulting in the formation of 6 operational IRHCs; and,

5. 27 MT training schools were established throughout the country and have continued to operate even after A.I.D.'s input terminated.

The GOP has firmly adopted this new approach to health care and is proceeding with training of paramedical personnel and the construction of RHCs and BHUs. However, the GOP recognizes the need to strengthen the system in the key areas of management, supervision, and training, and to identify ways to accelerate the recruitment of female health workers. The proposed A.I.D. Project is designed to build on the accomplishments and apply the lessons learned from the previous Project by assisting the GOP in these areas to improve the quality and expand the coverage of primary Health Care services in the rural areas. This will be accomplished by:

1. training and deploying significant numbers of female MTs and CHWs to reach women and children who are unable to obtain services because of cultural constraints;

2. increasing the management and supervisory capability at all levels of the health system and institutionalizing a monitoring system to measure program effectiveness;

3. improving the quality of the on-the-job performance of the MTs and CHWs; and,

4. promoting community participation in health activities by an effective outreach program.

As a result of the Project, Federal and Provincial health authorities will be better able to implement those health care interventions which will impact most effectively on diseases of high prevalence or significant morbidity and mortality and to make the RHCs and BHUs truly functional facilities.

The proposed Primary Health Care Project consists of an integrated package of five components which are designed to achieve the above objectives :

### 1. Program Management

High level Federal and Provincial Advisory Councils will be created to formulate policy and provide effective leadership. The Councils, project managers, and other key officials involved in the Primary Health Care system will be supported and strengthened by : long and short-term expatriate and Pakistani consultants; management workshops for personnel at all levels; participant training in the U.S. and third countries; and in-country observational visits. Provincial operating plans, management systems and procedures, and operating manuals for RHCs and BHUs will be developed as a part of this process.

### 2. Medical Technician and Community Health Worker Training

Long and short-term U.S. and Pakistani training advisors will assist GOP health officials to revise the curriculum and to develop training materials, both of which will be translated into Urdu, for both MTs and CHWs, and to design and conduct training workshops, including in-service workshops for deployed MTs. Participant training in the U.S. and third countries will be provided for key personnel. Thirteen consolidated permanent MT training schools will be constructed or rehabilitated, furnished and equipped, and provided with transport. Hostels will be built at each school for male and female students, the latter being especially important for the recruitment of females.

### 3. Program Operations

In addition to improved management and training inputs, the performance of MTs and CHWs will be enhanced by the provision of suitable uniforms, medical kits, and

low-cost transport (probably a motorized bicycle). A health promotion and education campaign will be designed and implemented to enhance the status and acceptance of field workers and to foster community awareness and participation in the health system.

#### 4. Research and Evaluation

Field studies will be undertaken at the beginning of the Project to provide baseline data on the prevalence and associated mortality of selected diseases to be used for a major end of project evaluation of program effectiveness, which will be conducted jointly by the GOP, WHO, UNICEF and A.I.D. Other research to be undertaken during the Project will include the collection of data on morbidity and mortality trends of children 0 to 4 years of age in selected areas served by the Project and research on recurrent costs. (See Section I.F.1. below). In addition, Project progress will be assessed annually in evaluation workshops involving Federal and Provincial health personnel, Project staff, and representatives of A.I.D. and WHO.

#### 5. Accelerated Expanded Program of Immunization (EPI)

As one of three accelerated interventions in health, the Government is launching an Accelerated EPI, a two-year effort designed to immunize 15 million young children against six preventable diseases that cause about 33 percent of all deaths in children under five. The Project will support this effort by financing equipment for the production of DPT vaccine, vaccines, and simple cold storage equipment. Funds will also be provided to purchase chemicals for the preparation of oral rehydration salts in support of the GOP's accelerated program to control diarrheal disease. This assistance will be provided in a manner that will reinforce the Primary Health Care Project's long-term institution-building objectives.

#### C. Summary Findings

This Project is considered socially, financially, and economically sound, and technically and administratively feasible, and is ready for implementation.

#### D. Statutory Criteria and Mission Director's Certifications

1. This Project meets all applicable statutory criteria.

Appropriate checklists are included in Annex B.

2. Two certifications signed by the USAID/Pakistan Mission Director are included in Annex C: (a) a FAA 611(e) certification, which certifies that the GOP has the capability to implement and maintain the Project; and, (b) a FAA 612(b) certification to permit the disbursement of dollars in lieu of U.S.-owned rupees to finance local costs.

#### E. APAC Concerns and Design Guidelines

The PID approval cable (Annex A) suggested that during project design, the Mission should consider ways to:

1. strengthen the referral system and enhance the effectiveness of CHWs;
2. assist to develop Provincial and Federal resources to help control diarrheal diseases and increase immunization coverage;
3. integrate health and population concerns;
4. explore health care financing and recurrent costs through such means as social financing schemes and users' fees;
5. increase physician awareness of the constructive role of MTs in the delivery of health care; and,
6. deploy adequate numbers of female health workers.

These concerns are addressed in the following sections of the Project Paper, respectively: (1) and (2) III.C., Project Components; (3) V.B., Administrative Analysis; (4) I.F., Project Issues and V.A., Technical Analysis; (5) III.C., Project Components and V.C., Social Soundness Analysis; and (6) I.F., Project Issues and III.C., Project Components.

#### F. Project Issues

There are three principal issues in this Project:

1. Can the recurrent costs generated by this Project be financed by the Provincial Governments? Can the recurrent costs of a full-scale Primary Health Care Program be financed by the Provincial Governments or by the provinces in concert with other sources of financing?
2. Can the problems of under-utilization of facilities and imbalanced and inadequate staff be overcome or significantly ameliorated through this Project and/or in other ways?

3. Can this Project overcome or ameliorate the problem of attracting, deploying, and retaining female physicians and MFs?

1. Recurrent Costs

Table 1 summarizes the estimated recurrent costs of Pakistan's Primary Health Care Program. Estimated costs are provided for twelve different cases, depending on the level of drug costs and the extent of population coverage. Salaries, facility and equipment maintenance, utilities, transportation and related recurrent costs of the Primary Health Care Program can be estimated with reasonable accuracy, but this is not the case for the recurrent costs of drugs. It is recognized that existing budgets for drugs are inadequate. However, there are no known studies of the actual drug requirements for a fully functional IRHC or similar institution, and data from more sophisticated systems are for the most part inapplicable and not transferable. Accordingly, cost estimates provided in Table 1 are based on three different assumed levels of drug costs which are defined in the footnotes to the table.

The table also provides estimated costs as a function of estimated population coverage for: the existing 6 fully operational IRHCs, with a population coverage of about 300,000 or about 0.5 percent of the rural population; the 12 existing IRHCs <sup>1/</sup>, plus the additional 53 IRHCs which will be established by the end of the PHC Project and which together will serve about 3,250,000 inhabitants, or about 5 percent of the population; 50 percent rural population coverage or 30,132,000 inhabitants; and, 100 percent coverage or 60,264,000 of the total rural population of Pakistan, which is estimated at 72 percent of the total population. A more detailed analysis of the recurrent costs of the program are provided in Section V.E., Financial Analysis.

The estimates in Table 1 do not include revenue from patient fees which are currently Rs 1.00 in the Punjab and 25 paise (Rs 0.25) per patient visit in the other three provinces. For 100 percent population coverage, this would amount to about Rs 41 million per year, which would offset recurrent costs by only 5 percent or less under the three different cost assumptions.

The recurrent costs of the proposed A.I.D. Project over the next five years, which range from a low of Rs 40,930,000 annually to a high of Rs 126,730,000 annually will be manageable. Even under the highest cost assumption (3), only a 2.5 percent increase per year in the total recurrent budget for health

1/ Only 6 IRHCs are fully operational at the present time; another 6 are expected to become fully operational within the next year.

TABLE 1

ESTIMATED RECURRENT COSTS OF PAKISTAN'S PRIMARY HEALTH CARE PROGRAM

Assumed Level of a/ Drug Costs	Population Coverage b/ (%)	Total Estimated Annual Recurrent Costs (in Rs 000)	Total Estimated Annual Recurrent Cost as a % of PFY 1981/82 Total Recurrent Budget for Health	
			Total Health Budget d/	Total Provincial Health Budgets e/
1	0.5 (Existing IRHCs)	3,503 <sup>c/</sup>	0.4	0.5
	5 (PHC Proj.)	40,930	4.2	5.3
	50	379,400	39.2	49.5
	100	758,800	78.3	98.9
2	0.5 (Existing IRHCs)	5,098	1.1	1.3
	5 (PHC Proj.)	55,230	5.7	7.2
	50	511,900	52.8	66.7
	100	1,023,900	105.7	133.5
3	0.5 (Existing IRHCs)	11,698	2.4	3.1
	5 (PHC Proj.)	126,730	13.1	16.5
	50	1,175,000	121.3	153.2
	100	2,350,000	242.5	306.4

Source: USAID/Pakistan Estimates

a/ Assumption 1: Drug costs for an IRHC will continue to be at the level currently budgeted in the Punjab, i.e., Rs 2.50 per person for a BMU and Rs 8.00 per person for an RHC.

Assumption 2: Drug costs for an entire IRHC will be at the current budgeted amount for an RHC, i.e., Rs 8.00 per person.

Assumption 3: Drug costs for an entire IRHC will be at the level of the current average national per capita expenditure for drugs, i.e., Rs 30.00 per person.

b/ Existing IRHC estimates are based on the population served by the 6 existing fully operational IRHCs.

PHC Project estimates are based on the population to be served by the 53 IRHCs which will be established as a result of the Primary Health Care Project plus the 12 existing IRHCs.

50% coverage estimates are based on half the rural population being served by IRHCs.

100% coverage estimates are based on the entire rural population being served by IRHCs.

c/ PFY 1981/82 revised estimates

d/ Total PFY 1981/82 Government recurrent budget for health = Rs 969 million.

e/ Total PFY 1981/82 Provincial recurrent budgets for health = Rs 767 million.

Note: Population coverage estimates are only for the population served by Integrated Rural Health Complexes, at an average of 50,000 persons per IRHC. The estimates do not include the population currently served by other facilities, such as RHCs without supporting BMUs, effective dispensaries, and the outpatient clinics of tehsil hospitals.

would be required. This compares favorably with the real increase of 4.2 percent per year which occurred in the budget between PFY 1977/78 and PFY 1981/82. However, it is clear that an expansion of the program beyond this level to cover a reasonable proportion of the population will place an enormous burden on the GOP's recurring budget. In constant rupees, the per capita recurrent real Government expenditures for health have increased at an annual rate of 1.2 percent over the last five years. At that rate, even under the lowest cost assumption (1), it would take 32 years for the program to be extended to 50 percent of the rural population, if the entire amount of real budget increases was devoted entirely to Primary Health Care. (This assumes a 3.0 percent annual population growth rate.)

It is interesting to note that while the population expects the Government to provide health care free of charge, they pay and always have paid for private allopathic and traditional health care. In fact the amount spent on private health care in Pakistan is about 2.5 times the Government's total recurrent health expenditures.<sup>2/</sup> It is therefore reasonable to assume that over time, if the population's perception of the quality of health care provided by the Government health system improves, they would be willing to pay for the service. Alternative ways of dealing with this problem will be examined under the Project. Some of the possible alternatives include the following :

a. raising patient fees to cover all or almost all of the recurrent costs;

b. providing only emergency supplies such as dressings free of charge and requiring patients to purchase all medicines in the local market;

c. a combination of (a) and (b) such as providing emergency supplies and initial medicines for a reasonable fee and requiring patients to purchase subsequent medication.

In practice, inadequate budgets are already resulting in some combination of (b) and (c), which varies from place to place. The effects of this situation, both medically and in terms of client confidence, have not been assessed. Because of the importance of these effects, studies will be undertaken early in the Project followed by pilot programs to test promising approaches.

<sup>2/</sup> Data taken from a national micronutrient survey which included information for all families surveyed, both rural and urban, of the amount of money spent on health care.

A related issue is the question of compensation versus volunteerism for CHWs. Most of the CHWs are currently providing free services, and a majority of them interviewed during an A.I.D.-financed evaluation survey in February 1982 stated that they believed a free service arrangement could go on indefinitely. However, when asked if they preferred a free service versus a fee for service arrangement, the numbers were much more evenly divided although more preferred the free service arrangement. Both CHWs and villagers also stated during this survey that the Government, not the village, should pay the CHWs. (If CHWs were paid a modest fee of Rs 100 per month, the total cost to reach the entire rural population of Pakistan would be Rs 145 million a year.)

It appears that a volunteer system could go on for some time as evidenced by the fact that such a system has gone on in the Punjab for almost a year. It could probably go on in some communities indefinitely where the CHWs see their work as akin to moral and religious service. For the system as a whole, however, it is unlikely that free service will be acceptable for long if the quality and level of health activities continues at its current pace. If these were to improve, it is likely that the community would tend to place higher value on the health service provided and would be more likely to provide financial support to the CHW. One distinct possibility is through the special taxing powers of the Union Councils. A study will be carried out during the Project to determine the availability of village resources to support CHWs and to identify ways in which such resources could be most readily and effectively utilized.

## 2. Manpower and Facility Utilization

Until very recently, over half of the Government posts for doctors in the rural areas was vacant because of the reluctance of physicians to serve in the rural areas. (In 1977, the vacancy rate was 66 percent. 3/) In contrast, paramedical positions, most of which are in the rural areas are filled immediately upon the creation of posts. Despite this, in the last decade, medical school enrollment has quadrupled while the capacity for training all types of paramedical personnel has increased by only one-third. (Over half of this increase in paramedical personnel training is a result of the A.I.D.-financed Basic Health Services Project). Because of this, Pakistan currently produces

3/ Accessibility of Health Establishments and Their Utilization, Siraj-ul-Haq Mahmood and S.I. Kasim, Pakistan Journal of Medical Research, Vol. 21, No.1, Jan.-Mar. 1982. This article and Health and Health-Related Statistics, published by the GOP Planning Commission in 1978, are the principal sources of health statistics in this paper.

about 2.2 doctors for every paramedic trained. Since physicians are reluctant to serve in the rural areas, the results are a severe bias of medical care toward the urban areas and under-utilized or unused health facilities in the rural areas.

A recent change is that the high level of production of doctors is apparently forcing some of them into the rural areas. No government posts for doctors in the Sind are currently vacant and the vacancy rates in the Punjab are now about 29 percent for males and 75 percent for females. While this represents an improvement, it does not alter the results described above. There are only some 970 rural doctor posts, one for every 62,000 rural inhabitants. If the urban doctor/population ratio were applied to the rural areas, 32,000 additional doctors would be required. Their salaries alone would equal 77 percent of the current total Federal Government recurrent expenditures for health. If health care is to effectively reach the rural areas, it will have to come through a paramedic-based system.

Medical school enrolment is a function of GOP policy and will not be directly addressed by this Project. However, this Project is designed to address the existing physician/paramedic imbalance by improving and expanding the Government's ability to train, deploy, support and supervise paramedical personnel to provide effective medical care in the rural areas. With the provision of sufficient numbers of qualified staff and the availability of adequate supplies at rural health facilities, the demand for services and the use of facilities by the rural population should increase.

Two recent policy changes that could directly affect facility utilization and staffing problems are the GOP's announced intention to deploy physicians in BHUs and its decision to require new graduates as of July 1, 1983 to serve in the rural areas for two years. Historically, physicians could not be recruited to serve in rural areas because of such factors as isolation and lack of adequate schools for their children. These concerns will be even more apparent in the case of BHUs, given their highly isolated locations. If physicians are assigned to BHUs, the units would operate much the same way as RHCs do now, with MTs assisting the assigned physicians. The MTs would also have more time to train and supervise CHWs. In addition, the RHCs would lose all or most of their referral role, leaving them as primary care and supervisory units. Taken together,

these changes could strengthen rather than retard the operation of the program. The major problem, however, would be the increased recurrent costs that would result. Conservatively, the assignment of physicians to BHUs would increase the recurrent costs of an IRHC by 50 percent. (The salary and allowances of a physician alone are one-third the total recurrent costs of a BHU.) In the long run, there would undoubtedly also be additional capital costs related to the construction of residential facilities. In the final analysis, the GOP's policy with respect to training and deployment of physicians will have a significant impact on the effectiveness and financial sustainability of Pakistan's Primary Health Care Program.

### 3. Female Health Workers

The previous BHS Project had considerable difficulty in attracting, deploying and retaining female MTs and female physicians. It was difficult to find women with a high school degree in all the provinces, except the Punjab. Female physicians, few in number anyway, were also nearly impossible to transfer to rural areas. The importance of this problem can be seen in the fact that RHCs with female workers had three times the volume of women and children patients as compared to those without female workers.

Experience has shown, however, that women can be recruited. In the fall of 1981, it appeared certain that the incoming MT class in the NWFP would contain only 12 women. Although time was limited, a letter was sent to the headmistresses of all the girls' secondary schools in the province to enlist their help in recruiting students for the new MT class. The letters included a description of the Project and application forms. This simple effort resulted in an incoming class of 22 female students against a class capacity of 25. The Punjab has indicated that it will undertake a similar recruitment campaign for its upcoming classes this year. In addition, this recruitment procedure will be a condition precedent for disbursement for furniture and equipment for MT training schools financed by the Project.

In addition to this special recruitment effort, three elements of the Project are specifically designed to attract more female MTs into the program. If these efforts succeed, the deployment of these female MTs should result in a concomitant increase in female CHWs. The three elements are :

a. construction of separate classroom and hostel facilities for women at the thirteen MT training schools to be constructed or rehabilitated under the Project. This will

be particularly important for attracting women from rural areas whose parents would not allow them to attend coed classes or go to a school away from home that did not have culturally acceptable living quarters. In doing so, it will enhance the possibilities of assigning female graduates to their home areas, and it will increase the total student pool;

b. design and implementation of a continuing recruitment campaign targeted at women, as part of a comprehensive health care promotion package; and,

c. hiring four female Pakistani training specialists (one for each province) to assist and guide the recruitment campaign and to strengthen female training.

Similar opportunities under the Project for attracting women physicians do not exist. Primary responsibility for recruitment of female physicians rests with the GOP. If it chose, the Government could invoke the rural service obligation of selected female medical school graduates. It is also possible that more women physicians could be recruited if selection criteria placed priority on new graduates rather than established doctors.

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## II. BACKGROUND

### A. USG-GOP Negotiations

The United States and the Government of Pakistan (GOP) have embarked on a renewed and strengthened effort to increase their economic and development cooperation. This effort was marked by high level U.S.-GOP consultations in 1981 which culminated in the negotiation of a \$3.2 billion package of military and economic assistance which the U.S. will seek to provide to Pakistan between FY 1982 and FY 1987. The economic assistance component was designed not only to maximize its development impact but also to produce as favorable balance of payments effects as possible. The balance of payments objective reflects two critical purposes of the agreed upon economic assistance:

1. to ameliorate the burden created by Pakistan's increased military expenditures; and,
2. to reduce the constraints on development which balance of payments strains generate.

In this manner, the economic, development, and security interests of both nations are interrelated and supported.

The U.S. Economic Assistance Negotiating Team, headed by the A.I.D. Administrator, visited Pakistan in August 1981 to discuss the details of the economic portion of the military/economic assistance package with the GOP. These negotiations were successfully completed and agreement was reached on the FY 1982 ESF program and on areas of concentration for the FY 1982 through FY 1987 period. It was in this context that A.I.D. agreed to finance a five-year project to support the GOP's Primary Health Care Program.

### B. Pakistan's Health Sector

The public and private health delivery system in Pakistan is characterized by considerable regional variation in the quality and quantity of services provided in both urban and rural areas. Historically, the health system has served urban areas better than rural areas and has placed higher priority on the training of physicians rather than auxiliary manpower. Budget restrictions have limited operating budgets for the public health sector, and curative services have been emphasized over preventive care and community health.

## 1. Health Profile

Pakistan's population of 83.7 million (March 1981) is predominantly rural, poor and illiterate. There are roughly 45,000 villages containing about 72 percent of the country's people. Forty-four percent of the total population is under the age of 15; 42 percent is between the ages of 15 and 44; and, only 14 percent is over the age of 44. Although there are more females born than males, in all age cohorts there are more males than females since the life expectancy of males is consistently higher than females.

The crude death rate is estimated to be 14 per thousand. Infant mortality is estimated at 105 per thousand live births, which accounts for about 15 percent of the crude death rate. About 20 percent (700,000) of the children that are born each year, die before the age of five.<sup>4/</sup>

The principal infant killers are diarrheal and respiratory diseases, which account for about 60 percent of all infant deaths.

Available health statistics do not permit the calculation of mortality by individual diseases. However, a GOP Planning Commission study indicates that, in rural areas, two-thirds of all deaths are due to infective and parasitic diseases, exclusive of malaria. Major killers are tuberculosis, birth injury, and complications of pregnancy and diarrhea.

The limited morbidity data available is hospital-based and therefore biased by the selection of patients. In 1973, patient records of public hospitals and dispensaries were studied in terms of the overall incidence of disease. Gastro-intestinal and parasitic diseases, respiratory diseases, fevers, diseases of the skin, and malaria accounted for roughly 72 percent of reported illnesses. Except for reduced incidence of malaria, these data are valid today.

A high proportion of the sickness in rural Pakistan is the result of poor environmental conditions, resulting from lack of sanitation, inadequate shelter, poor personal hygiene and inadequate nutrition. Potable water supplies are available to only 15 percent of Pakistan's rural people, and sanitation facilities are practically non-existent in the rural areas. (About 99 percent of the rural population uses open fields.) Per capita protein intake is estimated to be about 54 percent of daily requirements, and protein-energy malnutrition accounts for

<sup>4/</sup> GOP Planning Commission, Primary Health Care in Pakistan for Children's Survival, June 24, 1982

a significant amount of morbidity and mortality. Only a small proportion of sickness is caused by chronic or degenerative diseases.

## 2. Human, Physical and Financial Resources

The existing health system in Pakistan reflects a pattern not unusual for developing countries. All types of facilities and manpower are scarce and are heavily skewed toward urban areas despite the fact that most of the population lives in the rural areas. It is estimated that modern health (i.e. allopathic) services extend to only 17 percent of the total population and to perhaps as little as 5 percent of the rural population. This results more from limited budgets and lack of trained manpower than from lack of physical facilities.

### a. Manpower

Available health manpower data overstate the actual number of workers because the data do not allow for outmigration, retirement and deaths, and the frequently short career span of female medical personnel. Estimates of available health personnel in 1981 are shown in Table 2.

### b. Physical Resources

The PFY 1981/82 Annual Development Plan indicates that there are 5,352 Primary Health Care facilities in Pakistan including : 3,478 Dispensaries, 823 Maternal and Child Health Centers, 277 Rural Health Centers and 774 Basic Health Units and Health Subcenters. These numbers must be viewed with caution for two reasons. First, they represent only structures or buildings, regardless of whether or not they are staffed, equipped or functioning. Second, the structures themselves may be nothing more than a small room in a building used for other purposes as is the case with some Dispensaries.

The distribution of these facilities is skewed toward the urban areas. A facility survey undertaken in 1978 found that 51 percent of the total population was within a two mile radius of a health facility. However, only 33 percent of the rural population was within two miles of such a facility and 19 percent of the rural population was not even within five miles of one. The study also found that 66 percent of the government posts for doctors in rural areas was vacant. A PFY 1977/78 GOP Planning Division survey in the Punjab found that 19 percent of all MCH centers were abandoned or temporarily closed for lack of trained staff. The study concluded that, "the existing isolated and uncoordinated organization of MCH care is not

TABLE 2

HEALTH MANPOWER PROFILE IN PAKISTAN 1981

<u>Category</u>	<u>Number</u>	<u>Per Capita<sup>a/</sup> Ratio (Urban)</u>	<u>Per Capita<sup>a/</sup> Ratio (Rural)</u>
Doctors	16,000	1 : 1,850	1 : 18,780
Nurses	6,000	1 : 4,940	1 : 50,070
Auxiliaries <sup>b/</sup>	14,150	1 : 3,345	1 : 8,490
Traditional Practitioners <sup>c/</sup>	40,000	1 : 1,185	1 : 3,000

SOURCE : USAID/Pakistan Estimates

a/ There are no current data on the geographical distribution of health personnel between urban and rural areas. These ratios are based on the assumption that 80 percent of all doctors and nurses and 50 percent of all auxiliaries and traditional practitioners work in cities and towns.

b/ This figure includes 13,825 lady health visitors and dispensers (who are considered primary health care workers, although they are not fully trained for the tasks they are performing) and 325 Medical Technicians. To this figure, the Government frequently adds another 18,000 auxiliaries which include midwives, physiotherapists, pharmacists, laboratory medical technologists, malaria workers and others who do not serve as primary health care workers; these are not included in the Table.

c/ Includes hakims (Physicians trained in the Unani medical system which is based on the concept of four humors); homeopathic physicians (those who treat diseases by drugs, given in minute doses, that would produce in health persons symptoms similar to those of the disease) and unani pharmacists (those who sell preparations made of indigenous plants and herbs).

functional and has not .... succeeded in providing MCH care for the majority of Pakistan's women and children." Thus, the rural inhabitant fortunate enough to be within walking distance of a health facility is likely to find either that it is staffed with a lady health visitor or a dispenser, neither of whom is sufficiently trained to provide quality Primary Health Care services, or that it is closed.

### c. Financial Resources

Although public sector recurrent expenditures for health have risen 14.7 percent during the past five years, they still account for only 0.3 percent of GDP and 0.2 percent of total recurrent expenditures in the public sector. In constant prices, recurrent health expenditures per capita have increased by only 4.9 percent between PFY 1977/78 and PFY 1981/82. Development expenditures are about equal to recurrent expenditures. Total expenditures in health in PFY 1981/82 were 0.7 percent of GDP.

Statistics suggest that Pakistanis rely more on the private sector than the public sector for health care. GOP Planning Commission estimates of annual expenditures for medical treatment in the private sector vary. By taking an average of these estimates and adjusting for inflation, such expenditures total about Rs 2.5 billion per year for hospital beds, doctors in private practice, traditional healers, and drugs and medicines. (About 86 percent of all medicines marketed in Pakistan are sold through the private sector). This is over 2.5 times the amount spent in the public sector for recurrent expenses alone and raises per capita public and private recurrent expenditures to about 1.2 percent of GDP.

In summation, the patterns of morbidity and mortality in Pakistan do not differ significantly from those of other developing countries. At most, only minimal coverage is provided by current manpower and facilities throughout the country. There is considerable evidence that the facilities that do exist to serve rural areas are frequently understaffed, poorly supplied, not well managed, and in some cases, inappropriately located. These characteristics of the existing delivery system as well as others help explain why it is also under-utilized.

### 3. History of Rural Health Programs in Pakistan

In 1946, the Health Survey and Development Committee, chaired by Sir Joseph Bhore, surveyed health conditions in British India and recommended the directions

for future health policy. The central recommendation of the Bhoré Report was that both preventive and curative health services be provided to the urban and rural population through heavy reliance on a combination of professional and auxiliary medical personnel. Despite many stops and starts, there have been numerous programmatic efforts in Pakistan to implement this policy.

Three training programs, for lady health visitors (LHVs), dispensers, and sanitary inspectors, have long histories in the subcontinent. The LHV, trained since the 1920s, ranks below the doctor and the nurse. After about two years of training in maternal and child health and brief training in common diseases of women and children, she works predominantly in Rural Health Centers, family planning programs, and Maternal and Child Health Centers. There are currently only about 2,425 LHVs (or one per 34,545 persons) working in Pakistan despite a fifty-year training effort. Dispensers receive on-the-job training in hospitals and clinics. They function as auxiliaries although they are trained as assistant pharmacists. Current estimates are that roughly 11,400 dispensers are deployed in the country. The sanitary inspector receives 18 months of specialized training in basic hygiene and sanitation, and he serves predominantly in rural areas in the field of preventive public health. There are probably less than 1,000 sanitary inspectors currently working in Pakistan.

During the 1950s and 1960s, several programs were initiated to significantly expand Pakistan's cadre of trained auxiliary medical manpower. A number of these programs were abandoned after a few years because many of the individuals trained subsequently went on to medical school or emigrated to urban areas. In the early 1960's, a major effort was undertaken to build Rural Health Centers (RHCs) and to staff them with rural health inspectors. Although the building program proceeded more slowly than planned, there are now an estimated 277 RHCs and 747 Subcenters, the majority of which are in the provinces of the Punjab and Sind. RHCs continue to be built although the training program for the inspectors was abandoned several years after its inception, and the training institutions have become medical schools.

Several smaller-scale efforts to train medical auxiliaries were undertaken in the early 1970s, but none were national in scope. All had problems of recruitment, training, deployment, and retention of auxiliary personnel. None were able to provide the quality or quantity of care sufficient to meet the health needs of the target populations.

## C. The Basic Health Services Program

### 1. Background

In March 1975, the Government undertook a Country Health Programming Exercise. This effort culminated in the design of a new approach to rural health care. It called for the creation of three-tiered Integrated Rural Health Complexes (IRHCs) staffed with a new, better prepared type of paramedic, the Medical Technician (MT) (They were originally called mid-level workers.) The four elements that were identified as essential to the success of the program were : physical infrastructure, manpower training, logistic and drug support, and a management information system. This new three-tiered approach to rural health was adopted by the Government and incorporated into its Fifth Five-Year Plan (PFY 1977/82), and it served as the basis for the A.I.D.-supported Basic Health Services Project which was launched in April 1977.

The program revolved around an IRHC comprised of one Rural Health Center (RHC) and 4 to 10 Basic Health Units (BHUs). The IRHC was intended to serve a population of 50,000 to 100,000 in a geographic area of 150 to 250 square miles. The RHC was to be the focal point for all promotive and curative interventions and management. It was to be staffed by one male and one female doctor, two supervisory Medical Technicians and two Medical Technicians delivering care. The activities proposed for the RHC were to :

- a. provide Primary Health Care Services for the immediate surrounding area;
- b. serve as a referral center for all BHUs within its catchment area;
- c. function as a center for the planning and management of all preventive/promotive programs within its catchment area;
- d. provide technical and administrative supervision for all workers within its catchment area;
- e. serve as the collection and collation point for information system data on curative care, case finding and vital registration, immunizations, nutrition, antenatal care, and family planning services in the area; and,

f. serve as the first-line drug and equipment warehouse in the area.

Each RHC was to be linked with the District Health Officer (DHO), not only through managerial control by the physicians, but also by technical supervisory relationships with district level persons in personnel, supervision, inventory control and information system management.

The second tier, the BHU, was to be the most peripheral physical facility in the field. It was intended to serve 5,000 to 10,000 population, covering a 15 to 25 square mile area. Each BHU was to be staffed with a minimum of two MTs, one male and one female, and their support staff. The BHU was linked to the RHC by supervisory staff, and its activities were to be geared to the communities around the facility. Each BHU was to:

- a. provide Primary Health Care Services for its geographical catchment area;
- b. be responsible for the training and supervision of Community Health Workers (CHWs) in the villages;
- c. serve as a referral center for CHWs; and
- d. supply CHWs with simple medicines and equipment.

The third tier was the CHW, who was trained to deliver a limited range of preventive and curative care at the village level. One male and one female CHW were to be deployed for up to 1000 population, depending on village size, and were expected to live and work in the village they served. MTs were to both train and supervise CHWs. Each CHW was to be trained in basic preventive tasks such as weighing of children to detect malnutrition and seeking out pregnant women, and carrying out simple high-risk assessment to determine which women should be referred to MTs or physicians. The CHW was to have a role in curative medicine as well. When taught to recognize and treat simple health problems and to refer other health problems, the CHW would not only gain credibility in the village but would also reduce the case load at BHUs. Thus relatively simple curative skills would provide an entrée for the CHW to the more difficult job of preventive health and would enable the CHW to help bridge the social and knowledge gap between the modern health system and the village social system.

Special MT training schools were to be established, and training of CHWs by MTs was to take place in BHUs. The training to be provided in the MT schools and in turn to

the CHWs was to be competency-based training. That is, the MT was to be trained to be competent to deal with a limited range of problems, and, more importantly, to recognize problems that were beyond his or her competence that should be referred to the next higher tier. The same concept was used in the MEDEX program in the United States and in MEDEX-designed paramedic programs in other developing countries. It has its foundation in the relative commonality of illness, whether in the developed or developing world. Research has shown that fewer than ten simple health problems comprise half of all patient visits in rural areas of the developing world. The applicability of this approach to Pakistan was confirmed by an unpublished 1975 study in the Punjab, which found that 46 percent of all patient visits were for muscle aches and pains, stomach problems, fever and respiratory ailments. The basic MT course in all four provinces is 18 months. It consists of 6 months of classroom training, 6 months of practical training in a hospital, and 6 months of supervised on-the-job training in a functioning RHC. The MT initially trains the CHW both during visits to the village and in group sessions at the BHU. The training totals about 72 hours spread over a three-month period.

## 2. The Changes Involved

The three-tiered system, with the physician at the highest level at the RHC, the MT in the center and the CHW at the lowest tier, required significant changes in the existing system, including :

- a. designing an entirely new curriculum for MTs and allied training materials for CHWs;
- b. training of tutors in the new curriculum;
- c. setting up MT training schools;
- d. constructing RHCs and BHUs;
- e. developing new systems of management, supervision and supply;
- f. introducing the concept of male and female paramedics working in the rural areas as a team; and,
- g. gaining acceptance, in a physician-oriented milieu, of the widespread use of relatively independent paramedical personnel as physician extenders, and of the almost revolutionary idea of using paramedic trained CHWs.

### 3. The Results

The 1977 A.I.D. Basic Health Services (BHS) Project was designed to be implemented in two phases over an 8-year period. Phase I was to be a three-year build-up phase. During this period, the training program for MTs and the necessary management system and institutional framework were to be designed and put into operation, and a substantial number of IRHCs were to be built, staffed and functioning by the end of the project. The A.I.D. contribution for Phase I was to be \$15 million consisting of a \$1.5 million grant for technical assistance and a \$13.5 million loan to cover 60 percent of the construction and operating costs of the IRHCs. Upon the successful completion of Phase I, \$50 million was to be provided under Phase II to support a major expansion of the program. The end of project goal was to provide modern medical care to 50 percent of Pakistan's rural population through 363 functioning IRHCs staffed with 9,720 trained MTs and 43,200 CHWs.

In retrospect, the goals for both phases of the BHS Project were exceedingly optimistic as were those in the GOP's Fifth Five-Year Plan. The GOP Plan called for the creation of 625 RHCs and 4,596 BHUs during the five-year plan period. Partly because the targets were unrealistic, and partly due to other reasons, the Phase I outputs and inputs were revised sharply downward in 1979. Even with this revision, several extensions of the project completion date were required before the targets could be substantially achieved. The reasons for this and the accomplishments of Phase I are discussed in more detail in Section II.E. Table 3 summarizes planned and actual inputs and outputs for Phase I of the BHS Project. The changes in planned levels of inputs and outputs which occurred during Phase I as well as the suspension of A.I.D. assistance to Pakistan in 1979 precluded the possibility of undertaking Phase II.

#### D. Institutional Setting

The GOP's decision-making process with respect to the health sector is characterized by the following:

1. The Federal Government is responsible for health policy; but responsibility for implementation rests with the relatively autonomous provinces. Unfortunately, the Federal Ministry of Health's ability to influence the pace and progress of implementation of health plans and policies in the provinces has been limited.

2. The responsibility for the planning and funding of infrastructure is separate from the responsibility for funding recurrent costs.

TABLE 3

BASIC HEALTH SERVICES PROJECT, 1977-1981:  
SUMMARY OF PLANNED AND ACTUAL INPUTS AND OUTPUTS

	<u>Planned</u>		<u>Actual</u>
	<u>Original Agreement April 2, 1977</u>	<u>Agreement Amendment Sept. 25, 1979</u>	<u>End of Project October 31, 1981</u>
<u>OUTPUTS</u>			
Medical Technician Training Schools Established	36	12	27
Tutors Trained	108	36	85 <u>b/</u>
MTs Trained	800	80	124 <u>c/</u>
CHWs Trained	1350	48	55
Managers Trained <u>d/</u>	322	96	36
Curricula Developed	2	2	2
Operations Manuals Produced	3	2	1
RHCs Constructed and Fully Staffed	36 <u>e/</u>	6 <u>e/</u>	6
BHUs Constructed and Fully Staffed	329 <u>e/</u>	24 <u>e/</u>	24
<u>INPUTS (\$000)</u>			
A.I.D. Grant	1,500	1,500	1,482
A.I.D. Loan	13,500	7,000	7,000
GOP	10,200	10,000	18,330 <u>f/</u>

SOURCE: Ministry of Health and USAID/Pakistan records

a/ Final disbursement of the loan required 75 percent performance in meeting output targets.

b/ 45 are currently teaching; the remainder are working at IRHCs.

c/ As of August 1982, there were 325 MTs trained and deployed.

d/ Includes DHOs, ADHOs, and specialists in supporting functional areas such as personnel and logistics.

e/ Extrapolated from the number of IRHCs. Targets were expressed in numbers of IRHCs, not of RHCs and BHUs. In fact, at the end of the project, a total of 12 IRHCs had been established but only 6 were fully staffed and equipped and therefore considered fully operational.

f/ FFY 1977/78 through FFY 1979/80 converted at the exchange rate of Rs 9.90 = \$1.00.

3. The nature of the Primary Health Care Program requires coordination among separate vertical management structures in the Provincial Ministries of Health.

The Planning and Development Division (P&D) in the Federal Ministry of Finance, Planning and Economic Affairs has responsibility for formulating the five-year development plans for the health sector which set forth development targets and priorities. These targets are developed through close collaboration between the Federal Ministry of Health and the Provincial Departments of Planning and Development and of Health. Annual Development Plans (ADPs), which mainly cover construction, equipment and special start-up costs, are the responsibility of the Federal P&D Division, and Provincial P&D Departments. The revenue and current expenditure budgets are the responsibility of the Federal and Provincial Finance Departments.

Development plans and budgets appear to be more influenced by national policies and planners, while the current revenue and expenditure budgets are more influenced by Provincial Department of Health policies and personnel and the Health Departments' ability to adequately justify requests for assistance to Provincial Departments of Finance. There is an inherent risk that projects will be launched and infrastructure will be built without the provision of adequate operating funds to sustain them.

Under the BHS Project, the Federal Ministry of Health established a special Basic Health Services Cell in order to facilitate coordination between the Federal Government and the provinces. Headed by a Deputy Director-General of Health, the Cell's primary responsibility was to oversee and assist implementation of the BHS Project nationwide. This Cell was never fully funded and it was fully staffed only for a short period of time with appropriately qualified and graded officials to carry out its mission. At present, it consists only of the Deputy Director-General of Health and a Health Education Advisor. A condition precedent under the new A.I.D. project will require that the Cell be fully staffed.

At the Provincial level, the Secretary of Health is responsible for the development of health policy and the administration of special institutions such as medical schools, teaching hospitals and large urban hospitals. Under his direction, the Director of Health is responsible for the day-to-day operation of the Provincial health care delivery system. He has three key deputies who

have responsibility for : (1) planning and development; (2) communicable diseases; and, (3) basic health services. In three of the provinces, he is supported by staff branches which cover functional areas such as accounting, inspection and transport. In the Punjab, the Director's responsibilities are exercised through five (shortly to be increased to eight) geographic Divisional Deputies, each of whom has a staff that is a microcosm of the directorate branches in the other provinces. These geographic divisional offices are well staffed and funded, and the Deputy Directors retain considerable managerial authority over them rather than delegating such authority to District Health Officers. An organization chart of the Provincial departments of health is found in Annex K.

At the District level, Medical Officers serving as District Health Officers (DHOs) and Assistant District Health Officers (ADHOs) have direct supervisory responsibility over RHCs and IRHCs, and many have a direct and positive interest in promoting the further development of the Basic Health Services Program. District hospitals which are referral centers for IRHCs, are supervised by Medical Superintendents who do not report to DHOs or ADHOs. Medical Superintendents and DHOs both report independently to the Director(s) of Health. Consequently, DHOs must coordinate their activities with Medical Superintendents of referral hospitals who may have higher status than the DHOs, making coordination difficult. Nevertheless, each IRHC is theoretically linked to a backup hospital to which patients are referred for care. Although District hospitals do not play a direct role in the Basic Health Services Program, they serve as sites for MT training schools and for the practical hospital training in curative care for MTs.

Implementation of the BHS project crossed the existing lines of authority and responsibility in the Provincial Health Departments. To deal with this and to oversee and assist with the planning, implementation and evaluation of the Basic Health Services Program, a special BHS Cell was established at the Provincial level under the Project. More often than not, the head of each Cell was assigned to this position without being released from his other duties. Provincial Cells also were not adequately staffed with qualified people in the areas of training and management, and annual operating budgets for the Cells were slow to evolve. Consequently, Provincial BHS Cells have not had the planning or management capability required to perform their expected role of overseeing Provincial implementation of the Basic Health Services Program. Like the Federal BHS Cell, they are all virtually one-man operations today.

At the local level, elected Union Councils representing several villages replaced a system of individual Village Councils. Union Councils function under the jurisdiction of the Provincial Department of Local Government and Rural Development. Union Councils play a significant role in the Basic Health Services Program by :

1. their ability to select sites for BHUs;
2. their responsibility for construction of BHUs; and,
3. their ability and willingness to lend support for the mobilization of village health committees and CHWs.

#### E. Program Achievements

The BHS project failed to achieve its planned outputs, but there is a consensus that the original outputs were very optimistic. There are also those who believe that three or four years is insufficient time to expect to see significant changes in as complex an issue as physician-based versus paramedic-based health care. It is the last point that lends special significance to the previous project's major achievements, which include the following :

1. First and foremost, the concept of a physician extender, capable of performing simple curative and preventive care, although not a new concept in Pakistan, has been broadened and is generally accepted, especially within the Government. The Government regards paramedics as the primary means of bringing adequate health care to the rural areas within a reasonable period of time. Its present and prospective health plans for the rural areas are based on a further expansion of the three-tiered approach that was pioneered under the BHS Project.

2. Because the MTs were a new type of paramedic and the training concept was also new, a six-volume curriculum based on skill competency was developed, adopted, printed and used to train MTs. It was perhaps inevitable that the skill competency concept was somewhat diluted in the process. The curriculum covers topics, such as cancer, that should have been omitted, and it does not provide enough emphasis in some critical areas, such as oral rehydration of children with diarrhea. These problems require revision of the existing curriculum, which will be undertaken under the PHC Project.

3. There are currently 24 MT training schools functioning in the country, continuing well beyond the time the last Project-financed technical advisor left. These schools, 11 in the Punjab, 11 in the NWFP and 2 in Baluchistan, have a combined capacity of 574 students and a current enrollment of 570. In addition, 3 schools in the Sind, with a total capacity of 63 students, are expected to resume training this fall.

4. There are currently 325 MTs that have graduated from training and have been deployed in the field. Seventy-five (or 23 percent) are women. While the Project was unable to achieve the 50 percent target for female workers, the Project did establish that female health providers are vital to the program in terms of their ability to attract female patients to seek health care.

5. Twelve IRHCs were formed under the project. Six, all in the Punjab, were fully staffed by the time the Project ended. The remaining six were only partially operational. While the effective functioning of all the centers is still hampered by problems, they serve as the basic organizational model.

6. Pilot projects concentrating on the bottom tier, the CHW, were started under the Project. It was not until the last year of the Project, however, that any CHWs were deployed. An independent evaluation of worker performance conducted in February 1982 found that the few existing CHWs had not been adequately trained. The study also found, however, that there appears to be a clear perception on the part of the villager that the CHW is not just acceptable but that he or she is seen as a positive and beneficial element in the life of the village.

#### F. Lessons Learned

The Basic Health Services Program in Pakistan has been extensively evaluated. These evaluations include :

1. annual reviews of program development progress conducted jointly by the GOP, the project-financed technical assistance contractor (University of Hawaii MEDEX Program) and A.I.D. during 1978, 1979, 1980, and 1981;

2. detailed studies of the management system conducted by the MEDEX team and revised and endorsed by a National Management Workshop, entitled : "Management Systems Studies for the Establishment and Operation of Integrated Rural Health Complexes", December 15, 1980;

3. a terminal evaluation of the BHS Project conducted by A.I.D. and outside consultants entitled "Report of the Project Evaluation Team, January 18 - February 20, 1981, Islamabad, Pakistan;"

4. a special A.I.D.-funded study entitled "Feasibility Study in the Use of Radio in Addressing the Management, Logistics, Training and Continuing Education Needs of Mid-Level and Community Health Workers in Pakistan", January 1982;

5. a special A.I.D.-funded evaluation conducted in February 1982, entitled: "An Evaluation of the Field Performance of Mid-Level Medical Technicians and of Community Health Workers Trained under the Basic Health Services Project"; and,

6. a special evaluation of the training of MTs and CHWs conducted by WHO in March-April 1982.

Many significant lessons have been learned from these evaluations and other reviews of similar experiences elsewhere in the design and implementation of rural Primary Health Care Programs. Foremost among these are the following:

1. Special attempts, tailored to existing cultural and institutional conditions, must be made to effectively reach the target population. In the BHS Project, female health workers have had a significant impact on community health, and special efforts should be made to recruit, train, deploy, and retain female MTs and CHWs in order to effectively reach children and their mothers.

2. Training is a critical component and it should be designed to prepare the MTs and CHWs to perform the tasks which are known to have positive impact on health status. The curriculum developed under the previous A.I.D. project should be revised to include more emphasis on:

a. community health and health services management

b. maternal and child health, including child-birth, nutrition, and diarrhea, especially for female MTs; and,

c. environmental sanitation for male MTs.

3. The MT curriculum should be translated into Urdu, since most MTs are not fluent in English and the English texts are of little continuing value as on-the-job reference materials.

4. The MT training schools need to be standardized so that the training and quality of the workers' performance is consistent in all provinces.

5. Many CHWs are not literate, and appropriate training techniques and non-formal educational materials must be developed for their use in the field.

6. Supervision and continuing education should be given more attention to ensure that MT knowledge, performance and dedication to work in the community do not deteriorate. Specifically, supervisory MTs posted at IRHCs and the Medical Officers in charge must be trained in management and supervision. In addition, MTs should be provided with adequate and, for female MTs, a culturally acceptable form of transport to enable them to properly train and supervise CHWs in the villages and to carry out their other duties.

7. As population coverage expands, CHW training should take place both in group sessions in the BHU and in the village where continued on-the-job training can be given by the MT during routine visits for supervision and support.

8. Management needs to be strengthened at all levels of the Basic Health Services Program. To do this, the following are needed :

a. skilled personnel in planning and management at the Federal and Provincial levels;

b. additional training in project and management planning, operations management (health services administration) and program evaluation for Medical Officers posted at District, Division and Provincial levels;

c. adequate orientation and training in Primary Health Care and in the management of IRHCs for all Medical Officers posted at an RHC;

d. a communication system for management support and control for all echelons of the Basic Health Services Program, particularly between District referral hospitals, RHCs, BHUs and villages; and,

e. a management information system to monitor activities, improve logistics, and to collect, analyze, and use data to measure program progress and effectiveness.

9. Coordinated planning must occur between Provincial Departments of Health, Finance, and P&D regarding operational needs of the Basic Health Services Program. In particular, manpower development planning should be synchronized with facility planning.

10. Closer collaborative planning between technical advisors and counterpart Pakistan officials is required, particularly at the Provincial government level and below, to insure that management and technical plans are effectively implemented.

11. District Health Officers need to be actively involved in planning and implementing Provincial operations.

12. Although adequate management infrastructure is extremely difficult to develop and requires a long lead time, it is essential to support MTs and CHWs in rural and isolated areas.

13. Establishing a new cadre of workers such as the MT requires patience and persistence. This involves continuing efforts to obtain more appropriate pay and grade levels, to offer long-term incentives through promotional opportunities via career ladders, and to promote general understanding of the intended role and relationships of MTs and CHWs among other members of the health sector and the general public.

14. If adequate provision is not made in advance for the administration of technical advisory contracts, administrative issues will detract from the time of key personnel and adversely affect professional relationships.

15. When key program personnel are replaced, the replacements need to be briefed on the program's purposes and operations.

16. While occasionally, 1 RHC may supervise 5 or more BHUs, experience with the previous Project indicates that, in terms of population density and supervisory capabilities of health staff, a combination of 1 RHC and 4 BHUs is, in most cases, the most manageable and effective arrangement for a model IRHC.

All of these lessons have been incorporated into the design of the Primary Health Care Project.

## G. Other Donor Assistance

Historically, except for A.I.D., virtually all donor assistance in the health sector in Pakistan has been provided for activities other than Primary Health Care, and there is little expectation that this pattern will change in the near future. The PFY 1981/82 budget included a total of \$28.2 million in donor assistance for the health sector. Of this amount, \$20 million (71 percent) was for equipment for the Islamabad Hospital, the Faisalabad water and sewer project, malaria control and the National Institute of Health. The remaining \$8.2 million (29 percent) was provided for infant and pre-school feeding, maternal and child health, rural water supply, and the Expanded Program of Immunization (EPI), activities that are related to some components of the Primary Health Care Project but are not directly a part of it. The World Food Program is expected to continue at its current level of about \$ 1 million per year, and the maternal and child health and rural water supply activities of UNICEF will remain at about \$ 3 million, but support for EPI (mostly from UNICEF and Canada) will increase from \$1.9 million in PFY 1981/82 to \$4.3 million in PFY 1982/83. Less than one percent of total assistance from WHO and UNICEF was provided in PFY 1981/82 for Primary Health Care. Thus the proposed Primary Health Care Project does not duplicate the assistance of other donors. Rather, it will fill a glaring void in assistance to the health sector. As in the past, the A.I.D. Project will be coordinated with assistance to be provided by WHO and UNICEF which is described below.

### 1. WHO

WHO traditionally provides assistance through technical advisors, participant fellowships, and funding of workshops and conferences. In the BHS Project, WHO provided one full-time advisor to the Project who now serves as the WHO Public Health Administrator in the Federal BHS Cell. This advisor will be available for two additional years beyond 1982. In addition, WHO provided a UNDP-financed management consultant for the BHS Project from December 1979 to December 1980. WHO also helped sponsor a management workshop in September 1980, which was attended by Health and P&D officials from both the Federal and Provincial levels, and produced a prototype operations manual for IRHCs. The contributions of WHO and UNDP to the BHS Project between 1977 and 1982 totalled approximately \$489,000. For PFY 1982/83, WHO plans to spend \$323,400 for Primary Health Care activities related to the A.I.D. PHC Project, primarily for technical assistance.

## 2. UNICEF

UNICEF contributed significantly to the BHS Project by providing critical training equipment, transport for IBHCs and training schools, and cash assistance for printing of textbooks, and stipends for MT trainees and MT trainers. UNICEF assistance from 1977 through 1982 totalled \$405,100. Although UNICEF has changed its method of funding recently and has decentralized activities so that funds are given directly to Provincial project officers to manage, it is expected that UNICEF will continue its previous role under the PHC Project. The exact nature and funding levels for activities related to, but not a direct part of this Project, are unknown at this time. However, UNICEF is expected to provide about \$65,000 per year, which was the average level of its support during the last two years, for activities similar to those it financed in the past.

### H. Relationship to A.I.D. Strategy and Other A.I.D. Projects

#### I. A.I.D. Strategy

In 1979, the United States was a co-signatory, along with most of the other nations of the world, to the Declaration of Alma Ata which calls for "Health for all by the year 2000 - principally through the mechanisms of primary health care systems." The overall A.I.D. and ASIA Bureau health strategies are consistent with this Declaration. The A.I.D. Health Policy Paper explicitly identifies Primary Health Care as the Agency's top priority in health. The central core of the Asia Bureau's HPN strategy is "to reduce the birth and death rates among the most vulnerable groups in the context of a system of primary health care". The Bureau's strategy contains an illustrative Primary Health Care package which is designed to achieve this goal. It includes :

- a. early case detection of diarrhea and treatment with oral rehydration;
- b. inoculation of women of childbearing age with tetanus toxoid to prevent neonatal tetanus;
- c. family planning services;
- d. encouragement of breastfeeding and nutrition surveillance;
- e. immunization for measles and DPT; and,
- f. malaria treatment (chloroquine for fever) in the context of primary care, source reduction, and spraying for control.

Except for spraying for malaria control which will be undertaken as part of the A.I.D.-supported Malaria Control II Project, all of these interventions are key elements in the preventive portion of the Primary Health Care Project. Indeed one objective of the Project is to improve the training of paramedical workers in these key areas.

In addition, the A.I.D. strategy for Pakistan has the dual objectives of helping Pakistan to fulfil the basic human needs of its people and to address the country's foreign exchange needs. This Project will achieve both objectives by improving and expanding the health care system so that the rural population will have access to adequate and reliable basic health services and by financing local costs for school construction, Pakistani technical advisors and local commodities with dollars.

## 2. Other A.I.D. Projects

Recent research, both in Pakistan and elsewhere in the developing world, indicates that parents who experience significant changes in the probability of child survival alter their fertility behavior accordingly after a period of time. Therefore, to the extent that the PHC Project achieves its goal of substantially reducing infant and child mortality, this Project should contribute to the fertility reduction goal of A.I.D.'s two population projects in Pakistan. In addition, the direct provision of family planning services by MTs and CHWs, although independent of the Population Welfare Project, will also directly support the overall goal of that Project and will help to offset the short-term impact of declining infant and child mortality.

The PHC Project is also closely related to the Malaria Control II Project. MTs and CHWs will be trained to provide both curative and preventive services down to the village level. The first skills mastered by CHWs will deal with diseases of high prevalence and significant morbidity and mortality. Malaria is one disease with significant morbidity. During the course of the Project, MTs will assume a greater role in treating malaria cases and in taking malaria slides to document or verify cases. It is expected that passive case detection will significantly increase when MTs put their skills into practice. It is anticipated that the CHW, through health education, will promote those public health practices that will result in malaria vector source reduction and that they will assist the MTs in identifying cases that need presumptive treatment. In addition, it is expected that some health workers will receive refresher courses in malaria parasitology at the National Malaria Training Center under the Malaria Control II Project to improve their skills in passive case detection and verification.

## I. Project Rationale

Under the previous A.I.D.-financed Basic Health Services Project, the GOP made significant progress in implementing its Primary Health Care Program. Much still remains to be done, however, in terms of strengthening the existing program, institutionalizing various components of the program, and expanding the provision of adequate basic health services to the rural population of Pakistan. The GOP has specifically requested A.I.D. assistance to build on the accomplishments and to apply the lessons learned under the previous project in implementing its Primary Health Care Program. Given that no other donor plans to support the GOP in this critically important area and that Primary Health Care Programs have been accorded the highest priority in the health sector by the Agency, A.I.D.'s continued involvement in assisting the GOP in the health sector is highly justified. In addition, this Project is important to A.I.D.'s entire development effort in Pakistan since success in all sectors in which A.I.D. will provide assistance, depends, among other things, on a healthy, productive labor force.

In addition to being consistent with the Agency and the ASIA Bureau's health policy, the Project will carry out two of the major objectives of A.I.D.'s strategy in Pakistan, namely, to assist the GOP in meeting the basic human needs of its population and to expand the Government's resource base for local cost financing and thereby help ameliorate the country's balance of payments problems. The project will also support two other important A.I.D. initiatives in the areas of institution-building and technology transfer. As a result of the Project, an effective system of recruiting, training, supervising, deploying and supporting health care workers in the rural areas will have been institutionalized, and the system will be sustainable and replicable throughout the country. The Project also involves the transfer of appropriate educational and medical technology. It will reinforce the concepts of competency-based training and the use of paramedics as primary health care providers which the previous Project introduced. Finally, the Project is designed in such a way that it will not impose an unmanageable burden on the GOP's recurrent cost budget. The targets set are well within the financial, human, and physical means of the Provincial authorities to achieve.

In summary, this Project is feasible and justified and will achieve a measurable improvement in the health status of the rural population of Pakistan.

### III. DETAILED PROJECT DESCRIPTION

#### A. Project Goal and Purpose

The goal of this Project is to improve the health status of the rural population. This will contribute substantially to the Government's overall objective of social and economic development. The Project purpose is to improve the quality and expand the coverage of Primary Health Care services in the rural areas. Measures of goal and purpose achievement by the end of the Project include the following:

1. In areas served by the Project:
  - a. at least a 20 percent reduction in infant and child mortality;
  - b. at least a 20 percent reduction in moderate to severe malnutrition; and,
  - c. at least a 35 percent reduction in deaths due to diarrheal disease;
2. 75 percent of the MTs devoting at least half of their time to training and supervising CHWs;
3. 80 percent of the IRHCs with authorized drugs and medical supplies available;
4. 75 percent of BHUs receiving at least one visit weekly from MT supervisors posted at IRHCs; and,
5. at least 29, 12, 7 and 5 or a total of 53 additional operational IRHCs in the Punjab, NWFP, Sind and Baluchistan, respectively.

Important assumptions for achieving the Project's goal and purpose are that the Provincial Governments will continue to train and deploy MTs and CHWs; that modified management and supervisory practices will be adopted and implemented at the IRHCs; and that adequate amounts of appropriate drugs and medical supplies will be provided to IRHCs.

#### B. Project Outputs

The Project is expected to produce the following outputs which together should achieve the Project purpose:

1. one Federal Advisory Council and four Provincial Steering Committees (one per province) established and functioning effectively;
2. approved annual Provincial operational Primary Health Care plans for each province;

3. a planning and management system for IBHCs implemented with an institutionalized mechanism for continuing analysis and review of the system;
4. a revised MI curriculum and training materials developed and translated into Urdu for MIs and CHWs;
5. all currently deployed MIs and MI tutors retrained in the revised curriculum;
6. each MI deployed by December 1975 training and supervising an average of 10 CHWs;
7. 13 permanent consolidated MI training schools with hostel accommodations constructed or renovated and fully equipped;
8. a simple surveillance system designed and in use to monitor IBHC operations; and,
9. at least 40 percent of all deployed MIs and CHWs are females.

Additional information on the relationships among the Project goal, purpose, inputs, and outputs is provided in the Log Frame (Annex E).

### C. Project Components

The Primary Health Care Project consists of five integrated components: (1) Program Management; (2) Medical Technician and Community Health Worker Training; (3) Program Operations; (4) Research and Evaluation; and, (5) Accelerated Expanded Program of Immunization (EPI).

#### 1. Program Management

The principal management lessons learned from the previous BHS Project were that: (a) effective management and supervision are essential if the Primary Health Care Program is to succeed; (b) the Program needs to be strengthened in these two critical areas; and, (c) the Federal/Provincial division of responsibilities should be taken into account in establishing an effective system of supervision and management. A comprehensive management systems analysis was conducted during the BHS Project. A model operations manual was developed and sanctioned by a national workshop, but it has never been adopted by the Provinces. The reasons for this relate to the facts that the manual was developed in the last year of the previous Project, no management advisors or BHS Cell management staff were available to spearhead this effort, and no one else found the time, in the face of other competing priorities, to move forward on the management operations manual. The Program Management component of this project will address these problems

through: the establishment of newly created Project Advisory Councils at the Federal and Provincial levels to oversee and conduct Project activities; long and short-term technical assistance; and, in-country management training and participant training.

a. Advisory Councils

Project oversight and coordination will be the responsibility of a new Federal Advisory Council. Organization of the Council will be a condition precedent to initial disbursement of funds under the Project, and the Council will function throughout the life of the Project. The Council will be chaired by the Federal Secretary of Health and other members will include: the Director-General of Health (as Vice-Chairman); Chief, Health Section, Planning Division, Federal Ministry of Finance, Planning and Economic Affairs; Joint Secretary, Federal Ministry of Finance, Planning and Economic Affairs; and, the Provincial Secretaries of Health. The Federal Deputy Director-General of Health for Basic Health Services will serve as the permanent Secretary to the Council.

The Council will serve as a forum for Federal and Provincial authorities to discuss program planning and implementation issues. Regular meetings of such a coordinating body are essential to ensure the smooth and timely implementation of the Project. The Council will be responsible for:

- i. recommending the allocation of development funds for the PHC Project;
- ii. reviewing and recommending approval of Provincial PHC development and operations plans;
- iii. ensuring uniformity of standards in the Program and seeing that they conform to Federal health policy; and,
- iv. coordinating and arranging for the participation of appropriate Government officials in Project evaluations.

Provincial PHC Steering Committees will also be formed in each province to coordinate and oversee development of Provincial plans and Project implementation within the province. Each Provincial Project Steering Committee will be chaired by the Provincial Secretary of Health. Other members will include: the Provincial Director for Health Services (Vice-Chairman); Chief, Health Section, Provincial Planning and Development; Additional Secretary, Finance Department; and, representatives from other Provincial

Ministries chosen by the Chairman. The Provincial Deputy Director of Health Services for Basic Health Services will serve as the permanent Secretary to the Committee.

The Provincial Steering Committees will be responsible for the development and approval of Provincial Project development plans. A critical task to be completed before the end of the first Project year will be to draft development plans for the PHC Project in each province for the life of the Project. The plans will include anticipated development budget expenditures for construction of RHCs, BHUs and MT training schools, requirements for and availability of manpower, and estimated operating budgets to support the PHC Project. Approval of Provincial PHC plans will be a condition precedent to continued disbursement of funds for the Accelerated E.P.I. These plans will be submitted to the Federal Advisory Council which must recommend approval. It is anticipated that meetings of the Provincial Steering Committees will serve as a forum for the discussion of, among other things, PHC budgets, and that, as a result, appropriate and defensible budget allocations for PHC will be made.

#### b. Technical Assistance

One long-term expatriate health management advisor will be assigned to the Federal BHS Cell for the 5-year life of the Project. The advisor will work closely with the Federal Deputy Director-General, BHS Cell and with the Assistant Director-General, Operations, when he is hired for the Cell. Filling this latter position will be a condition precedent to disbursement for the Accelerated E.P.I. prior to September 30, 1984. The advisor will supervise four project-financed long-term Pakistani management advisors who will be assigned to Provincial BHS Cells and will be funded for 3 years. All five advisors will serve as resource persons for the Federal Advisory Council and the Provincial Steering Committees. Their primary function will be to assist Federal and Provincial Governments to systematically develop management systems and to conduct a series of Provincial workshops involving participants ranging from Provincial health officials down to Medical Officers who are in charge of IRHCs and supervising MTs. At the end of the three-year period, the GOP will evaluate the impact of these Provincial management advisors on the PHC Program. Depending on the outcome of this assessment, the Provincial Governments have indicated a willingness to consider sanctioning a full-time post in each of the Provincial BHS Cells for a non-medical management operations specialist.

These advisors will be complemented by two short-term management consultants for one month each to assist in the design and conduct of the first national management workshop. The principal counterparts of the long-term management advisors and other officials whom the long-term advisors will assist will receive on-the-job training to develop their knowledge, skills and attitudes related to management analysis, management planning and execution, and evaluation.

#### c. Management Training

One of the most difficult problem areas in rural health services delivery is the establishment of adequate planning, management, and supervisory capability. In Pakistan,

staff with adequate planning and management skills are lacking in the health sector and this has been one of the major constraints in implementing the Basic Health Services Program. Not only are skills absent, but operational plans, policies and procedures need to be strengthened. This is particularly critical for IRHCs, which have a higher ratio of non-professional workers to professional workers than hospitals. IRHCs require greater attention to supervision, performance evaluation and continuing education in order to sustain the quality and productivity of the paraprofessional MTs and voluntary CHWs.

Accordingly, this Project will assist the GOP to strengthen its health planning and management capability through two important activities. The first will be the analysis and redesign of existing management policies, procedures and practices followed by the implementation of recommended improvements for each of the following management support/control systems:

- i. program and operations evaluation and planning;
- ii. supervision and patient referral;
- iii. personnel;
- iv. drug, medical and general supplies;
- v. transportation;
- vi. communications;
- vii. facility and equipment maintenance;
- viii. information; and,
- ix. finance.

The second related activity will be the preparation of new and revised management training curricula, the training of tutors, and the conduct of in-service training programs for existing workers and pre-service training programs for new workers for the following categories of personnel, all of whom play an important role in IRHC activities:

i. Medical Officer Administrators posted at Provincial, Division and District levels. Although these officers often have completed the one year diploma in public health course, which focuses primarily on public health sciences including biostatistics and epidemiology, they normally lack adequate training in operations planning and management.

ii. Medical Officers posted at IRHCs. Unfortunately, Medical Doctors posted at RHCs have had little, if any, exposure to the concepts and practices of rural health services planning and management. There is a need not only to develop

knowledge and skills in this area, but also to develop attitudes that will be conducive to the proper administration of IRHCs and the supervision of MTs.

iii. Supervisory MTs posted at RHCs to supervise other MTs. Currently there is no job description or sanctioned post for these workers.

iv. MTs; and,

v. Management Specialists and Technicians working within the various management support/control systems and directly serving the IRHCs.

The redesign of management policies, procedures and practices and the training of personnel will be done concurrently through three types of training activities: (i) curriculum redesign; (ii) management workshops and courses; and (iii) in-country observational visits and participant training. The general revision of the pre-service MT curriculum will integrate management training appropriate to the operations of the BHUs and similar functions at the RHCs. It will include community relations and the mobilization, training and supervision of CHWs. (Prototype management training modules for adaptation to Pakistan's specific needs are available from AID/Washington's Central Health Office which funded the development, field testing and publishing of these materials.)

As shown in Table 4, a total of 118 management workshops and courses will be conducted over the life of the project.

TABLE 4

PROPOSED NUMBER AND TYPE OF PLANNING  
AND MANAGEMENT WORKSHOPS BY YEAR

<u>Type of Workshop</u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>	<u>Total</u>
1. National PHC Orientation	1	1	1	1	1	5
2. Management Workshops						
National Level	1	1	1	1	1	5
Provincial Level	4	4	4	4	4	20
District Level	12	12	12	12	12	60
3. MT Supervisors						
Preservice	-	2	2	2	2	8
In-service	2	3	4	5	6	20
TOTAL	20	23	24	25	26	118

For Supervisory MTs, two special standardized formal short courses will be developed, including curricula and training and examination materials, and tutors will be trained. One such course will be a two-week session to upgrade managerial and supervisory knowledge and skills of existing MTs functioning as MT supervisors. The other will be a four-week pre-service course for new personnel. Successful completion of this course will entitle the participant to a special certificate and will prepare him/her for advancement in a proposed career ladder system for MTs.

A one-week conference/workshop on orientation to the PHC Project will be held in Islamabad annually to acquaint newly appointed District, Provincial and Federal health officials, who have assumed or will soon assume responsibilities for the PHC Program, with the Project. These workshops will help prevent the problems that arose in the past as a result of turnover in key personnel.

Annual National, Provincial and District Management Workshops will serve two purposes. First, the participants, who will be drawn from all levels of the program, will acquire the knowledge and skills needed to produce operations and project implementation plans and to redesign management support/control systems. They will also acquire general knowledge and skills in communications, management analysis, problem-solving, team functioning and evaluation. The second purpose of these workshops will be to develop Federal and Provincial policies and development and implementation plans for the life of the Project and to redesign provincial management systems for the program. This process is described in detail in Annex I, Proposed Management Plan. It will begin with provincial workshops to be held as early as possible in the first Project year. At these workshops, participants will prepare draft statements of Provincial policy, draft annual and long range plans for the program, and related Project implementation plans. These will provide guidance for the preparation of more detailed District level plans at mid-year workshops. The draft plans will be reviewed at the Provincial level and final Provincial plans will be forwarded for review and approval at a national workshop. In succeeding years the sequence will be the same, but the focus will differ. In the second year, Provincial management support/control systems and procedures covering the nine key areas listed above will be drafted. This work will draw on the management system studies and the draft Operations Manual for IRHCs which were prepared under the previous BHS Project. In the third year, the systems and procedures will be finalized and will be published in the form of operations manuals for BHUs and IRHCs. In the fourth and fifth years, the workshop will continue to serve as a forum to revise plans and management systems, but there will be more focus on training per se.

This group process will involve officials, technicians and others who have vested interest in the program and who will have responsibility for or influence over maintaining the management systems. By doing so, it will minimize resistance to change, promote the selection of actions which are realistic and least difficult to implement, and encourage decentralization of authority, responsibility and functions. In addition to long and short-term technical assistance, the Project will fund all planning and operating costs of conducting the workshops described above, including travel and per diem expenses of workshop participants, special equipment, supplies, training aids, typing, and printing and/or reproduction of papers and reports. The Project will also pay the costs of printing and distributing the IRRC and BHU operations manuals.

In-country observation visits and participant training in the U.S. and third countries will also be financed under the Project. In-country observational trips will be arranged for in-service staff. Model IRHCs that are fully operational and have adequate supervisory, monitoring and logistics capabilities will function as training models. Provincial staff can observe new and innovative practices and apply what they have learned in their own district or province. The Project will also fund all travel and per diem costs for selected officers to attend a variety of courses offered by various management training institutes in Pakistan. These include: the Pakistan Institute of Management in Karachi; the Lahore Institute for Public Administration in Lahore; and the Academy for Rural Development in Peshawar. During the first Project year, the formulation of detailed project implementation plans will include designation of courses and time schedules for the conduct of these training programs and for participant training abroad for management personnel.

## 2. Medical Technician and Community Health Worker Training

The principal MT training lessons learned from the previous project were that: (a) the curriculum, facilities and training materials need to be improved; (b) the general quality of training varies among schools; and, (c) more female students should be recruited. The MT training component of the Project will address these problems through: long and short-term technical assistance; construction of 13 consolidated permanent MT schools; and, in-country training workshops and participant training abroad.

### a. Technical Assistance

MT training will be strengthened through the provision of one long-term expatriate and four female Pakistani Provincial training specialists, for a period of

three years each, and several short-term specialists. Hiring women for the training specialist positions is a key element in the effort to recruit more women into the program. These specialists will ensure that adequate attention is paid to the training of women. They will assist in the recruitment campaign for females, and they will lend support to female MTs (and through them CHWs) deployed in the field. The training advisors will work with appropriate Federal and Provincial health authorities to achieve the following:

i. The MT curriculum will be revised to provide a better balance between curative and preventive components. More emphasis will be given to preventive and community health aspects of training by adding a substantial amount of new material to the community health module, especially in the area of techniques to be transmitted to the CHWs. Information on clinical conditions which are not major health problems will be pared considerably; emphasis will be given to diseases which are important causes of significant morbidity and mortality, such as diarrhea; and a management module will be added.

If the MTs are to function effectively as trainers of CHWs, it must be within a participatory learning process in which the student is the subject not the object of the learning experience. To do this, the MTs themselves should learn in a similar situation. During the curriculum revision exercise, this training philosophy will be re-introduced.

The MT curriculum will be translated into Urdu so the texts will continue to be valuable resources to MTs, most of whom are not fluent in English. Project funds will be used to cover the costs of publication of the revised texts. Revision of the MT curriculum will be accomplished in the first Project year. The Federal BHS Cell will continue to be responsible for development of a standardized curriculum. The long-term training advisor assigned to the Federal Cell and staff of the Cell will be assisted by two consultants (one expatriate and one Pakistani) for six months each who are experts in paramedical curriculum development.

ii. Training Materials. The new curriculum will be based on a more interactive approach to training. Documented experience in the BHS Project indicates that new training aids should be developed to support the curriculum and to improve the training and performance of CHWs. This will be accomplished through a dual purpose training materials workshop.

The desired qualities of the female Provincial training specialists relate more to training experience in the field, their willingness to participate in a program which is based

largely on itinerant workshops and their ability to travel extensively within the provinces. It is not expected that four such women will also be experienced in the proposed new training methodology. Therefore, it will be necessary to train them in the methodology to be used and to involve them in developing new training materials for the revised MT curriculum and a structured training program and training aids for CHWs. This will be done for the selected candidates and for four experienced MT tutors in a three-month special course to be held in Islamabad and conducted by a short-term training expert. During the course, the actual training materials will be developed.

The training materials will be published in Urdu, and CHW materials will be specifically designed so that they can be used to train illiterates. The A.I.D.-financed 1982 evaluation of CHW performance found that illiteracy was not a barrier to effective performance. Further, the study concluded that there almost certainly would not be enough literate candidates to fill the requirements for CHWs, especially female CHWs.

In addition to the above duties, the training advisor and specialists will be continuously involved in helping to design and conduct management and training workshops. They will serve as advisors to the Federal and Provincial Basic Health Services Cells and as resource persons to the Federal Advisory Council and the Provincial Steering Committees. As is the case with the expatriate Management advisor, the expatriate training advisor will work closely with the Federal Deputy Director-General, BHS Cell, and the Assistant Director-General, Training, when he is hired for the Cell. Filling this latter position will be a condition precedent to disbursement for the Accelerated EPI prior to September 30, 1984. In addition, as is the case with the 4 Pakistani management advisors, the Provincial Governments have agreed to consider sanctioning a full-time post in each BHS Cell for a non-medical training specialist based on the outcome of their experience with the Project-financed specialists for 3 years.

#### b. Permanent MT Training Schools

A total of 27 MT training schools were established under the BHS Project. As mentioned previously, 24 are functioning and the 3 in the Sind are expected to resume classes in the fall of 1982. At present, these MT training schools are single rooms attached to existing District hospitals or other types of training institutions. Many tutors are reluctant to be assigned to these posts partly because they do not have basic amenities such as residences. Many schools exist from one 18-month class session to the next, with no guarantee that the subsequent class will be held. Long lapses between classes occur. Hostel facilities for students are seldom provided, which makes recruitment of female students particularly difficult. Male students also find it difficult to secure living accommodations in small District headquarters towns where the schools are located.

Accordingly, Project funds will be used to construct or renovate 13 permanent consolidated MT training schools in areas where schools now exist and where Provincial PHC plans indicate a continuous supply of MTs will be required. These 13 permanent schools will replace the existing 27 ad hoc, inadequate and temporary locations currently used as schools.

The five schools in the Punjab will each have a capacity of 50 male and 50 female students. The other schools, 3 in the Sind, 3 in NWFP and 2 in Baluchistan will each be able to accommodate classes of 25 males and 25 females per class session. Classrooms for males and females will be separate but adjacent, and male and female MTs will share an auditorium and an audio-visual hall. Each school will have separate hostel facilities for the male and female students and faculty quarters. Preliminary designs of the proposed training schools (both for 50 and 100 students) are provided in Annex M. The schools will be located in District towns near or on the grounds of the District hospital. Each school will be supplied with teaching aids, furniture and a light van for every 50 students which will be used to carry students to the field for their community health practicum.

In areas where existing schools are well-situated, Project funds will be provided to remodel classrooms and provide hostels for the students and faculty quarters to make the schools permanent. Training aids will be provided in the first Project year to schools which have been identified for renovation. Construction is expected to start in the second Project year provided that approved Provincial plans reconfirm projected MT manpower requirements. The first graduates of renovated or newly constructed consolidated schools will not be available for service until the fifth Project year.

c. Projected Numbers of Functionals IRHCs, MTs, and CHWs

Evaluations of the previous BHS Project revealed several problems which contributed to the limited achievement in establishing fully operational IRHCs. A fully operational IRHC is defined as one in which: (i) at least 80 percent of the authorized physicians and MTs are in place and working, and at least 10 CHWs have been trained by MTs, deployed, and are being supervised by MTs; (ii) at least 80 percent of the required standard drugs are available at all times; (iii) at least 80 percent of the required standard equipment is on hand and in operating condition; (iv) a functional vehicle is available for ambulance and supervisory services with sufficient funds provided for P.O.L. and routine maintenance services; and, (v) a laboratory is equipped and staffed to do routine examinations of blood, urine, stools, and sputum.

Among the several problems which emerged, those dealing with the deployment of female staff appear to have been the most significant. Female MTs are critical to an IRHC becoming fully functional because male MTs will not be able to

effectively reach female clients and their children who are the primary target groups in the general population. This Project contains a number of elements aimed specifically at recruiting and retaining more females in the PHC Program, including:

i. construction or renovation of 13 consolidated MT training schools with separate classrooms and hostel facilities for women;

ii. special recruitment campaigns in the female secondary schools in all the provinces;

iii. provision of culturally acceptable transport for female MTs; and,

iv. hiring four female Provincial training specialists.

These actions should enable the Project to achieve a target of having 40 percent of all MTs be females. Even if this target is achieved, however, the number of deployed female MTs will still be the limiting factor in determining the number of functional IRHCs that can be established during the life of the Project.

Projected numbers of possible functional IRHCs by the end of the Project were therefore arrived at by estimating the number of female MTs who would be trained and deployed under the Project. The projections were based on three fairly conservative assumptions:

i. that only 80 percent of the female MT students enrolled in the training program would successfully complete the course;

ii. that only 50 percent of the female graduates would accept assignments and be deployed at an IRHC; and,

iii. that there would be an attrition rate of 5 percent after a female MT had served for two years at an IRHC.

The estimates of deployed female MTs were then converted into numbers of functioning IRHCs by year and by province. (Each functional IRHC should have 6 female and 6 male MTs.) The results are shown in Table 5.

Projected numbers of MTs trained and deployed by Project year and province are provided in Annex N. These projections were based on the following assumptions: (i) that all schools will have 100 percent enrollment; (ii) that beginning in 1983, all classes will consist of 50 percent males and 50 percent females; (iii) that 80 percent of the students

TABLE 5

CUMULATIVE NUMBER OF OPERATIONAL IRHCs BY PROJECT YEAR

<u>Province</u>	<u>Project Year</u>					
	<u>1981/82<sup>a/</sup></u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>
Punjab	6	10	15	24	28	35
Sind	3	3	3	5	7	10
NWFP	2	4	5	9	10	14
Baluchistan	1	3	4	5	5	6
<b>Total</b>	<b>12</b>	<b>20</b>	<b>27</b>	<b>43</b>	<b>50</b>	<b>65</b>

a/ The 6 existing IRHCs in the Punjab are fully operational; the remaining 6 are expected to be fully operational shortly.

enrolled will graduate; (iv) that 60 percent of the male graduates and 50 percent of the female graduates will be deployed in the field; (v) that there will be an attrition rate of 5 percent per year for both male and female MTs in all provinces; (vi) that the consolidated permanent schools to be constructed under this Project will be completed and operational in January 1985; (vii) that all MT training programs will last for 18 months; and, (viii) that existing schools will have a 3 month interval between class sessions while the new consolidated permanent schools will begin a new training cycle 2 months after the previous class has completed its 6-month classroom and 6-month in-hospital training sessions. The assumptions regarding numbers of graduates, numbers deployed, and the attrition rate reflect actual experience under the BHS Project.

It is possible that as a result of the improvements programmed to occur under the PHC Project in the training facilities, hostel accommodations, recruitment campaign, curriculum, transport, program management and supervision, and career mobility for MTs, that more MTs than projected will actually graduate, be deployed, and be retained in the PHC Program. Other factors may, however, offset or possibly outweigh these positive changes such that the actual numbers may be

less than projected. The projected numbers of deployed MTs in this paper therefore should be regarded as the likely average numbers of workers. The results for both MTs and CHWs, assuming that each deployed MT will train at least 10 CHWs (5 males and 5 females) are shown in Table 6.

TABLE 6  
PROJECTED NUMBERS OF MEDICAL TECHNICIANS AND COMMUNITY  
HEALTH WORKERS BY THE END OF THE PROJECT

	<u>Male</u>	<u>Female</u>	<u>Total</u>
<b>1. <u>MTs</u></b>			
a. Total Trained and Deployed	804	555	1359
b. MTs Serving at the 65 Functional IRHCs Established by the End of the PHC Project	390	390	780
c. Remaining MTs	414	165	579
d. MTs Serving at Potential Additional IRHCs (27)	162	162	324
e. Remaining MTs Deployed to Health Facilities Other Than IRHCs	252	3	255
<b>2. <u>CHWs</u></b>			
a. Total Trained and Deployed by the End of the Project (9/30/87)	3200	3200	6400
b. Total Trained and Deployed After Last Year MT Graduates have been Deployed and have Trained CHWs	3900	3900	7800

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The projections in Table 6 indicate that 1,359 MTs will have been trained and deployed by the end of the Project. The projected number of 65 fully functional IRHCs by the end of the Project (which includes the 12 existing IRHCs and the 53 to be established under the PHC Project) require only 780 MTs. Of the remaining 579 MTs, only about 165 will be females, which means that only an additional 27 IRHCs (6 female MTs per IRHC) could be formed during the Project. The remaining

male MTs would be posted at health facilities other than IRHCs. This in fact is what has occurred with the existing 325 MTs; only 120 of these are serving at the 12 existing IRHCs while the remainder are posted at other health facilities. Even though a sufficient number of MTs will be trained to staff more IRHCs than the 65 which are projected to be fully operational by the end of the Project, both A.I.D. and the GOP felt that a target of 65 fully operational IRHCs was achievable during the life of the Project and would be a significant accomplishment and well worth the investment. If the target is exceeded, the economic and financial viability of the Project would be even greater than now planned.

d. Training Workshops and Participant Training

Four types of training workshops and programs, including the training materials workshop, will be funded under the Project. A summary of the proposed number and type of training workshops is provided in Table 7, and the workshops are briefly discussed below. More details are provided in Annex J, Proposed Training Plan.

TABLE 7

PROPOSED NUMBER AND TYPE OF TRAINING WORKSHOPS FOR MEDICAL  
TECHNICIANS AND COMMUNITY HEALTH WORKERS BY YEAR

<u>Title</u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>	<u>Total</u>
Training Materials Development 1		-	-	-	-	1
In-Service Training for Tutors 1		2	2	2	2	9
MT Retraining		4	4	-	-	8
In-Service Training for MTs	28	36	50	58	68	240
TOTAL	30	42	56	60	70	258

1. MT tutors, including physicians and MTs, will assume major responsibility for training future MTs over the long run. They should be taught new training methods, should become familiar with the revised curriculum, and should have continuous access to the latest developments in MT training. To orient them to the revised curriculum and new training techniques, they will attend one of nine proposed four-week seminars/workshops which will be offered in the provinces on a rotational basis at the end of a MT class cycle. This

series of workshops will be given throughout the Project to provide continuing in-service training after all of the MT tutors have received their initial training.

ii. Retraining for MTs already working in IRHCs will be provided through eight two-week Community Health/Training Technique Workshops. These workshops, which will be held in the provinces, will provide an introduction to the revised MT curriculum and will upgrade the knowledge and skills of the participants in the areas of community health management and non-formal training techniques. The Provincial training specialists will conduct the workshops.

iii. Continuing in-service training for MTs to expose them to new developments in Primary Health Care and community health will be provided through annual one-week workshops to be held in each province. New material dealing with special health projects which IRHCs will undertake (e.g. special efforts in childhood immunization) and feedback from the annual Project evaluations will also be covered at these workshops. The Provincial training specialists will also conduct these workshops.

iv. Training CHWs will be a continuous process beginning with their recruitment by the MT. The basic training will be initiated during MT visits to the village and will be supplemented by monthly visits to the BHUs where all male or all female CHWs congregate in a one-day training session. This will enable them to become familiar with the BHU and will allow the MT to use group training techniques and new audio visuals more effectively.

As is the case with the management workshops, in addition to long and short-term technical assistance, the Project will fund all planning and operating costs of conducting the training workshops.

Participant training in the U.S. and third countries will be provided throughout the life of the Project. It will include both short courses and observational visits to Primary Health Care projects, such as the Lampang Project in Thailand, that are considered exemplary. The selection of specific management and training personnel and the preparation of specific training plans will be done as part of the formulation of detailed project implementation plans during the first Project year.

### 3. Program Operations

The principal operations lessons learned from the previous Project were that the status, motivation and effectiveness of health workers must be enhanced and that lack of transport is a serious problem which especially

impairs the Program's ability to recruit, train and supervise CHWs. The Program Operations component of the Project will address these problems through: the provision of medical kits; the implementation of a health education/public relations campaign package; and the design and procurement of suitable MT transport.

a. Provision of Medical Kits

Standardized kits, containing simple equipment and supplies, for both CHWs and MTs are in the process of being designed and field-tested in Pakistan by UNICEF. Project funds will be used to conduct further field testing and to refine the design of the kits during the first Project year and will also be used to procure and provide such kits to all existing and new CHWs and MTs in conjunction with their training and deployment to IRHCs.

b. Health Education/Public Relations Campaign

There is a general lack of knowledge and understanding of Primary Health Care among the general population and in the villages served by the Program. This includes a misunderstanding of specific program operations, as well as lack of knowledge of Primary Health Care concepts, principles and methods. An educational program is needed to inform the public, especially the villagers served by the Program, as to the role of the MTs and CHWs and simple, effective, preventive health interventions. To achieve this, Project funds will be used to contract with an appropriate Pakistani institution during the first Project year to design:

- i. a combined health education/public relations campaign with appropriate brochures, posters, visual aids and educational materials for villages;
- ii. a logo for the PHC program;
- iii. appropriate uniforms for both MTs and CHWs; and,
- iv. special identification plates to be mounted on the residences of functioning CHWs.

Upon the approval of the design and product specifications, funds will be provided to procure and supply these items to deployed CHWs and MTs.

c. Suitable MT Transport

There are very few roads in the rural areas in Pakistan that are suitable for public transport vehicles.

Even kucha roads, which can be best described as dusty tracks, cannot be used throughout the year because rains leave them impassable. Little or no maintenance of these tracks is undertaken.

The only transport available at BHUs is one or two bicycles which currently are not used by women. Horse-drawn tongas or carts are not always available and are relatively expensive, but they are usually the only alternative to pedalling or walking through the intense heat or inclement weather. The A.I.D.-financed 1982 health worker evaluation found that the greatest difficulty the MTs appear to have is with transport, not in getting to and from work, but in the performance of their jobs, especially in supervising CHWs. Out of 16 MTs interviewed, 15 claimed to have problems with transport. The solution to this problem is not readily apparent. Any transport would have to be very economical to operate and suitable for women. In an effort to find a solution to this critical problem, during the first Project year, an appropriate Pakistani institution will be contracted to develop, within program, environmental and cultural constraints, the design of an appropriate mode of transport for use by male and female MTs. During the second and subsequent Project years, such transport will be procured and provided to existing MTs and new MTs when they are posted to RHCs and BHUs which are part of IRHCs.

#### 4. Research and Evaluation

With the assistance of consultants, three different types of research and evaluation activities will be undertaken during the life of the Project to provide essential data for program planning and evaluation. They are as follows:

##### a. Baseline and End-of-Project Surveys

A baseline survey of selected indicators (such as the incidence of and mortality from infant diarrhea) of the current health status of areas to be served by IRHCs is essential in order to be able to meaningfully measure the impact of the Project after five years on health conditions. Accordingly, early on in the first Project year, a protocol will be designed and a baseline survey will be conducted either under the direction of two consultants for three months each or by the staff of the newly established WHO Inter-Regional Research Center in Karachi, if it is operational by then. The same contractor will conduct a follow-up survey of the same population sample at the end of the Project. Funds have been set aside for two consultants for two months each to undertake this end-of-project survey. Project funds will also be provided for all local costs for both surveys.

b. Double Round Survey

A special research project called the double round survey will be conducted at mid-project to evaluate the impact of the Project on infant and child mortality. The concept was adopted from a model developed by A.K.M. Chowdry, Cholera Research Laboratory, Dacca, Bangladesh. In the adaptation for this Project, data will be collected during two surveys, six months apart, (the double round) from the same sample. Respondents will consist of a random sample of 1000 females in the reproductive age (14-45 years) having at least one child four years or younger and who believe they are pregnant at the time of the survey. Data collected will cover such variables as: mother's age, gestational age of pregnancy, number of pregnancies, number of living children, age of youngest child, age of next to youngest child, last child dead/alive, age at time of death, cause of death, immunization status of child, and nutritional status. Second round data will indicate pregnancy outcome and provide information regarding young child mortality trends (1-4 years). The sample will be drawn both from areas served by IRHCs as well as those without access to IRHCs. This will make it possible to determine the impact of the PHC Project on the child population. The survey will also measure the effect of the Government's Accelerated EPI Program in those areas surveyed. Project funds will be provided for six months of technical assistance and for all local costs of the survey such as the salaries of field staff and the costs associated with data tabulation and analysis.

c. Recurrent Costs Studies

As mentioned previously in Section I.E.1. (Project Issues) and further discussed in Section V. E. (Financial Analysis), an expansion of the PHC Program, beyond that proposed under the PHC Project, to cover a reasonable proportion of the population will place an enormous burden on the GOP's recurrent budget. Alternative ways of dealing with this problem must be examined as soon as possible. Accordingly, funds will be provided under this Project for one consultant for three months to examine such alternatives as the use of social financing schemes or users fees to help the GOP meet the recurrent costs of its PHC Program. The question of volunteer versus paid CHWs will also be examined including the possible role of Union Councils as a mechanism for mobilizing village resources to pay these workers.

5. Accelerated Expanded Program of Immunization (EPI)

It is currently estimated that about 33 percent of all deaths of children under five are the result of 6 preventable diseases: diphtheria, pertussis, tetanus, poliomyelitis,

tuberculosis, and measles. The Government has been conducting an Expanded Program of Immunization (EPI) with a long-term goal of reducing these diseases by at least 90 percent (by 1990) by vaccinating all children in the country and of eliminating neo-natal tetanus by giving tetanus toxoid to pregnant women. This program is being carried out at a cost of Rs 36 million a year. It is progressing satisfactorily, but program targets have been set too low to achieve the program's goal. Under the current program, only 1 million children are immunized a year. Since about 3.5 million children are born every year, instead of covering the backlog, the problem has continued to grow. In an effort to "catch up", the Government has designed an accelerated health program with a two-year budget of Rs 600 million. The program has three main goals:

a. to immunize 15 million young children over the next two years, to reach a point where only newborns need to be immunized (Accelerated EPI);

b. to provide one trained dai (a traditional midwife) for every village, a target that would require training about 35,000 dais; and,

c. to expand the production (possibly by cottage industries) and use of oral rehydration salts to combat the effects of infant diarrhea.

The goals of the nationwide accelerated program are admirable but very ambitious. There are inherent conflicts between a specialized crash program such as Accelerated EPI and a program such as PHC which seeks to build a sustainable effective system of general health care. Despite this, Accelerated EPI deserves careful, limited A.I.D. support as part of the PHC Project for the following reasons:

a. There is intrinsic merit in supporting a national effort to reduce the terrible toll these diseases now take on Pakistan's children;

b. It is possible to manage the potential conflict in such a way as to make the two efforts not only compatible, but mutually reinforcing. (This issue is discussed in detail in Section V.A., Technical Analysis);

c. A successful EPI program in areas covered by the PHC Project will help gain credibility for MTs and CHWs and enhance their effectiveness by providing them with resources with which to provide services to clients;

d. After the first two years, EPI can have a significant effect on the mortality of young children in villages that will not be served by the PHC Program for some time to come; and,

a. To the extent the accelerated EPI program succeeds, the rate of the resultant fertility reduction will also be accelerated.

Accordingly, the Project will provide \$2 million for vaccines, cold storage equipment needed to preserve the vaccines in the field, a bacterial fermentor to enhance the local production of DPT vaccine and chemicals for the preparation of oral rehydration salts. For those vaccines procured initially, priority will be given to areas now served by IRHCs.

#### IV. IMPLEMENTATION PLAN

##### A. Implementation Schedule

Project activities are programmed to take place over a period of five years from the date the Project Agreement is signed. A proposed implementation schedule is presented in Table 8.

Once the Agreement is signed, the first priority will be to recruit the two long-term expatriate advisors under Personal Services Contracts (PSCs). Recruitment of the 8 Pakistani long-term management and training specialists will take place simultaneously. Both the GOP and A.I.D. will participate in the recruitment process for all long-term advisors. The long-term expatriate advisors will participate in the selection process for the Pakistani specialists if they have arrived in-country prior to the time these specialists are recruited. All ten long-term advisors are expected to be hired by December 1982. Project vehicles which will be used by these advisors will be ordered as soon as the Agreement is signed as will household and office furniture and equipment for the expatriate advisors.

Short-term consultants will be recruited to arrive in early 1983 to undertake the baseline health survey, revise the MT curriculum, and conduct the Development of Training Aids Workshop and the National Management Workshop. It is also expected that by the end of the first Project year, both the Federal Advisory Council and all four Provincial Steering Committees will have met at least once, that the Federal BHS Cell will be fully staffed, and that all four Provincial PHC Project Plans will have been developed and approved by the Federal Advisory Council.

The GOP will contract with a local design institute by December 1982 to design the motorized bicycles for the MTs and other promotional materials. The GOP will also arrange for the printing of the new CHW and MF training materials by the end of the first Project year. Orders will be placed throughout the Project, as the MTs and CHWs are deployed, for the kits, uniforms, motorized bicycles, and nameplates for these workers.

The process of contracting with a local A&E firm for the construction or renovation of the 13 permanent consolidated schools will begin in late 1983, and contracts will be executed with individual construction contractors in early 1984. All 13 schools are expected to be completed and fully operational by January 1985. Orders will be placed for the furniture, training equipment, and vehicles for the schools in 1984 to ensure their arrival prior to the opening of the schools for the first class session.

TABLE B  
PROPOSED IMPLEMENTATION SCHEDULE

PRIMARY HEALTH CARE (301-0475)

ACTIVITY	1982			1983			1984			1985			1986			1987		
	S	O	N	S	O	N	S	O	N	S	O	N	S	O	N	S	O	N
1. Project Agreement Signed	X																	
2. Technical Assistance																		
a. Long-Term																		
i. Expatriate Management Advisor(1)																		
ii. Expatriate Training Advisor(1)																		
iii. Public Health Management Specialists(4)																		
iv. Pediatric Training Specialists(4)																		
b. Short-Term																		
i. National Management Workshop (2 mo)																		
ii. Training Area Development (3 mo)																		
iii. Curriculum Revision (2nd mo)																		
iv. Baseline Survey (2x2 mo)																		
v. Follow-up Survey (2x2 mo)																		
vi. Recurrent Cost Study (3 mo)																		
vii. Baseline Survey (2x2 mo)																		
viii. Evaluation (2x2 mo)																		
3. Construction of 10 Schools																		
a. All Firm Construction																		
b. Actual Construction																		
4. Training (for Training Plan)																		
5. Major Institute Contract																		
6. Immediate Procurement																		
a. Project Staff Vehicles	X																	
b. Household and Office Equipment	X																	
c. 10 Motorbikes																		
d. 10 Preliminary Materials																		
e. 10 Training School Equipment and Furniture	X																	
f. 10 Training School Vehicles																		
g. Training Supplies																		
h. Acceleration EPI Committees																		
7. Evaluation																		
a. Expatriate Workshop (1 mo.)																		
b. Terminal Evaluation (2 mo.)																		

X - Orders Placed      E - Equipment  
 O - Orders Received    F - Furniture

Best Available Document

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Training activities are expected to take place throughout the life of the Project and these are outlined in the Proposed Training Plan in Section IV.D. Evaluation workshops will be held in September of each year in 1983 - 1986, and the terminal impact evaluation will take place in July-August 1987.

## B. Administrative and Monitoring Arrangements

### 1. A.I.D. Responsibilities

The USAID/Pakistan Office of Health, Population, and Nutrition (HPN) will assume overall responsibility for managing the Project. This Office, which is currently staffed with 3 U.S. Direct-Hire and 3 FSN professionals, will be expanded by the addition of 1 FSN professional in FY 1982. One of the 3 FSN professionals is a Pakistani public health physician who will work closely with Government officials and other HPN staff in achieving the objectives of the Project as they relate, in particular, to the recruitment, deployment, training, and retention of female health workers. The Office of HPN will work closely with and relate directly to the expatriate LT management and training advisors who will be located in the Federal BHS Cell. The Office will relate to the 4 Pakistani management and 4 Pakistani training specialists located in the Provincial BHS Cells through the 2 long-term expatriate advisors who will supervise the Provincial specialists.

The Mission's Office of Energy and Engineering (E&E) will assist HPN in monitoring the architectural and engineering (A&E) and construction contracts for the construction and renovation of the 13 consolidated permanent MT training schools. The Office of E&E, which currently consists of 2 U.S. Direct-Hire and 9 FSN professionals will shortly be expanded by the addition of 1 U.S. Direct-Hire and 1 FSN professional. The Office of Project Development and Monitoring (PDM), which currently consists of 3 U.S. Direct-Hire and 2 Pakistani professionals will assist HPN in all contracting and procurement actions under the Project. This Office will shortly be expanded by the addition of 2 U.S. Direct-Hire, 1 of whom will be a contracts and procurement officer, and 2 FSN professionals. HPN will also call on the services of AID/Washington to assist in the selection of short-term consultants under the Project. In addition, the Regional Contracts Officer and the Regional Commodity Management Advisor may be called upon from time to time to assist the Mission to implement this Project.

Specific A.I.D. responsibilities will include the following: (a) contracting with all expatriate and Pakistani long-term and short-term consultants; (b) procuring project-financed off-highway vehicles and commodities as shown in Table 10; (c) contracting

with a Pakistani architectural and engineering (A&E) firm to design and supervise the construction or renovation of MT training schools; (d) contracting with Pakistani firm(s) to construct or renovate the schools; (e) financing all costs of in-country training workshops, the translation and printing of training materials, and research studies; (f) arranging for short-term training in the U.S. and other countries for selected participants; and, (g) providing sufficient staff to participate in the scheduled Project evaluations and to liaise with appropriate Federal and Provincial Government agencies in the implementation of this Project.

Staff resources are considered adequate to handle USAID/Pakistan's administrative and monitoring responsibilities under the Project.

## 2. GOP Responsibilities

### a. Federal Level

The Federal Basic Health Services (BHS) Cell of the Federal Ministry of Health and Social Welfare will be the overall GOP Coordinator for the Project. This Cell, which is currently staffed with a Deputy Director-General, BHS, and an Education Advisor, will be expanded by the addition of an Assistant Director-General, Operations, and an Assistant Director-General, Training within the first year of the Project. This Cell will be responsible for overall day-to-day Project management, supervision, and evaluation and will work closely with the Provincial Health Departments under the policy direction of the Federal Advisory Council. Specific responsibilities of the Federal BHS Cell will include the following: (a) preparing a plan of operations for the life of the Project; (b) establishing and convening meetings of the Federal Advisory Council for the Project with its Deputy Director-General serving as permanent secretary to the Council; (c) ensuring that adequate counterparts are in place for all long-term and short-term consultants provided under the Project; (d) coordinating all in-country training workshops and seminars; (e) contracting in the first Project year with an appropriate Pakistani firm to design appropriate transport for MTs, visual training aids, other training materials and MT and CHW promotional materials; (f) distributing Project-financed equipment, furniture and training supplies to the provinces; (g) arranging, coordinating, and participating in Project evaluations and Project-financed research activities; and, (h) ensuring that uniform standards are maintained at all MT training schools with respect to recruitment and the curriculum.

**b. Provincial Level**

In each province, the Secretary Health and the Director Health Services will have overall responsibility for Project implementation and will provide policy and operational guidelines to the Provincial BHS Cells established within the Directorate of Health Services or Health Secretariat. The Provincial BHS Cells will be responsible for the day-to-day implementation of activities under this Project. Specific responsibilities of each Provincial BHS Cell shall include the following: (a) constructing RHC and BHUs and operating IRHCs; (b) preparing annual provincial plans for the Project; (c) establishing Provincial Steering Committees for the Project with its Director serving as permanent secretary to the Committee; (d) operating, supervising, and evaluating MT schools; (e) expediting the final qualifying examinations of MTs by Provincial medical faculties; (f) creating posts for newly graduated MTs and arranging for their immediate deployment; (g) training, monitoring and evaluating CHWs; (h) developing management and operational rules and regulations for IRHCs; (i) organizing Provincial workshops and seminars; (j) nominating and releasing Provincial health personnel for the various management and training workshops held over the life of the Project; and, (k) providing staff to participate in Project evaluations and research activities.

## C. Procurement Plan

### 1. Technical Assistance

The Project will finance a total of 424 person-months of technical assistance, consisting of 384 person-months of long-term and 40 person-months of short-term assistance. A proposed technical assistance plan is provided in Table 9. The long-term assistance will consist of one expatriate management advisor for 60 person-months (a 36-month contract with the option to renew for 24 additional months); one expatriate training advisor for 36 person-months; and, four Pakistani training and four Pakistani management specialists, each for 36 person-months. The long-term expatriate consultants will be contracted directly by A.I.D. under Personal Services Contracts (PSCs). The long-term Pakistani consultants will be contracted under PSCs by a local service contractor already under contract with USAID/Pakistan. This latter firm will provide administrative and logistic support to the long-term Pakistani advisors such as processing of vouchers for reimbursable expenses and salary.

Short-term technical assistance will be provided in the following areas: (a) two persons for 1 month each in 1983 to conduct a management workshop; (b) 1 person for 3 months in 1983 to conduct a training materials development workshop; (c) 1 Pakistani and 1 expatriate consultant for 6 months each in 1983 to assist in the revision of the MT curriculum; (d) 2 persons for 3 months each in 1983 to undertake the baseline health survey; (e) 2 persons for 2 months each in 1987 to conduct the follow-up health survey; (f) 1 person for 3 months in 1983 to conduct a recurrent costs study; (g) 1 person for 6 months (2 visits of 3 months each) in 1984 to conduct the double round survey; and, (h) 2 persons for 2 months each in 1987 to participate in the final Project evaluation. All these consultants will be contracted directly by A.I.D. under either PSCs, RSSAs, or IQCs.

A.I.D. will contract directly with a competitively selected local architectural and engineering firm to design and supervise the construction or renovation of the 13 consolidated permanent MT training schools. A.I.D. will also contract directly with the competitively selected local construction contractors of which it is estimated there will be 4 to 6 firms. The GOP will enter into a host country contract with a competitively selected local design institute to undertake the various activities planned under the Program Operations component such as the design of MT and CHW uniforms and transport, training aids and training materials, and the health education/promotion campaign.

TABLE 9

PROPOSED TECHNICAL ASSISTANCE PLAN

<u>Project Component</u>	<u>Nature of Assistance</u>	<u>Person-Months</u>	<u>Type of Contract</u>	<u>Proposed Schedule</u>
Program Management	Expatriate Management Advisor(1)	60	PSC	1982-1987
	Pakistani Management Specialists(4)	36 each	PSC	1982-1985
	Management Workshop Trainers(2)	1 each	PSC or IQC	1983
NT and CM Training	Expatriate Training Advisor(1)	36	PSC	1982-1985
	Pakistani Training Specialists(4)	36 each	PSC	1982-1985
	Training Materials Workshop Trainers (1)	3	PSC or IQC	1983
	Expatriate Curriculum Specialist(1)	6	PSC	1983
	Pakistani Curriculum Specialist(1)	6	PSC	1983
	Pakistani A&E Firm (1)	18	Institutional	1983-1985
	Pakistani Construction Contractors (4-6)	6	Institutional	1984-1985
Program Operations	Pakistani Design Firms (1-2)	6	Institutional	1982-1983
Research and Evaluation	Baseline Survey Researchers(2)	3 each	PSC, IQC or RSSA	1983
	Follow-up Survey Researchers(2)	2 each	PSC, IQC or RSSA	1987
	Double Round Survey Researcher (1)	6 <sup>b/</sup>	PSC, IQC or RSSA	1984
	Recurrent Cost Specialist(1)	3	PSC or IQC	1982
	Evaluators (2)	2	PSC, IQC or RSSA	1987

<sup>a/</sup> All contracts will be direct A.I.D. contracts with the exception of: the 4 Pakistani management specialists and the 4 Pakistani training specialists, who will be hired by a Pakistani firm already under a service contract with USAID/Pakistan; and, the institutional contract(s) with 1 or 2 Pakistani design firm(s) which will be a host country contract(s).

<sup>b/</sup> 2 visits of 3 months each.

As indicated above, with the exception of the contracts with the local design institute and the 8 long-term Pakistani management and training specialists, all technical assistance will be contracted directly by A.I.D. in accordance with A.I.D. procedures for direct contracting. Due to difficulties with host country contracting under the previous BHS Project, the Mission has determined that it is in the best interests of the Project for A.I.D. to undertake the majority of contracting directly.

## 2. Commodities

Funds will be provided under the Project to procure the following commodities: (a) vehicles for the long-term consultants and for the 13 consolidated schools; (b) motorized bicycles for deployed MTs; (c) kits and uniforms for deployed MTs and CHWs and nameplates for deployed CHWs; (d) training equipment and supplies and classroom, office and hostel furniture for the 13 consolidated MT Schools; (e) household furniture and appliances for the expatriate advisors; (f) printing and related costs for the production of IRHC and BHU operations manuals; curricula and training materials and training aids in Urdu for MTs and CHWs; promotional materials for the proposed health education/public relations campaign; and materials and supplies in support of all the planned in-country workshops and seminars; (g) furniture and equipment for the Project Office and the BHS Cells; and, (h) vaccines, cold storage equipment to preserve the vaccines, a bacterial fermentor to enhance the local production of DPT vaccine, and chemicals for the preparation of oral rehydration salts. A proposed commodity procurement plan is shown in Table 10.

USAID/Pakistan will procure the following commodities off-shore in accordance with A.I.D. procurement policies and procedures: the vehicles for the consultants and the schools; film projectors, cassette players, and other training equipment for the schools; household and office equipment for the advisors and BHS Cells; and the bacterial fermentor for DPT vaccine. With the exception of the vehicles, all these commodities will be procured in the U.S. A source/origin waiver request to procure 18 right-hand drive vehicles is contained in Annex G.1. The GOP will procure the vaccines and oral rehydration salts through UNICEF and the cold storage equipment through WHO as has been done in the past. Source/origin waivers may be required for these procurement transactions and will be sought if necessary. The remaining commodities, all of which have their source and origin in Pakistan will be procured either directly by USAID/Pakistan or by the GOP as shown in Table 10.

TABLE 10

PROPOSED COMMODITY PROCUREMENT PLAN

Category	Quantity	Nature of Commodity	Source	Method of Procurement	Order Placed
A. <u>Vehicles</u>	10	RHD Diesel Pick-Up Trucks	Japan	A.I.D.	1982
	18 <sup>a/</sup>	RHD Diesel 12-Passenger Vans	Japan	A.I.D.	1984
	780	Motorized Bicycles	Pakistan	A.I.D.	100 in 1983 300 in 1984 380 in 1985
B. <u>Program Operations</u>	780	MT Kits	Pakistan	A.I.D.	100 in 1983 300 in 1984 380 in 1985
	780	MT Uniforms	Pakistan	A.I.D.	100 in 1983 300 in 1984 380 in 1985
	7800	CHW Kits	Pakistan	A.I.D.	300 in 1983 500 in 1984 2000 in 1985 2000 in 1986 3000 in 1987
	7800	CHW Uniforms	Pakistan	A.I.D.	300 in 1983 500 in 1984 2000 in 1985 2000 in 1986 3000 in 1987
	7800	CHW Nameplates	Pakistan	A.I.D.	300 in 1983 500 in 1984 2000 in 1985 2000 in 1986 3000 in 1987
	7800	CHW Nameplates	Pakistan	A.I.D.	300 in 1983 500 in 1984 2000 in 1985 2000 in 1986 3000 in 1987

<sup>a/</sup> All 5 of the MT training schools in the Punjab will have a capacity of 100 students each while the remaining 8 will each accommodate 50 students. The 5 larger schools will be assigned two vehicles each and twice the number of sets of furniture and training equipment as the smaller schools.

**TABLE 10**  
**PROPOSED COMMODITY PROCUREMENT PLAN**  
(Continued)

Category	Quantity	Nature of Commodity	Source	Method of Procurement	Order Placed
<u>C. Furniture for MT Schools</u> <sup>a/</sup>	10 sets	100 Student Capacity Schools	Pakistan	A.I.D.	1984
	10 sets	100 Student Capacity Hostels	Pakistan	A.I.D.	1984
	8 sets	50 Student Capacity Schools	Pakistan	A.I.D.	1984
	8 sets	50 Student Capacity Hostels	Pakistan	A.I.D.	1984
<u>D. Training Equipment for MT Schools</u> <sup>a/</sup>	18	16 mm Movie Projectors	U.S.	A.I.D.	9 in 1983 9 in 1984
	18	Overhead Projectors	U.S.	A.I.D.	9 in 1983 9 in 1984
	18	35 mm Slide Projectors	U.S.	A.I.D.	9 in 1983 9 in 1984
	320	Battery-Operated Slide Projectors	U.S.	A.I.D.	50 in 1982 80 in 1983 90 in 1984 100 in 1985
	320	Cassette Players	U.S.	A.I.D.	50 in 1982 80 in 1983 90 in 1984 100 in 1985
	<u>E. Household Furniture/ Appliances for LT Expatriate Advisors</u>	2 sets	Furniture	Pakistan	A.I.D.
2 sets		Appliances	U.S.	A.I.D.	1982

<sup>a/</sup> All 5 of the MT training schools in the Punjab will have a capacity of 100 students each while the remaining 8 will each accommodate 50 students. The 5 larger schools will be assigned two vehicles each and twice the number of sets of furniture and training equipment as the smaller schools.

TABLE 10

PROPOSED COMMODITY PROCUREMENT PLAN  
(Continued)

Category	Quantity	Nature of Commodity	Source	Method of Procurement	Order Placed
F. <u>Support for Workshops/Seminars/Training</u>	-	Printing of Training Materials/Supplies	Pakistan	H.C.	1982-1987
	-	Operations Manuals	Pakistan	H.C.	1983
	-	MT and CHW Curricula	Pakistan	H.C.	1983
	-	Health Education/Promotional Materials	Pakistan	H.C.	1983-1984
G. <u>Furniture and Equipment for Project Office and BRS Cells</u>	-	Project Office Furniture and Supplies	Pakistan	A.I.D.	1982
	-	Project Office Equipment	U.S.	A.I.D.	1982
	-	Typewriters for BRS Cells	U.S.	A.I.D.	1982
H. <u>Accelerated EPI</u>	-	Vaccines	Through UNICEF	H.C.	1982-1987
	-	Cold Storage Equipment for Vaccines	Through WHO	H.C.	1982-1987
	-	Bacterial Fermentor for DPT Vaccine	U.S.	A.I.D.	1982-1987
	-	Chemicals for the Preparation of Oral Rehydration Salts	Through UNICEF	H.C.	1982-1987

#### D. Training Plan

Three categories of training will be financed under this Project: (a) U.S. short-term training; (b) Third country short-term training; and, (b) in-country seminars/workshops and observational visits.

A proposed training plan is provided in Table 11. Primary emphasis will be given to in-country training activities. Annexes I and J provide additional details on the objectives and nature of the proposed in-country management and training programs. The Project-financed long-term and short-term consultants will assist Federal and Provincial health authorities in organizing and conducting these training programs throughout the country. A significant feature of the in-country training program will be inter-Provincial observational visits by all levels of health staff to model IRHCs. This particular element of the training program is designed to create an active dialogue among Provincial staff and to encourage an exchange of ideas. It will also help to standardize procedures throughout the country in the PHC Program.

Short-term training and observational visits to Third countries are planned throughout the life of the Project. Visits by Pakistani health staff to exemplary PHC Projects in other parts of the world such as the Lampang Project in Thailand will facilitate the exchange of ideas and the application of lessons learned from similar programs in other countries. Participant training financed by A.I.D. under this Project shall be only in countries included in A.I.D. Geographic Code 901 (Limited Free World).

In addition to the training described in Table 11, training of MTs in 18-month courses and of CHWs at BHUs and in their villages will take place throughout the life of the Project.

#### E. Evaluation Plan

##### 1. Research

As discussed in Section III, Project Components, several research activities will be financed under this Project. These include a baseline and follow-up end-of-project health survey on the prevalence and morbidity and mortality associated with various diseases and a double round survey at mid-project to examine the impact of the health delivery services provided by MTs and CHWs on neonatal mortality, malnutrition and the immunization status of children under five years of age. These three survey activities will provide important data to measure program effectiveness, and the results of these surveys will

**TABLE 11**  
**PROPOSED TRAINING PLAN**

Type of Training	Length of Training	No. of Participants	Categories of Participants	Proposed Schedule
<b>A. <u>U.S. Short-Term</u></b> Health Management and Training Courses	12 weeks	30	Senior health managers and trainers.	6 participants each in 1983-1987
<b>B. <u>Third Country Short-Term</u></b>				
1. Health Management and Training Courses	4 weeks	50	Senior health managers and trainers	10 participants each in 1983-1987
2. Observational Visits	2 weeks	100	Senior health managers and trainers	20 participants each in 1983-1987
<b>C. <u>In-Country Training</u></b>				
1. Training Materials Development Workshop	12 weeks	8	4 LT Pakistani Trainers and 4 MT Tutors	1 course in 1983
2. National Management Workshop	2 weeks	300	Supervisory MTs, DHOs, ADHOs, MTs, MOs at RHCs, Med. Supts.	1 course of 60 participants each in each year 1983-1987
3. Provincial Planning and Management Workshops	1 week	800	MOs and MTs at RHCs, DHOs, ADHOs, Division Level Health Officers, BHS Cell staff, MOH functional area staff	1 course of 40 participants in each province in each year 1983-1987
4. District Level Management Workshop	1 week	1200	MOs at RHCs, DHOs, ADHOs, Supervisory MTs	1 course of 20 participants in 12 districts in each year 1983-1987

**TABLE 11**

**PROPOSED TRAINING PLAN  
(Continued)**

Type of Training	Length of Training	Total No. of Workshops	No. of Participants	Categories of Participants	Proposed Schedule
5. National PHC Orientation Workshop	1 week	5	150	MOs, DHOs, and other PHC officials.	1 course of 25-30 participants each in each year 1983-1987
6. In-Service Training for Tutors	4 weeks	9	180	Tutors of MT Training Schools.	1 course of 15-20 participants each in each province on rotational basis as follows: 1 in 1983; 2 each in 1984-1987
7. Supervision Management Skills (for new MT Supervisors)	4 weeks	8	150	New MT Supervisors	1 course of 15-25 participants each in each province in alternate years 1984-1987
8. MT Retraining Workshops	2 weeks	8	200	Existing MTs	Total of 8 courses of up to 25 participants each in 1984 and 1985
9. In-Service Training for MT Supervisors	2 weeks	20	400	MT Supervisors	Total of 20 courses of up to 25 participants each; sites and number of courses each year should be based on number of in-service MT Supervisors
10. In-Service Training for MTs	1 week	240	4000	MTs working at BHUs	Total of 240 courses of up to 20 participants each to be held at IRHCs; number of workshops each year will be based on the number of in-service MTs
11. Community Health Knowledge and Skills Workshop				To be conducted informally by CHWs whom they supervise.	MTs at BHUs for 1983-1987

**TABLE 11**  
**PROPOSED TRAINING PLAN**  
 (Continued)

Type of Training	Length of Training	Total No. of H. shon	No. of Participants	Categories of Participants	Proposed Schedule
12. Project Evaluation Workshops	1 week	5	100	Senior Federal and Provincial Health Officials and Project Staff	1 course of 20 participants in each year 1983-1987
13. Observational Visits	1 week	-	245	15 DNOs, 20 Trainers, 6 Project Directors, 1 Directors HS, and 4 Health Secretaries	Total of 49 officials each year

be used as one of the several sources of information on which the Project evaluations will be based. In addition, the recurrent cost studies which will be financed under this Project and the management information system at IRHCs which will be strengthened and institutionalized under the Project will also generate useful data for evaluation purposes.

## 2. Annual Evaluation Workshops

At the end of each of the first four years of the Project, a one-week formative evaluation workshop will be held in accordance with criteria which will be set forth by A.I.D. in Project Implementation Letters (PILs). The workshops will involve officials from both the Federal and Provincial BHS Cells, other key MOH officials involved in the PHC Program, the expatriate and Pakistani management and training advisors, and representatives of A.I.D., WHO, and UNICEF. The purpose of these evaluation workshops will be to: review progress achieved during the preceding year in meeting targets; identify possible problem areas and recommend solutions and any necessary changes in program plans for the succeeding years; and to revise if necessary program targets, the proposed implementation schedule, and the Project budget. Results of these workshops will be conveyed to other staff members of the PHC program during the numerous in-service training workshops which are planned to take place over the life of the Project. The results of the workshops will also be reported to the Federal Advisory Council which will be responsible for determining, on the basis of the evaluation workshop findings, what if any policy changes should be adopted and transmitted to the provinces.

## 3. Terminal Evaluation

In 1987, a comprehensive terminal Project impact evaluation will be undertaken involving representatives of the GOP, A.I.D., WHO, and UNICEF, and two Project-financed external consultants for two months each. This evaluation will assess the success of the Project in achieving its goal and purpose and in meeting its targeted outputs. The effectiveness of the Federal Advisory Council and the Provincial Steering Committees in performing their intended role will be assessed and recommendations will be made as to whether these bodies should continue to function even after the termination of the Project. The adequacy of staffing in the Federal and Provincial BHS Cells will also be examined and recommendations made as to the future staffing needs of these entities if the PHC Program is to be expanded.

Actual experience with the recruitment, training, deployment, and retention of female health workers, in particular MTs and CHWs, will be closely examined, lessons learned will be identified, and recommendations proposed to accelerate and increase the efficiency of the process of female recruitment. The evaluation team will also review the experience with all the in-country management and training programs and make recommendations as to the minimum type and number of such programs which should be institutionalized and conducted on a regular basis as part of the overall PHC Program.

In addition to assessing the impact of the Project on health status and health conditions, worker performance at all levels of the health system as well as attitudes of the general population and health workers will be examined in an attempt to evaluate the impact of the health education/promotional activities and the comprehensive management systems improvement Project component. Finally, the evaluation team will also review the recurrent cost implications of the Program, examine experience to date with alternative financing schemes, and make sound recommendations to the GOP as to the most viable alternatives available to the GOP to meet the recurrent costs of an expanded PHC Program.

## V. PROJECT ANALYSES

### A. Technical Analysis

#### 1. Accelerated EPI and the PHC Project

Under the GOP's Sixth Five-Year Plan, PFY 1983/87, expansion of PHC Program in the rural areas will be one of the areas of the principal thrust in the health sector. However, recognizing the time required to build a permanent PHC system, the GOP has singled out, for immediate action, three interventions designed to have the greatest impact on infant and maternal morbidity and mortality: immunization, control of diarrheal disease, and trained midwives. Over the next two years, PFY 1982/83 to PFY 1984/85, the GOP plans to immunize all children under five, to promote oral rehydration treatment for diarrheal diseases, and to attempt to deploy a trained dai (a traditional birth attendant) in every village. The immunization portion of this program is called the Accelerated Expanded Program of Immunization (EPI).

The "crash program" approach is designed to achieve a measurable and significant health impact within a short period of time. For example, immunization of all children under five is expected to result in a significant reduction in infant morbidity and mortality. Such an approach has often been employed during epidemics of such diseases as smallpox and malaria and has proven successful in eradicating one disease (smallpox) and containing or preventing other major public health problems. However, its utility in addressing long-term recurring problems such as diarrheal disease, the risks associated with pregnancy and delivery, and childhood diseases is limited. The limitations of the approach relate to the following:

a. The effects of such a program are short-lived. Because provision cannot be made in such a short time frame to institutionalize the process, the sustainability of the program, after the initial phase, is questionable.

b. The nature of the specific health problems to be addressed in the crash program require continued input by the health sector. A dai trained and deployed must be provided with continuing education courses, must be adequately supervised, and should have access to necessary supplies and a referral system in order to function effectively. Her presence alone will not ensure that adequate care will be given to expectant mothers. The dai needs to function as part of a health team and an efficient system of health care which she can draw upon to support her work. Similarly, the health system must be organized in such a way that it

can respond to the continued need for immunizations and treatment of diarrheal disease, both of which require that adequate numbers of sufficiently trained health personnel and equipment and supplies are available to respond to these recurring problems.

c. The nature of the specific health problems to be addressed in the crash program also require continued and considerable cooperation by the population. A health education campaign, which takes time, complemented by interpersonal communication provided by health workers on a day-to-day basis, is essential to ensure that the population will seek appropriate medical care once the crash program has ended. This is particularly the case in the second and third rounds of vaccinations.

d. Crash programs require a high level of managerial skills as evidenced by the successful smallpox program. However, these skills are different from those required for the day-to-day smooth and efficient functioning of an IRHC. And the skills required for the latter take time to transfer and to be incorporated into the daily routine of health workers.

e. It is difficult to integrate activities into the general health program when they have started as vertical programs. This also applies to specialized workers who, as in the case of smallpox workers in Pakistan, were never fully absorbed into the health system. And vertical programs almost invariably turn out to be more costly and less efficient in terms of the delivery of care than is true for an integrated health care approach.

f. Crash programs tend to be expensive. When such programs deal with diseases which cannot be eradicated, as is the case in this instance, they may not prove to be cost-effective since the infrastructure to sustain the activity after the initial large investment will not have been established.

By providing support to both the GOP's crash program and its PHC Program, this Project is intended to harmonize the two approaches and maximize the chances of success of both programs. The Project will assist in building the necessary infrastructure, developing the essential managerial and supervisory capability, deploying skilled health manpower, and promoting community participation and cooperation which are the essential ingredients for a truly effective PHC Program. It is expected that by the time the two year Accelerated EPI is completed, the training and managerial inputs needed to make IRHCs fully operational will be in place. Under the Project, MTs will undergo an intensive 18-month training program which will cover not only the

three components targeted under the Accelerated Program, but also nutrition, family planning, sanitation, clean water, and other health problems resulting in high morbidity like malaria. It is expected that the MT - CHW team working out of IRHCs will be able to foster community participation in the Accelerated Program and increase the likelihood that the effects of the Program will be sustained. In the presence of the inputs to be provided under the A.I.D.-supported PHC Project, the long-term sustainability and cost-effectiveness of the Accelerated Program should increase.

## 2. Technical Assistance

The PHC Project is designed to address management and training deficiencies identified under the previous BHS Project. Because the actual provision of health care is a provincial responsibility, emphasis in this Project will be directed primarily at the provincial level. Technical assistance will be provided for both the Federal and Provincial Basic Health Services Cells. One long-term expatriate training specialist and one long-term expatriate management specialist will work directly with the Federal BHS Cell. Pakistani specialists outside of the Government civil service, will assist Provincial BHS Cells to strengthen training and management at that level. Female Pakistanis will be hired to serve as the Provincial training specialists because the Project emphasizes improved health status for mothers and children. In order to truly impact on this segment of society, these specialists must be able to effectively work with female MTs and CHWs. Numerous workshops in the field will be geared to improving the training and supervision of these workers. While women will be able to supervise the training of male MTs and CHWs, because of cultural constraints, only a woman will be able to effectively work closely with female MTs and CHWs in the villages.

The female training specialists will also act as a role model for the MT/CHW team. They will provide an additional resource to promote the activities of the Project and will seek innovative ways to increase participation of women at all levels of the PHC Program. At the end of three years, the Provincial governments will evaluate the effect of the training specialists and decide whether to create a sanctioned post for this position.

The Provincial management advisors will be hired for three years to provide management input to the Provincial BHS Cells. The male Pakistani management advisors will have previous management experience in business or might possibly be retired army officers with logistic and managerial experience. They will be thoroughly oriented to PHC.

They will work for the Director of the BHS Cell and receive supervision from him and the LT management advisor. At the end of three years, Provincial governments will evaluate the input of the management advisors and decide whether to create a sanctioned post for a non-medical management officer.

Ideally, it would have been preferable to use Government employees to perform the services of trainers and management specialists. However, during the previous Project, Provincial governments did not perceive the need to sanction these posts and in fact they were never created. Some seven years after the start of the previous Project, major problems with training and management still need to be addressed. It is anticipated that the value of these personnel will be readily apparent during the Project and that, as a result, Provincial authorities will be motivated to create these posts.

### 3. Construction

Under the Project, 13 consolidated permanent medical technician training schools with residences for the teaching staff and hostels for the students will be constructed or renovated. The number of schools has been determined in consultation with Provincial officials based on estimates of manpower needs for IRHCs. Construction cost estimates are provided in Annex O and are judged to be reasonable and technically sound. A Pakistani architectural and engineering (A & E) firm will prepare the design and contract specifications, assist in evaluation of construction bids and supervise the construction. Previous A.I.D. experience with the flood rehabilitation program in the mid-1970's indicates that this can be done successfully. Under that program, schools were built throughout widely dispersed areas in the Indus basin. Although the construction was not done under a direct A.I.D. contract (it was done under a Fixed Amount Reimbursement procedure), supervision was successfully carried out by Pakistani A & E firms under contract with A.I.D. The construction contracts under this Project will be awarded directly by A.I.D. to several Pakistani firms. A part-time expatriate PSC engineer, experienced in A.I.D. construction, will oversee the entire activity.

### 4. MT Transport

The need to make the MT mobile in order to facilitate training and supervision is readily apparent. What is not so evident is how to provide a culturally acceptable mode of transport for female workers which is also fuel efficient. To address this problem, a host country contract

will be executed with a Pakistani institution to develop an appropriate, fuel-efficient mode of transport for both male and female MTs. It is likely that the vehicle will be a motorized bicycle, but whatever is designed will be field tested in all provinces for acceptability and durability.

#### 5. Summary

This Project is judged to be technically feasible and sound. The Project design provides appropriate and sufficient technical assistance and training to develop the capability of host country institutions to apply the new technologies to be introduced under this Project.

## B. Administrative Analysis

Government health services in developing countries are traditionally weak in administrative capability, and Pakistan is no exception. The previous A.I.D. Project attempted to address this major problem and began a gradual process of creating awareness of management problems, including poorly functioning management support control systems, and how they could be resolved. The National Management Workshop in Primary Health Care, held in September 1980 acknowledged the need to give special attention to strengthening administrative capability of the Government health sector. It was acclaimed as a benchmark by health leaders, including the Federal Secretary of Health. The proposed Project, building on the accomplishments of the previous Project, will carry management development work forward over the next five years.

Authority and responsibility for Project direction are assigned to the Director of the Federal Basic Health Services Cell (Deputy Director-General of Health, Grade 19), which position, in the past, has provided national oversight for project development work in this program area. Grade (or rank) within the public service system of Pakistan is a highly respected and enforced collection of protocols inherited from the colonial era - much like a military chain of command with a rigid set of rules and procedures by which ranked officers interrelate. The Federal BHS Cell has experienced considerable difficulty in providing national leadership for development efforts within Provincial Governments, because counterpart officials at the Provincial level are either of a higher grade (Secretaries and Directors), or of the same grade (Director of Provincial BHS Cells) as the head of the Federal BHS Cell. This has presented continuing problems in program development oversight, both in planning and executing national policies, including implementing nationwide standards. The problem of relative grade levels of medical officer administrators is a long-standing one, and there does not appear to be a solution in sight. A partial solution to this difficulty is the creation of the proposed Federal Advisory Council. The Deputy Director-General of the Federal BHS Cell, as permanent secretary to the Council, will be acting with implicit authority of the Council, and consequently should command more influence.

In addition to planning and oversight at the Federal level, the Federal BHS Cell is assigned responsibility to assist with and to directly perform a variety of project implementation activities. The proposed revision of the standardized national curriculum for MTs and CHWs and related training guidelines, materials and evaluation practices is a key responsibility of this Cell. Similar leadership in the development of related Primary Health Care education programs

and management infrastructure development must be provided by this Cell. There has been a continuing problem in staffing the Cell with appropriately qualified and motivated personnel who understand the concepts of Primary Health Care and who are capable of adequately performing development work on a day-to-day basis. Consequently, as a condition precedent of the proposed Project, the Federal Ministry of Health is being asked to give special attention to the full and appropriate staffing of the Cell, and the Project provides interim assistance in the form of technical advisors.

Provincial BHS Cells have not assumed the leadership role intended, due to delays in authorizing operating funds and staff and difficulties encountered in assigning appropriately qualified and motivated Medical Officers to these Cells. Such assignments are viewed as less than optimum by qualified Medical Officers, because other posts provide greater benefits in the form of increased autonomy (e.g. DHOs posted in rural areas) and freedom to develop a private medical practice (including related financial benefits); and because the Provincial Cell posts offer no increased pay or grade (Grade 19). It is only the unusually dedicated Medical Officer who serves willingly in such a post.

Within the Government health sector, senior administrative positions are always filled with Medical Officers (medical doctors). Because there has been a continuing resistance to employing non-medical planning and management specialists, none exist. The proposed Project will provide interim technical advisors to each Provincial Cell who are intended to be non-medical specialists in the fields of training and management. This should lead to the eventual permanent staffing of these Cells with similarly qualified people, to establish the precedent of utilizing non-doctors in administrative posts. Since Medical Officers have not been interested in being posted to the Provincial and Federal BHS Cells, there should be little or no opposition to this approach.

Much of the difficulty in obtaining increased annual operating expenses for the BHS Program, as the program has expanded its coverage of the rural population, has been the inability of Provincial Departments of Health to adequately plan, justify, and administer their programs to the satisfaction of Provincial Departments of Finance who authorize the operating (revenue) budgets. The Provincial Departments of Health have been relatively weak in administrative capability, with corresponding credibility problems with other Government Offices such as Finance and Personnel. The proposed Project, while attempting to set an example for future use of non-doctors in administrative posts, will provide training to existing medical doctor administrators in project and program management, including management analysis, management planning, supervision and evaluation in order to address this problem.

Actual field implementation of rural health services, including the PHC Project, rests with District Health Officers (DHOs) who are usually community and public health oriented. DHOs directly supervise RHCs and IRHCs. They often lack the administrative capability to perform their jobs effectively, and they may lack the necessary funds to cover operating costs including P.O.L., supplies and other non-salary costs. This is attributable to problems of planning, justifying budgets and credibility of the Departments of Health as discussed above. DHOs often need training in administration and supervision although they may have graduate level training in public health. The proposed Project will provide various types of assistance in strengthening the administrative capability of District Health Officers to oversee the operations of expanding numbers of IRHCs.

At Rural Health Centers, which serve as the administrative apex of IRHCs, Medical Officers usually lack administrative interests and skills. And they often are transitional people in early career, whose inclination is for further medical specialization or movement to urban areas where amenities for their families, including education, are better. The proposed Project, while providing training in management to Medical Officers posted at RHCs and supervising IRHCs, continues to support the posting of 2 MTs (male and female) at every RHC to assume responsibility for helping with supervision of MTs posted at outlying BHUs, and to generally assist with the work activity, planning, and day-to-day administration of IRHCs. In addition, special job-oriented competency-based training in administration and supervision to improve their management skills and practices will be provided.

At the further periphery of the Primary Health Care delivery system, MTs are expected to mobilize, train and provide continuing guidance and support to CHWs. They will work with various management support/control systems such as ordering supplies and maintenance. The proposed Project will further strengthen the knowledge, skills and attitudes of MTs through revision of training curriculum to include these critical areas.

On the basis of the foregoing, the proposed Project will serve to significantly strengthen the administrative capability of Project implementation agencies and is therefore deemed administratively feasible.

## C. Social Soundness Analysis

### 1. Socio-Cultural Feasibility

Socio-cultural feasibility must be viewed from the perspective of Pakistan's population as both beneficiaries or users of the health system as well as providers or workers within the system. In so doing, attention must be paid to the role and status of women, since health care for women and children under five must be emphasized in order to achieve maximum impact on the health status of the population. Since tradition and culture place special constraints upon the behavior of women, provision of health care for this group under the Project involves special considerations from the socio-cultural perspective.

#### a. Existing Social Landscape

Pakistan contains a wide variety of ethnic groups, incorporating not only the indigenous population of the Indus watershed, but also refugees coming from India after partition in 1947. Each of the four major regions of the country is dominated by an ethnic group distinguished by a separate language: Punjabis in the Punjab, Pathans in the Frontier, Sindhis in the Sind and Baluchis in Baluchistan. In addition, there are groups who do not form a majority anywhere, such as Jatts and Lasis in the Sind, and Brahuīs in the Sind and Baluchistan. The people of the mountainous northern areas, which have been historically isolated both from the plains and from each other, belong to a number of diverse ethnic groups, often with distinct customs of their own. Approximately 95 percent of the population of the country as a whole is Muslim, a factor which tends somewhat to mitigate the ethnic differentiation.

Tribes, caste and language are important factors in social classification. The Pathans and Baluchis are organized on the basis of tribe and lineage. In the Punjab and Sind, however, caste is more important as a distinguishing feature. The main classification in the Punjab is between agricultural castes and occupational or service castes. The Sind is more diverse than the other provinces; the Sindhis themselves are divided into a great number of geographical, tribal, caste and occupational groups. There are large groups of Baluchis and Brahuīs, and approximately one sixth of the people are refugees from India.

Although about 72 percent of the population is rural and about 55 percent of the work force is employed in agriculture, agriculture accounts for only 30 percent of GDP. With a current national per capita income of the equivalent of \$307, it is apparent that the rural population is poor, and it is only partially integrated into the cash economy.

Police and revenue functions are carried out on a circle rather than village level and intra-village affairs are managed on an informal basis and along considerations of kinship, caste and social class. The significant organizational units involved in village-level activities are: (i) the family; (ii) the biraderi or lineage; and, (iii) the zat (quom) or caste. The system as a whole is hierarchical, with authority vested in older people generally and especially in men and wealthy farmers. Women are expected to defer to the authority of their male relatives, and, among families who can afford it, they observe purdah or seclusion within the home. Among poorer groups, women associate mainly with other women and are supposed to avoid social contact with men who are not relatives. Even for serious health problems, women often cannot obtain permission from their husbands to seek assistance from male health providers.

Decision-making and economic cooperation are primarily functions of the lineage. Within a village, different lineages perform separate economic functions. Village politics may be viewed as a process of alliance and faction formation among lineages. A village council, known as the panchayat or jirgah exists, and consists of the heads of lineages but its power is limited and is mainly confined to the settlement of disputes.

Zats are ranked social groups composed of lineages. They function in the organization of marriage and marking of social status, and membership is determined by birth. Some zats, mainly those of artisans, are occupational groups. As zats are distributed on a regional basis, they constitute a source of inter-village social, economic and political linkages.

Zat classifications overlap with and are sometimes parallel to distinctions in socio-economic class, such as those between landlord/tenant, small farmer/merchant, or landholder/artisan. For members of the lower classes, access to resources is in varying degrees mediated through upper class, educated, politically and economically powerful landlords.

In addition to these traditional groupings, there is an effective system of local councils which was started in 1959 and now operates under a revised law passed in 1979. The basic structure of local councils is a District Council at the District level and Union Council at the community level (8,000 - 15,000). Baluchistan and the Sind have retained the Tehsil/Taluka Councils, and the Punjab has established a (non-statutory) Council at the level of the Markaz (the administrative unit of the former Integrated Rural Development Program), but the most significant levels, as before, are the District and Union Councils.

Election to Councils is by adult franchise. Special provisions have been made for the representation of peasants, workers, women, and minorities. Under the law, no one may run for office as the candidate of a political party in a council election. All members are elected (i.e., there are no official or nominated members), and the Chairman of a council is elected from among its membership. There is provision for a vote of no-confidence against the Chairman. The Union Councils have the capacity to establish special tax districts (i.e., a specific tax or rate to pay for strictly localized benefits). However, Councils may also use general revenue for this purpose if they choose.

b. Perception of Project Benefits by Participants

Participants in this case are both the users or beneficiaries of PHC services and the workers or providers within the PHC delivery system. In order to gain some understanding of the way in which beneficiaries may be expected to perceive the system, it is necessary to understand their health problems, their concepts of disease causation and cure, and their current mode of relieving suffering and pain.

During an anthropological study in early 1976, Pakistani women questioned in rural dispensaries indicated that they rely on a number of sources to meet their health care needs which range from gynecological problems, malaria, diarrhea, anemia, upper respiratory infections and scabies, to typhoid. The women consult a wide range of medical specialists, both allopathic and indigenous, including lady doctors, male doctors,<sup>5/</sup> dais, hakims, homeopathic physicians, other indigenous medical specialists, and religious specialists providing medical care. The factors that determined the specific practitioner utilized were based on perceived skill and experience of the practitioner, attitude expressed by the practitioner toward the patient, tangible results from the medicines prescribed, and the accessibility of a service. Given the past practice of women's use of allopathic practitioners if skilled, accessible, and capable of providing effective medications, this demonstrates the need and value of extending the rural health care network.

In addition to the users of health care services, the other participants in the health care system are the workers i.e. the MTs and CHWs. CHWs consists of both males and females of all ages although the average CHW is in his/her thirties or forties. Literacy is likely to be low especially among

5/ Male doctors are usually consulted only for general (i.e. non-gynecological) illness, generally of a fairly serious nature or on behalf of one's children.

the women. Nevertheless, their position among their fellow villagers is likely to be well-established. Many belong to service castes like the traditional birth attendant (TBA) with whom the villagers have a long-standing relationship of mutual obligation and economic exchange. They are more likely to come from the lower social sections of the population.

The majority of the MTs are young people in their twenties and thirties. From past experience, male mid-level workers conform more closely to Pakistan's cultural norms, and tend to experience little difficulty in relating to the community in carrying out their duties. In the past, female MTs have tended to be single and posted away from their homes. In order to have female MTs who are working more in harmony with the existing cultural norms, efforts will be made to recruit women and then post them after training to RHCs or BHUs near their home village.

It is anticipated that the communities' perceptions will shift over the life of the Project. As stated above, villagers seek medical services from those in whom they have the most confidence and with whom they feel the most comfortable. As the MTs and CHWs establish themselves and develop favorable reputations, utilization rates are expected to increase. Furthermore, as it becomes known throughout the villages that the CHWs can provide effective backup services through the referral system and MT and physician supervision, they should develop a reputation for providing better service.

Assuming the continued existence of parallel allopathic and indigenous systems, it is expected that villagers will continue to use both systems. This may be especially true in the case of emotional disorders where the personalistic services of the hakim are especially valued. However, it is anticipated that the improvements in the availability of skilled and effective staff, adequate supplies of drugs and better location of rural facilities will increasingly draw villagers to the allopathic system. Existing low utilization rates are due to the lack of staff, drugs, and referral care. In summary, if the system of IRHCs can furnish the essential elements of a health care system that have heretofore been lacking and prove itself to the community, the IRHCs will be increasingly utilized.

### c. Cultural Obstacles

The Project will not in any sense threaten the social organization of rural Pakistani village life. Nonetheless, there are some potential cultural obstacles to successful project implementation which have been given

serious attention in designing the Project. One is the issue of the interface between existing medical practitioners and the CHWs and MTs to be trained and deployed.

The use of indigenous practitioners by the population is traditional and therefore familiar and acceptable. The newly introduced PHC service offered through the allopathic system will have to prove itself. Attitudes toward allopathic medical personnel among rural people are mixed and not always positive. Because they are urban based and use alien symbols such as the white coat and the stethoscope, they are frequently perceived as foreign. However, although allopathic medicine is sometimes costly and inaccessible, it is on occasion also perceived as more effective than indigenous medical systems in the rural areas. Also, unlike hakims, allopaths do not profess a strong religious orientation and their services have not been as personalistic. However, paramedical personnel of rural origin are expected to show more humanistic tendencies toward those in their own community than is the case with sophisticated doctors of urban origin. Because the CHWs will be chosen by and with the consent of the communities in which they will serve, they will be familiar to their clients and will have a long-standing personal relationship with the community. By virtue of this familiarity, the CHWs should in turn facilitate use of the services of the MTs to whom their patients will be referred.

There is evidence that this is already happening. The A.I.D.-financed worker evaluation conducted in February 1982 found that, in general, the attitudes expressed by the community toward the PHC system and its workers were positive. The villagers claimed to use the services of the health workers, stated that they preferred the health system workers' services to those of traditional health providers (i.e. hakims/dais), and expressed satisfaction with the help that the MTs and CHWs have provided, although, at this point, they perceive the workers in the system as primarily providers of curative medicine.

The major potential cultural obstacle to project implementation is to be found in the purdah system. While considerable attention has been given in the preceding section to the health status of rural women and to their treatment seeking behavior, little mention has been made of the way in which working conditions for women need to be structured to facilitate their performance as providers of health services. Existing female workers particularly at the MT level face serious problems from the cultural standpoint in terms of age, marital status and work place vs. home place. Most of these workers are young, unmarried, and working in districts other than their native ones, posing

serious cultural pressures on them and no doubt diminishing their effectiveness and sense of well-being in their jobs. Efforts must be made to remedy this situation by trying to recruit older, married women and to ensure that women are posted to their native districts. It is expected that these problems will be alleviated somewhat as the training of new workers continues and the pool of talent expands.

#### d. Communications Strategy

Finally, in order to maximize project success in overcoming cultural barriers to implementation, communications with the target population (aimed primarily at rural women and children) is considered a critical element of this Project. CHWs (male or female villagers) trained within five miles of their homes, will be the change agents who can best convey messages to their neighbors. They will receive training from the mid-level worker in preventive and simple curative care which they can explain in the context of the village idiom. They are in a position to bridge the gap between the Government health system and the village social system in communicating health messages. Thus, the key to good communications in this Project is the use of villagers themselves as change agents who concentrate first on diseases with high prevalence and mortality/morbidity (where they can be expected to have the most dramatic results) in order to maximize their impact.

### 2. Diffusion of the Project

This program has national scope with parallel diffusion expected with implementation of the IRHCs. Each province will proceed at its own pace in accordance with a timetable that has taken into account all the administrative, cultural and operational constraints. Supported by a communications campaign with some health education focused nationally and some selectively directed at target areas, the workers should be able to encourage adoption of new health practices which do not entail radical life style changes.

#### a. Leadership/Authority

Within the villages, the recruitment of CHWs will be aided by village leaders, using leaders from within the Union Council as a focal point to stimulate the selection process. This plus community awareness of the jobs of the CHW through the communications strategy should maximize the acceptability of the worker. Thus the CHW strategy builds on the strengths of village leadership/authority structures.

### b. Patterns of Mobility

The Project takes into account the limited physical mobility of the secluded village woman and attempts to support her with home visits by female CHWs who live within the same village. The MTs, who also will live and work close to Project beneficiaries, will provide the supervision and training of these workers. The social structure of rural Pakistan limits social mobility as well as physical mobility. The social gap between villagers and urban-born, high status doctors is large. By training villagers as CHWs and rural-based people as MTs, this social gap should be narrowed, with the result that the diffusion process should be greatly increased.

### 3. Beneficiaries

The primary direct beneficiaries of this Project will be approximately 3,250,000 rural people (including about 500,000 children under the age of 5) who will have access for the first time to simple effective, modern health care. Millions more people will be similarly served as the program continues to expand after A.I.D. inputs terminate. In addition to generally improved health and well-being, the project has the specific goals for children of significant reductions in: (a) infant and child mortality; (b) moderate and severe malnutrition; and, (c) deaths due to diarrheal disease.

Other direct beneficiaries will be the persons who will be trained as MTs with modern training methods and the CHWs whom they, in turn, will train. Selected government officials and technicians will also benefit from in-country training and short-term training abroad.

### 4. Summary

By extending health care services to the village, the Project will impact favorably on the social factors that affect access and utilization of health care by the rural population, particularly women and children. Through the use of CHWs and a strengthened referral network, the social prohibitions and barriers that affect patterns of utilization of health facilities should be broken down, and people will be more likely to use such facilities. All Project activities are therefore considered socially feasible and acceptable.

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#### D. Economic Analysis

Analyses of the economic returns of improved health services yield imprecise results.<sup>6/</sup> Because the causal relationship between efforts to improve health status and socio-economic development is not well understood and is difficult to quantify, a traditional cost/benefit analysis to evaluate the economic feasibility of this Project is not appropriate. However, the potential qualitative benefits of the Project can be examined and are discussed below. A unit cost analysis of the Project is also presented, which draws on the data in Section V.E., Financial Analysis.

##### 1. Benefits

For this Project, the most direct set of potential benefits is the increased consumer satisfaction (i.e. welfare) derived from being healthier. The objectively verifiable indicators at the goal level of the logical framework define the changes in health status that the Project proposes to achieve. These changes include reduced morbidity, mortality, and fertility rates.

A second set of benefits would arise if improved health status leads to increased output due to more productive workers. The causal relationship between improved health and increased output is not well established and can vary from one society to another. If healthier and thus more efficient workers continue to devote the same amount of time to productive labor, total output in the economy should increase. A similar result is obtained to the extent that workers would lose fewer working hours related to illness, even if productivity does not rise. However, it has been demonstrated that in rural societies improved work potential may be translated into leisure, if workers choose to produce the same output in less time. Alternatively, increased underemployment may result if more people desire work but can't obtain it. It is generally accepted that there is widespread underemployment in rural Pakistan with labor scarcity occurring only during brief periods of the year. As a result, there is no hard evidence to indicate that a reduction in morbidity of the type anticipated under this Project is likely to increase output through increased work effort or an increase in work days at the micro-economic level. However, the reduction in morbidity and mortality of the under-five age group should contribute, in the long run, to a decline in population growth rates which should ultimately contribute to higher per capita income. The resulting macro-economic effects on savings and investment levels, dependency ratios, and other variables should improve Pakistan's long run growth potential.

<sup>6/</sup> For example, see Petrich, Ernest E. Briefing Paper: Health and Economic Development., Health Manpower Development Staff, School of Medicine, University of Hawaii, Honolulu, November 1981.

A third set of benefits arises if an improved health system serves as a nation-building program that raises development potential by improving the motivation and attitude of the general population. The value of this set of benefits, no matter how vaguely defined, should not be dismissed lightly for Pakistan. Malenbaum, in his pioneering article on the subject, makes a strong argument for the possibility that there is an important link between health services and output which is not directly related to output derived from a more efficient work force.<sup>7/</sup> That is, a health measure can produce economic gains without or before improving health. The argument is that basic attitudinal changes can occur as health services are improved. For example, as people feel the society has increased its control over the environment, through control over disease, it may become easier to motivate increased work effort.

## 2. Costs

Even though benefits cannot be quantified, it is useful to analyze the unit costs of the Project for comparison with the subjective benefits and the costs of alternative health delivery systems. Accurate unit costs of health care are not available either for the health system generally or for the PHC Program. Moreover, data relating to manpower inputs are either fragmentary or rough estimates. As a result, any forecast of unit costs for this Project will necessarily be approximate.

A useful method of estimating unit costs is one which includes total direct costs and amortizes costs for facilities and training. Such estimates are shown in Table 12. It is important to note that the estimates are very sensitive to the assumptions regarding the clientele served and the cost of drugs. (Drugs comprise 45 percent of the operating costs of an IRHC). The assumption in Table 12 that an IRHC serves 50,000 persons is the average used throughout this paper. The assumption regarding the number of patient visits is based on actual experience in PFY 1981/82 at the IRHC at Lalamusa in the Punjab. In PFY 1980/81, the IRHC at Lalamusa had an average of 27 patient visits per day per BHU. This number increased to an average of 70 per day in PFY 1981/82 as a result of an increase in the budget for drugs. To be conservative, the latter figure was used as the basis for the assumption on patient visits used in Table 12, although it is almost certain that a further increase in drug budgets would result in a concomitant increase in patient visits. (The potential extent of this increase, and the level of visits for which even further budget increases would be required, will be analyzed as part of the study of recurrent costs to be conducted as part of this Project.)

7/ Malenbaum, Wilfred "Health and Productivity in Poor Areas" Empirical Studies in Health Economics, Johns Hopkins Press 1970.

TABLE 12

ESTIMATED UNIT COSTS FOR THE  
PRIMARY HEALTH CARE PROJECT <sup>a/</sup>

(In Constant 1982 Rupees)

Cost Component	Average Cost	
	Per Person Served Per Year	Per Patient Visit
<u>Operating Costs</u>		
Total Direct Operating Costs of IRHC	16.00	7.88
MT/CHW Equipment <sup>b/</sup>	.58	.29
Initial MT Training <sup>c/</sup>	.05	.02
Refresher MT Training	.76	.37
Sub-Total	17.39	8.56
<u>Facility Costs</u> <sup>d/</sup>		
IRHCs	3.47	1.71
MT Training Schools	.01	<sup>e/</sup>
Sub-Total	3.48	1.71
Total Unit Costs	<u>20.87</u>	<u>10.27</u>

SOURCE: USAID/Pakistan Estimates

<sup>a/</sup> Calculations are based on the following assumptions :

- (i) an average of 50,000 persons is served by an IRHC; and
- (ii) the average IRHC has 101,000 patient visits per year or 350 per working day. In addition, costs, which are set forth in Section V.E., Financial Analysis, do not include overhead costs incurred above the level of the IRHC.

<sup>b/</sup> Amortised over 10 years

<sup>c/</sup> Amortised over 10 years (i.e. 5% attrition for deployed MTs)

<sup>d/</sup> Amortised at 30 years for buildings and 10 years for furniture and equipment.

<sup>e/</sup> Less than .01

The total cost per person served of Rs 20.87 per year appears to be a relatively small price for the targeted reductions in morbidity, mortality, and malnutrition and the anticipated subsequent decline in fertility. It also appears reasonable in the context of a per capita GNP of Rs 3000 and an average total public and private per capita expenditure for health of about Rs 40 per year. (While there is very limited comparability between the figures and to some degree they overlap, if one assumes that the existing government health system serves the whole urban population and 5 percent of the rural population, the total government recurrent costs are Rs 36.55 per person served.)

There is very little data available on the unit operating costs of other Government health facilities. The GOP Planning Division estimates that, as of December 1975, the average direct cost per out-patient visit at district headquarters hospitals was Rs 5.66. This is equivalent to Rs 8.44 per visit in 1982 prices, slightly more than the projected direct costs of Rs 7.98 per patient visit at an IRHC. If these costs were adjusted to equate drug costs per patient visit, the difference would be greater, since the projected drug costs per patient visit at an IRHC are higher than those currently being incurred in district hospitals.

In summary, the projected unit costs for an IRHC are commensurate with the expected benefits, and they compare favorably with other means of health care delivery in Pakistan.

## E. Financial Analysis

### 1. General

This Project provides funds to support the implementation of the GOP's PHC Program. As shown in Table 13, the entire cost of the Project over the next five years is estimated at \$ 55,750,000. This amount does not include the estimated \$1,130,000 which is likely to be provided by WHO and UNICEF during the five year period for related activities which are not directly a part of this Project. Similarly, the total estimated costs of the GOP's Accelerated EPI and other accelerated health care interventions which will take place during this period and which will be borne by the GOP and other donors, are not reflected in total Project costs. Only the \$2,000,000 contribution of A.I.D. to this effort is included.

The total GOP contribution to the Project over the five year period is estimated at \$35,750,000 or 64 percent of the total cost of the Project while A.I.D.'s contribution of \$20,000,000 constitutes 36 percent of Project costs. The proposed obligation schedule for the A.I.D. grant is as follows: \$5,500,000 in FY 1982; 0 in FY 1983; \$8,200,000 in FY 1984; and, \$6,300,000 in FY 1985.

Three summary tables are provided on the following pages: Table 14 summarizes project costs by expense category and source of funding; Table 15 describes project costs by project component, expense category, and source of funding; and, Table 16 provides a summary of A.I.D. funding by foreign exchange and local costs by expense category and fiscal year.

### 2. Summary Cost Estimates and Financial Plan

#### a. A.I.D. Contribution

The A.I.D. dollar grant will finance: construction (27 percent); commodities (24 percent); training (20 percent); technical assistance (14 percent); and, other costs (1 percent) with the remaining 14 percent for contingency. A.I.D. will finance with dollar funds the international travel costs of all participant training up to and including one year. Annex G contains a justification, signed by the USAID/Pakistan Mission Director which waives the requirement for the host country to cover these costs.

The allocation of A.I.D. funds by project component is as follows: 46 percent for training; 19 percent for program management; 10 percent for the Accelerated EPI; 8 percent for program operations; and, 3 percent for research and evaluation

TABLE 13

SUMMARY OF PROJECT COSTS<sup>a/</sup> BY FISCAL  
YEAR AND SOURCE OF FUNDING  
( In \$ 000)

Source of Funding	Fiscal Year					Total
	1982	1983	1984	1985	1986	
A.I.D. Dollar Grant	5,500	-	8,200	6,300	-	20,000
G.O.P. <sup>b/</sup>	3,700	5,964	8,474	6,777	10,835	35,750
Total	9,200	5,964	16,674	13,077	10,935	55,750

a/ A.I.D. Dollar Grant Project costs are defined as anticipated obligations of funds. Costs exclude \$1,130,000 which is likely to be provided by WHO and UNICEF for related activities which are not directly a part of this Project. Also excluded are the total estimated costs of the Accelerated EPI and other accelerated health care interventions which will be borne by the GOP and other donors. Only the \$2,000,000 to be provided by A.I.D. in support of this effort is included.

b/ Expressed as dollar equivalents at the exchange rate of U.S. \$1.00=Rs 12.16 as of July 18, 1982.

TABLE 14

AMOUNT IN MILLION DOLLARS OF FEDERAL  
CATEGORY AND SOURCE OF FUNDS  
(IN \$ '000)

Expense Category	Life of Project Funding			
	A.I.B. Dollar Loans			GDP
	FA	LC	Total	
<b>I. FEDERAL ASSISTANCE</b>				
a. Short-Term	320	173	493	-
b. Long-Term	900	1,000	2,368	-
Sub-Total	1,220	1,173	2,393	-
<b>II. FINANCING</b>				
a. U.S. Short Term	600	90	690	-
b. Third Country Short-Term	410	270	680	-
c. Co-Country	-	2,000	2,000	1,000
Sub-Total	910	2,360	3,270	1,000
<b>III. COMMITMENT</b>				
a. Utilities	337	400	737	-
b. Accelerated LPI	2,000	-	2,000	-
c. Other	167	1,777	1,944	2,000
Sub-Total	2,504	2,177	4,681	2,000
<b>IV. CONSTRUCTION</b>				
a. NY Schools and Hospitals	10	1,300	1,400	-
b. LIME	-	-	-	22,000
Sub-Total	10	1,300	1,400	22,000
<b>V. OTHER COSTS</b>				
a. Research and Evaluation	-	210	210	-
b. Operational Costs	-	13	13	4,100
Sub-Total	-	223	223	4,100
<b>Total</b>	<b>4,726</b>	<b>12,470</b>	<b>17,196</b>	<b>26,100</b>
<b>Total</b>	<b>4,726</b>	<b>12,470</b>	<b>17,196</b>	<b>26,100</b>
<b>Contingency</b>	<b>700</b>	<b>2,070</b>	<b>2,770</b>	<b>-</b>
<b>Grand Total</b>	<b>5,426</b>	<b>14,540</b>	<b>19,966</b>	<b>26,100</b>

1/ A.I.B. Dollar Loan Project costs are defined as anticipated sub-obligations or commitments of funding through, e.g., PIDs, contracts or purchase orders.

2/ Inflation = 100 FA salaries, 700 all other FA costs and 200 total costs, all assumed annually.

3/ Expressed as dollar equivalents at the exchange rate of 20 \$1.00 to 12.10 as of July 10, 1965.

4/ The GDP's total contribution for the Accelerated LPI and other accelerated health care activities over the 5 year life of the project, which is estimated at the equivalent of about 100 million (less the contributions of other donors), has not been included in calculating the GDP contribution to this Project.

TABLE 15

SUMMARY OF PROJECT COSTS BY PROJECT COMPONENT,  
EXPENSE CATEGORY AND SOURCE OF FUNDING  
(In \$ 000)

Project Component <sup>b/</sup>	Type of Project Funding			
	A.I.U. Dollar Grant			GOP <sup>c/</sup>
	FX	LC	Total	
<b>1. Program Management</b>				
a. Technical Assistance	628	894	1,522	-
b. Training	459	1,755	2,214	-
c. Commodities	56	20	76	-
d. Other	-	2	2	-
Sub-Total	1,147	2,667	3,814	-
<b>2. HT and CM Training</b>				
a. Technical Assistance	403	573	976	-
b. Training	459	1,290	1,749	5,095
c. Commodities	444	644	1,088	-
d. Construction	60	5,393	5,453	-
Sub-Total	1,356	7,900	9,256	5,095
<b>3. Program Operations</b>				
a. Commodities	-	1,562	1,562	3,400
b. Construction	-	-	-	22,660
c. Other	-	11	11	4,195
Sub-Total	-	1,573	1,573	20,655
<b>4. Research &amp; Evaluation</b>				
a. Technical Assistance	233	125	358	-
b. Other	-	214	214	-
Sub-Total	233	339	572	-
<b>5. Accelerated PI</b>				
Commodities	2,000	-	2,000	- <sup>d/</sup>
Sub-Total	2,000	-	2,000	- <sup>d/</sup>
<b>Total</b>	<b>4,736</b>	<b>15,479</b>	<b>17,215</b>	<b>35,750</b>
Contingency	766	2,019	2,785	-
<b>Grand-Total</b>	<b>5,502</b>	<b>14,498</b>	<b>20,000</b>	<b>35,750</b>

a/ A.I.U. Dollar Grant Project costs are defined as anticipated sub-obligations or commitments of funding through, e.g. PIOS, contracts or purchase orders.

b/ Inflation = 10% FX salaries, 15% all other FX costs and 20% local costs, all compounded annually.

c/ FX, expressed as dollar equivalents at the exchange rate of US \$1.00 = Rs 12.16 as of July 14, 1982.

d/ The GOP's total contribution for the Accelerated PI and other accelerated health care activities over the 5 year life of the Project, which is estimated at the equivalent of about \$50 million (less the contributions of other donors), has not been included in calculating the GOP contribution to this Project.

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TABLE 16

SUMMARY OF A.I.D. FUNDING BY FOREIGN EXCHANGE AND LOCAL COSTS, EXPENSE CATEGORY, AND FISCAL YEAR  
(In \$ 000)

Expense Category	FISCAL YEAR									
	1982		1983		1984		1985		Total	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
<b>1. Technical Assistance</b>										
a. Short-Term	169	81	-	-	60	29	96	63	325	173
b. Long-Term	655	1,112	-	-	-	-	294	297	949	1,409
Sub-Total	824	1,193	-	-	60	29	390	360	1,274	1,582
<b>2. Training</b>										
a. U.S. Short-Term	167	27	-	-	96	14	247	47	500	92
b. Third Country Short-Term	133	81	-	-	82	53	203	141	418	275
c. In-Country	-	820	-	-	-	496	-	1,362	-	2,678
Sub-Total	290	928	-	-	178	567	450	1,509	918	3,045
<b>3. Commodities</b>										
a. Vehicles	146	265	-	-	191	190	-	-	337	455
b. Accelerated EPI	350	-	-	-	-	-	1,650	-	2,000	-
c. Other	-	105	-	-	73	820	64	852	157	1,777
Sub-Total	496	370	-	-	264	1,010	1,714	852	2,494	2,232
<b>4. Construction</b>										
MT Schools & Hostels	50	783	-	-	-	4,610	-	-	50	5,393
Sub-Total	50	783	-	-	-	4,610	-	-	50	5,393
<b>5. Other Costs</b>										
a. Research & Evaluation	-	86	-	-	-	12	-	118	-	214
b. Operational Costs	-	13	-	-	-	-	-	-	-	13
Sub-Total	-	99	-	-	-	12	-	118	-	227
Total	1,660	3,373	-	-	502	6,228	2,574	2,876	4,736	12,479
Contingency	234	233	-	-	512	916	-	648	766	4,119
Total	1,894	3,606	-	-	1,014	7,144	2,574	3,524	5,502	14,420
Grand Total	5,500	-	-	-	8,200	-	6,300	-	20,000	-

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with the remaining 14 percent for contingency. Together, the program management and training components of the Project will receive about 65 percent of the A.I.D. funds in keeping with the primary emphasis of this Project on these two critical areas of the PHC Program. The A.I.D. contribution to the Accelerated EPI component of the Project is \$2,000,000: \$350,000 in the first year and \$1,650,000 in the last two years of the Project. The Government's estimate of the two-year cost of the three accelerated health programs, EPI, oral rehydration and training of dais, is \$50 million. If these activities extend over a five year period, with inflation, the cost will be \$65 million. In the first Project year, a total of \$10,350,000 will be available for these activities: \$5.7 million from the GOP, \$4.3 million from other donors, and \$350,000 from A.I.D.

A total of \$14,498,000 or 72 percent of the A.I.D. contribution will finance local costs. These funds will be disbursed in U.S. dollars in order to maximize the balance of payments impact of this Project in accordance with the overall objectives of the renewed USG-GOP economic and development assistance program. A FAA Section 612(b) certification has been signed by the USAID/Pakistan Mission Director and is included in Annex C.

## b. GOP Contribution

### 1. Capital Costs

About 33 percent of Pakistan's rural population is within two miles of a modern medical facility, but estimates are that only about five percent has access to effective modern medical care. The difference between the two percentages is a result of manpower shortages and inadequate operating budgets, principally for drugs. Despite this situation, Pakistan is continuing to build rural health facilities at a rapid rate. As shown in Table 17, the PFY 1982/83 Development Budgets included a total of 87 RHCs and 982 BHUs under construction with the majority in the Punjab. The rate of expenditures shown in Table 17 is only indicative of a level of effort because development projects are funded over several fiscal years. The RHCs and BHUs consume the bulk of the Provincial funds. Both the number of units and the funding levels support the Planning Division's forecast that rural health coverage will extend to 80 percent of the population by the end of the next (Sixth) Five-Year Plan period. These figures however represent facility coverage, not effective health care. Adequate numbers of qualified personnel will not be available six years from now

TABLE 17

PFY 1982/83 FEDERAL AND PROVINCIAL ADPs FOR RURAL HEALTH:  
SUMMARY OF KEY INDICATORS

<u>ADP</u> <sup>a/</sup>	<u>Number of Health Units</u>		<u>Total Rural Health Expenditures</u> (Rs 000)		
	<u>RHC</u>	<u>BHU</u>	<u>Capital</u>	<u>Revenue</u>	<u>Total</u>
Federal	4	13	26,914	18,185	45,099
Punjab	50	881	110,050	54,295	164,345
Sind	15	40	26,850	2,751	29,601
MWFP	10	NA	24,335	6,564	30,899
Baluchistan	9	40	21,070	8,900	29,970
TOTAL	87	982	209,219	90,695 <sup>b/</sup>	299,914

a/ Annual Development Plan

b/ Includes Rs 69,100,000 (76%) for EPI

to reach 80 percent of the rural people. This situation has important implications for the PHC Project, because:

(a) the Project is directed at the key bottleneck -- qualified people. By the end of the Project, trained personnel will be deployed and providing effective modern medical care to about 5 percent of the rural population that do not receive it now, thus doubling the number of rural people who are estimated to receive such care; and,

(b) the Project proposes to staff only 53 additional IRHCs during the Project period. With 277 Rural Health Centers in existence and 87 more RHCs (and 982 BHUs) under construction, availability of facilities should not be a problem.

The current cost for constructing and equipping an IRHC in the Punjab is Rs 5.2 million (the RHC is Rs 3 million and each BHU is Rs 550,000). Costs in the other provinces are comparable. The resulting costs by year for the 53 additional IRHCs to be established under the Project are as follows: Rs 36,400,000 in PFY 1982/83; Rs 52,000,000 in PFY 1983/84; Rs 72,800,000 in PFY 1984/85; Rs 36,400,000 in PFY 1985/86; and Rs 78,000,000 in PFY 1986/87 or a total of Rs 275,600,000 over the five-year Project period.

#### ii. Recurrent Costs

As indicated in Section I.F. Project Issues, drug costs the most difficult element of recurrent costs to quantify. The previous BHS Project projected drug costs at Rs 4 per person in the population served by an IRHC. The comparable figure today is Rs 7 per person. The Government of the Punjab has recently increased its drug budget for RHCs to Rs 8 per person, but it remains a low Rs 2.5 per person for a BHU. These numbers compare to a national per capita average of Rs 30 per person spent for drugs last year. Data are not currently available that would support a judgement as to what the actual cost should be.

Tables 18 and 19 show the estimated recurrent costs for a RHC and a BHU, respectively. Table 18 assumes that drug costs for an RHC will be the level currently budgeted in the Punjab. This would require increases from current levels in the other three provinces. Table 19 assumes that the drug budget for a BHU will be increased to Rs 7 per person, the current value of the 1976 estimate of drug requirements for a BHU. This is a somewhat arbitrary figure and it results in a difference of 29 percent in overall recurrent IRHC costs during the life of the Project. The comparison is shown in Table 20. The increased drug amount for BHUs was selected as the basis for estimating the Government's contribution to the Project because it is financially feasible, and because such an increase is a specific objective the Project seeks to achieve during the preparation of the Provincial operating plans during the first Project year.

Recurrent costs per pupil in the existing MT schools are fairly uniform and average Rs 14,900 per pupil. This cost factor has been used for the first three years of the Project with one exception. The cost of stipends for some of the students is currently being paid by UNICEF, and has been excluded in 1982/83. Beginning in 1983/84, the full cost is used on the assumption that UNICEF will not continue to pay these costs because it will be allocating its funds to other health programs. In the last two years, the cost per pupil has been increased to Rs 16,800 to provide for equipment replacement, vehicle operations and building maintenance at the new schools.

TABLE 18  
ESTIMATED ANNUAL RECURRENT COSTS FOR A RHC  
(In Rs)

<u>Salaries:</u>		45,400	
2 Doctors	@ 22,700	20,000	
2 Supervisory MTs	@ 10,000	18,000	
2 MTs	@ 9,000	7,200	
1 Storekeeper	@ 7,200	7,200	
1 Dispenser	@ 7,200	7,200	
1 Clerk	@ 7,200	4,000	
1 Mali	@ 4,000	7,200	
1 Lab Assistant	@ 7,200	5,400	
1 Sanitary Patrol	@ 5,400	5,400	
1 Peon	@ 5,400	5,400	
1 Cook	@ 5,400	5,400	
1 Chowkidar	@ 5,400	5,400	
1 Driver	@ 5,400	10,800	
2 Ward servants	@ 5,400	5,400	
1 Midwife	@ 5,400		139,400
	Sub-Total		80,000
<u>Drugs:</u>	10,000 persons @ 8 Rs/person		
<u>Other Costs:</u>		6,100	
Utilities		11,800	
Vehicle Maintenance		8,900	
Disposable Equipment		16,800	
Building Maintenance		7,000	
Miscellaneous			50,600
	Sub-Total		
		TOTAL	290,000

TABLE 19

ESTIMATED ANNUAL RECURRENT COSTS FOR A BHU  
(in Rs)

Salaries:

2 MTs @ 9,000	18,000	
1 Dispenser @ 7,200	7,200	
1 Chowkidar @ 5,400	5,400	
1 Dai @ 5,400	5,400	
1 Water Carrier @ 2,000 (part-time)	2,000	
1 Sweeper (part-time) @ 2,000	2,000	
	<hr/>	
Sub-Total		40,000

Drugs:

10,000 persons @ 7 Rs/person	70,000
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Other Costs:

Utilities	3,600	
Disposable Equipment	3,600	
Building Maintenance	9,000	
Miscellaneous	1,800	
	<hr/>	
Sub-Total		18,000

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**TOTAL** 128,000

TABLE 20

ESTIMATED ANNUAL RECURRENT COSTS FOR 53 ADDITIONAL  
IRHCs UNDER THE PHC PROJECT

<u>PFY</u>	<u>No. of IRHCs<sup>a/</sup> Operational</u>	<u>Costs (Rs 000)</u>	
		<u>BHU Drugs (70,000 pa)<sup>b/</sup></u>	<u>BHU Drugs (25,000 pa)<sup>c/</sup></u>
1982/83	3.5	2,835	2,205
1983/84	12.0	9,720	7,560
1984/85	24.0	19,440	15,120
1985/86	35.0	28,350	22,050
1986/87	45.5	36,855	28,665
<b>TOTAL</b>	<b>53.0<sup>d/</sup></b>	<b>97,200</b>	<b>75,600</b>

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a/ Assumes each IRHC functions for only 6 months during the first year of operations.

b/ Assumes drug costs at BHU @ Rs 7.0 per person per year.

c/ Assumes drug costs at BHU @ Rs 2.5 per person per year.

d/ 53 full-year operations in the sixth year.

### iii. Total GOP Contribution

The GOP's contribution of \$35,750,000 to this Project consists of the costs for the construction and equipping of the RHCs and BHUs which will make up the additional 53 IRHCs to be established by the end of the Project; the recurrent costs of operating these facilities; and the recurrent costs of operating the MT training schools, including student stipends. Of the total GOP contribution, 64 percent will go toward the capital costs for the IRHCs, 22 percent for the recurrent costs of the IRHCs, and 14 percent for the recurrent costs of the MT training schools. These cost estimates do not include other associated costs such as the operating costs of the Federal and Provincial BHS Cells and the District Health Offices. (Operating budgets for the four Provincial BHS Cells in PFY 1982/83 totalled Rs 717,000.) Table 21 summarizes the total GOP contribution to the PHC Project by year. No allowance for inflation has been made in these cost estimates.

The total Government recurrent cost budget for health in PFY 1981/82 was Rs 696 million, of which Rs 767 million was Provincial funds. It is this latter figure that is relevant to recurrent PHC costs since the IRHCs will be in the four provinces. Of the total Provincial recurrent cost budgets for health, about 20 percent is for rural health, and only a part of this is devoted to PHC. The balance is for other costs such as tehsil hospitals, MCH Centers, dispensaries, and the like. Exactly how much is devoted to PHC would require an extensive detailed analysis of each Provincial budget. The Provincial operational plans which will be developed during the first Project year will contain this information.

In the fifth Project year, annual recurrent costs for the Project will total Rs 53.8 million, of which about Rs 43.0 million is not in the current budget. This will require an increase in the annual recurrent budget of the provinces of about 1.1 percent per year in constant prices. This is well within the real annual increase in the total recurrent health budget of 4.2 percent over the past five years. It would, however, result in a somewhat larger share of the Provincial budgets going for rural health, and a substantial increase in the amount allocated to PHC, as defined in this Project. Assurances have been provided by the GOP that adequate funds will be provided in the Provincial budgets to cover the recurrent costs of the Project.

**TABLE 21**  
**TOTAL GOP FINANCIAL CONTRIBUTION**  
**TO THE PHC PROJECT BY YEAR a/**  
**(In Rs 000)**

Expense Category	PFY					Total
	1982/83	1983/84	1984/85	1985/86	1986/87	
1. Construction and Equipping of IRHCs <u>b/</u>	36,400	52,000	72,800	36,400	78,000	275,600
2. IRHC Operating Costs <u>b/</u>	2,835	9,720	19,440	28,350	36,855	97,200
3. MT Training Schools Operating Costs	5,765	10,800	10,800	17,655	16,900	61,920
<b>Total (Rs)</b>	<b>45,000</b>	<b>72,520</b>	<b>103,040</b>	<b>82,405</b>	<b>131,755</b>	<b>434,720</b>
<b>Total (s) <u>c/</u></b>	<b>3,700</b>	<b>5,964</b>	<b>8,474</b>	<b>6,777</b>	<b>10,835</b>	<b>35,750</b>

SOURCE: USAID/Pakistan Estimates

- a/ does not include: (i) the GOP's total contribution for the EPI and other accelerated health care activities over the 5 years life of the Project, which is estimated at the equivalent of about \$50 million (less the contributions of other donors); and, (ii) the operating costs of the Federal and Provincial BHS Cells and the District Health Offices.
- b/ Represents costs associated only with the 53 additional IRHCs to be established under this Project.
- c/ At the exchange rate of US\$1.00=Rs 12.16 as of July 18, 1982

#### F. Environmental Statement

This Project falls under Section 216.2(c)(2)viii of A.I.D.'s environmental procedures, which excludes the requirement of an initial environmental examination or any other environmental documentation for "programs involving nutrition, health care or population and family planning services....."

#### G. Women in Development

As mentioned previously, this Project has, as one of its major objectives, the increased involvement of women as both providers and beneficiaries of health care services. Accordingly, this Project should have a significant impact on the status of women in Pakistan.

Several activities are planned under the Project which are specifically aimed at accelerating the recruitment, deployment, and retention of female health workers in the Primary Health Care Program. These include the construction of MT training schools with separate classrooms and hostel accommodations for female students; the implementation of a special female MT recruitment campaign in female secondary schools throughout the country; the provision of culturally acceptable and fuel efficient transport for female MTs; and, the hiring of four female Pakistan training specialists, one per province, to assist in the recruitment and training of female MTs and CHWs. It is expected that the increased number of deployed female MTs will result in an increased number of deployed female CHWs. In fact, one of the targets of the Project is that at least 40 percent of all deployed MTs and CHWs are females. Trained and deployed female MTs will benefit from increased knowledge and improved employment opportunities with corresponding changes in professional status and income. Female CHWs will similarly benefit from increased knowledge and improved status in their village as para-professional health workers.

The female MTs and CHWs are the vital link to the second group of women who will be significantly affected by the Project. This group includes rural women who will be the recipients of Primary Health Care services. For women in Pakistan who, because of cultural constraints, have been unable to receive male-provided medical care, this will be a significant change. With the existence of female health providers, it will be more culturally acceptable for village women to leave the seclusion of their homes to seek out both curative and preventive health care. Such improvements will not only benefit the women directly but should also contribute to the improved health of her family and an overall enhancement of the quality of life of the rural household.

**H. Narcotics Impact Statement**

The Primary Health Care Project, being basically humanitarian in nature, does not lend itself to specific actions or policies relative to narcotics suppression. The strengthening of the rural health care infrastructure and the provision of health care services to the rural population of Pakistan does not provide a useful vehicle for suppression of narcotics activities. Accordingly, no narcotics impact analysis is submitted for this Project, and no poppy clause will be included in the Project Agreement.

## VI. CONDITIONS, COVENANTS, AND NEGOTIATING STATUS

### A. Conditions Precedent

#### 1. Conditions Precedent to Disbursements Other than Disbursements For the Procurement of Technical Assistance and Vehicles and Household/Office Furniture and Equipment for Said Technicians

Except as A.I.D. may otherwise agree in writing, prior to any disbursement under the Grant other than for the procurement of technical advisory services and vehicles and household/office furniture and equipment for said technicians or the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall, within sixty (60) days after the signing of the Project Agreement, furnish to A.I.D., in form and substance satisfactory to A.I.D.:

a. an opinion of Counsel acceptable to A.I.D. that the Project Agreement has been duly authorized and/or ratified by and executed on behalf of the Grantee and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all its terms; and,

b. a statement setting forth the name of the person holding or acting in the office of Grantee and of any additional representative(s), together with a specimen signature of each person specified in such statement.

The above conditions precedent will be met by the Grantee within 180 days from the signing of the Project Agreement or the Grant may be terminated.

#### 2. Conditions Precedent to Initial Disbursement for the Accelerated Expanded Program of Immunization (E.P.I.) Prior to September 30, 1984

Except as A.I.D. may otherwise agree in writing, prior to disbursement under this Grant for the Accelerated E.P.I. program prior to September 30, 1984 or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, acting through its Federal Ministry of Health (MOH), shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that:

a. a Federal Advisory Council has been established to review the program of activities under the Primary Health Care Project and to provide guidance to the provinces to implement these activities;

b. membership of the Federal Advisory Council includes the Secretary MOH (Chairman); Director-General Health, MOH (Vice-Chairman); Joint Secretary, Federal Ministry of Finance, Planning and Economic Affairs; Secretaries of Health for the four provinces; and, Chief of the Health Section, Planning Division, Federal Ministry of Finance, Planning, and Economic Affairs;

c. the Federal Advisory Council is required to meet no less than twice annually;

d. the Federal Advisory Council has held at least one meeting;

e. Primary Health Care Steering Committees have been established in each of the four provinces for the purpose of reviewing the Project;

f. membership of the Primary Health Care Steering Committees includes the following Provincial officers : the Secretary of Health (Chairman); the Director of Health Services (Vice Chairman); the Additional Secretary, Finance; and the Chief of the Health Section of the Planning and Development Department;

g. the Primary Health Care Steering Committees are required to meet no less than twice annually;

h. each of the Primary Health Care Steering Committees has held at least one meeting; and,

i. the Federal Basic Health Services Cell in the Federal Ministry of Health has staffed the following positions: the Deputy Director General (Basic Health); the Assistant Director General, Training; and the Assistant Director General, Operations.

The above conditions precedent will be met by the Grantee no later than September 30, 1984 or the Grant may be terminated.

3. Condition Precedent to Disbursement for Architectural and Engineering (A&E) Services

Except as A.I.D. may otherwise agree in writing, prior to the disbursement of funds by A.I.D. under the Grant or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made for architectural and engineering services with respect to each of the 13 medical technician training schools, other than for site investigations, the Grantee shall establish, in form and

substance satisfactory to A.I.D., its right to ownership or adequate and sufficient use and occupancy of the land site proposed for the buildings.

The above condition precedent will be met by the Grantee no later than March 31, 1984 or the Grant may be terminated.

4. Conditions Precedent to Disbursement for Construction of Medical Technician Training Schools

Except as A.I.D. may otherwise agree in writing, prior to disbursement under the Grant or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made for actual construction or renovation of any medical technician training schools in a province, the Grantee, acting through the MOH, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that :

a. the Provincial Government of the province wherein the medical technician training school for which disbursement is sought is located has initiated the formation of both administrative and technical posts for its training schools; and,

b. the Provincial Steering Committee of the province wherein the medical technician training school for which disbursement is sought is located has recommended approval of a budget allocation for each school which the Committee has determined to be adequate and appropriate for the operation of each school.

The above conditions precedent will be met by the Grantee no later than September 30, 1984 or the Grant may be terminated.

5. Conditions Precedent to Disbursement for Furniture and Equipment for Medical Technician Training Schools

Except as A.I.D. may otherwise agree in writing, prior to the disbursement under the Grant for furniture, equipment, audio-visual aids and transport for the medical technician training schools in any province or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, acting through the MOH, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that :

a. the Provincial Government of the province wherein the medical technician training school for which disbursement is sought is located has created both

administrative and technical posts for the staff of the training schools, and has initiated recruitment; and,

b. the Provincial government of the province wherein the medical technician training school for which disbursement is sought is located has undertaken sufficient advertisement for recruitment of students for the training schools, and that all female high schools have been timely notified and provided information as to the next scheduled medical technician classes.

The above conditions precedent will be met by the Grantee no later than September 30, 1985 or the Grant may be terminated.

6. Conditions Precedent to Disbursement for the Accelerated E.P.I. on or After September 30, 1984

Except as A.I.D. may otherwise agree in writing, prior to the disbursement under the Grant on or after September 30, 1984 for the Accelerated E.P.I. or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, through its MOH, shall furnish in form and substance satisfactory to A.I.D., evidence that :

a. a Federal plan of operations for Primary Health Care has been prepared and approved by the Federal Advisory Council;

b. Provincial plans of operation have been prepared for each of the provinces, approved by the cognizant Provincial Steering Committee and are being implemented;

c. baseline health surveys to record morbidity and mortality patterns and the status of delivery of curative and preventive health services have been conducted; and,

d. performance targets set forth in Project Implementation Letters for the preceding twelve-month period have been substantially met with respect to :

- i. program management;
- ii. medical technician and community health worker training
- iii. program operations; and
- iv. research and evaluation.

**Best Available Document**

The above conditions precedent will be met by the Grantee no later than September 30, 1985 or the Grant may be terminated.

7. Conditions Precedent to Disbursement for Accelerated E.P.I. on or after September 30, 1985

Except as A.I.D. may otherwise agree in writing, prior to the disbursement under the Grant for the Accelerated E.P.I. on or after September 30, 1985 or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee, acting through the MOH, shall furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that :

a. the Federal Advisory Council and Provincial Steering Committees have been institutionalized and have had at least two meetings to review progress and implementation of the Primary Health Care Project in each of the United States fiscal year since it has been formed;

b. at least 16 Federal and Provincial level health officials responsible for Primary Health Care (Basic Health Services) have been trained overseas in management systems including analysis and evaluation;

c. at least 85 Medical Officers posted at Integrated Rural Health Complexes, District Health Officers and Divisional Deputy Directors who deal with Primary Health Care (Basic Health Services) have been trained in management and oriented in the Primary Health Care Project;

d. logistics/support systems and procedures have been reviewed and revised as necessary and operating manuals for Integrated Rural Health Complexes have been adopted, published, and distributed in each of the four provinces;

e. ninety percent of the physician and para-medical tutors in the program have been trained or retrained in the revised curriculum and training methods;

f. eighty percent of the medical technicians trained and deployed by December 30, 1985 have trained an average of 10 community health workers who in turn are supported and regularly supervised by medical technicians;

g. procedures have been adopted in each province to insure that medical technicians and community health workers have been provided and are using transport, medical kits, uniforms and other commodities procured under the Project;

h. at least 40 percent of the medical technicians that have been trained and deployed are females;

i. double round surveys/evaluations have been conducted in project years three and four to establish the impact of the project on morbidity, mortality, and immunization status; and,

j. at least 53 additional Integrated Rural Health Complexes (29 in the Punjab, 12 in the Northwest Frontier, 7 in the Sind and 5 in Baluchistan) are operational. For purposes of this Agreement, an operational Integrated Rural Health Complex (IRHC) is defined as one in which:

i. at least 80 percent of the authorized doctors and medical technicians are in place and working, and community health workers have been trained in accordance with Section 7.f. above;

ii. at least 80 percent of the required standard drugs are available at all times;

iii. at least 80 percent of the required standard equipment is on hand and in operating condition;

iv. a functional vehicle is available for ambulance and supervisory services with sufficient funds provided for P.O.L. and routine maintenance services throughout the fiscal year; and,

v. a laboratory is equipped and staffed to do routine examinations of blood, urine, stools and sputum.

The above conditions precedent will be met by the Grantee no later than September 30, 1987 or the Grant may be terminated.

#### B. Covenants

The Grantee shall make every reasonable effort to require that each participant trained outside of Pakistan under this Project works in Primary Health Care activities in Pakistan for not less than three times the length of time of his or her training program provided, however, that in no event shall the participant be allowed to work for less than one year from the date of the participant's return to Pakistan. This covenant shall not apply to training of less than 45 days duration.

**C. Negotiating Status**

The above Conditions Precedent and Covenants have been discussed with and agreed to by the Government of Pakistan. During Project Agreement negotiations, USAID/Pakistan will incorporate into the Agreement appropriate language to cover these terms and conditions.

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 PP RUPHIL  
 TT RUFFC #3290 3281853  
 ZNR UUUUU 72H  
 P #428172 NOV 81  
 FM SECSTATE WASHDC  
 TO AMEMBASSY LAMARHEAD PRIORITY 3659  
 BT  
 UNCLAS STATE 293890

ATLAC

E.O. 12065: N/A

TAGS:

SUFJ: APAC REVIEW - PRIMARY HEALTH CARE (391-0475)

THE APAC MET AND APPROVED THIS PROJECT ON OCTOBER 15, 1981. THE FOLLOWING ITEMS WERE DISCUSSED FOR CONSIDERATION IN DESIGN OF THE PP.

1. A REVIEW OF THE PREVIOUS PRIMARY HEALTH CARE PROJECT, WHICH FOCUSED PRIMARILY ON THE MID-LEVEL WORKER, SUGGESTS THE NEXT STAGE SHOULD BE A PROJECT TO STRENGTHEN THE REFERRAL SYSTEM. BECAUSE THE COMMUNITY HEALTH WORKER (CHW) LEVEL WAS NOT A PRIMARY FOCUS IN THE PREVIOUS PROJECT, THE MISSION SHOULD NOW EXPLORE DEVELOPMENT OF AN ARRAY OF PROGRAMS WHICH WILL ENHANCE THE EFFECTIVENESS OF CHW'S.

2. THE MISSION SHOULD ASSIST IN DEVELOPMENT OF PROVINCIAL OR FEDERAL RESOURCES WHICH WILL HELP CHW'S TO CONTROL DIARRHEAL DISEASES, TO IMPROVE THE ACCESS TO SAFE WATER (WHICH IN TURN FACILITATES HEALTH EDUCATION), TO IMMUNIZE AGAINST CHILDHOOD DISEASES AND TO PROVIDE FAMILY PLANNING SERVICES. HISTORICALLY THE UTILITY OF THESE RATHER SPECIALIZED COMPONENTS OF POP PROGRAMS HAS BEEN LIMITED BY A LACK OF AN

EFFECTIVE COMMUNITY AGENT. CHW'S, IN TURN, NEED ACCESS TO RESOURCES TO OFFER TO THE COMMUNITY TO MAKE AN IMPACT ON HEALTH AND TO MAINTAIN CREDIBILITY IN THE COMMUNITY. IF THE CHW IS TO WORK EFFECTIVELY AS A HEALTH PROMOTER, THE PROJECT SHOULD IDENTIFY COMPONENTS OF A COMPREHENSIVE HEALTH PROGRAM WHICH WILL PROVIDE RESOURCES TO MEET THE GOALS OF THE PRIMARY HEALTH CARE PROJECT.

3. CHW'S MUST HAVE ACCESS TO THE FULL RANGE OF FAMILY PLANNING SERVICES TO BE EFFECTIVE HEALTH AGENTS. THE MISSION IS ADVISED TO ENSURE THE CHW TRAINING IS CONSISTENT WITH TRAINING OF COMMUNITY WORKERS IN THE POPULATION WELFARE SYSTEM AND TO EXPLORE METHODS TO INTEGRATE HEALTH AND POPULATION CONCERNS ESPECIALLY AT THE COMMUNITY WORKER LEVEL.

4. THE APAC DIRECTED THAT A PLAN FOR HEALTH CARE FINANCING BE ADDRESSED IN THE PP. THE MISSION IS

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ANNEX A

Page 2

REQUESTED TO DEVELOP PLANS TO EXPLORE THIS COMPLEX  
PROBLEM BOTH IN DESIGN AND DURING THE PROJECT,  
INCLUDING BUT NOT LIMITED TO SOCIAL FINANCING  
SCHEMES AND MEETING RECURRENT COSTS THROUGH USER  
FEES.

B. STUDIES OF THE PREVIOUS PRIMARY HEALTH PROJECT  
RAISED TWO POINTS WHICH SHOULD BE ADDRESSED: (A)  
THE MEDICAL ESTABLISHMENT REPRESENTED BY PHYSICIANS  
SHOULD BE MADE AWARE OF THE CONSTRUCTIVE ROLE PARA-  
MEDICAL TECHNICIANS CAN PLAY IN THE DELIVERY OF  
HEALTH CARE, AND (B) FEMALE TECHNICIANS SHOULD BE  
DEPLOYED ADEQUATELY.

C. SUGGEST MISSION EXPLORE OPPORTUNITIES TO USE  
EXCESS PROPERTY IN THIS PROJECT. HAIG  
BT  
#3290

UNCLASSIFIED

STATE 293890

## 5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: B.1. applies to all projects funded with Development Assistance Funds, B.2. applies to projects funded with Development Assistance loans, and B.3. applies to projects funded from ESP.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes

Yes

### A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project;  
(b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that amount)?

(a) Congressional Notification and Congressional Presentation

(b) Yes, assistance is within the 1982 operational year budget.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,00, will there be

-2-

(a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

Yes

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No further legislative action is required.

4. FAA Sec. 611(b); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.)

N.A.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

Yes, the Mission Director has signed a FAA 611(e) certification.

6. FAA Sec. 209: Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

Project is not susceptible to execution as part of a regional or multilateral project. Other donors, specifically WHO and UNICEF, are financing components of the GOP's Basic Health Services Program as separate projects. Assistance will not encourage regional development programs.

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

No significant effect in these areas is expected.

8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

Many of the goods and services procured under this Project will have their source and origin in the United States and will be procured in accordance with A.I.D. competitive procurement procedures.

-4-

9. FAA Sec. 612(b), 636(h);  
FY 1982 Appropriation  
Act Sec. 507. Describe  
steps taken to assure  
that, to the maximum  
extent possible, the  
country is contributing  
local currencies to meet  
the cost of contractual  
and other services, and  
foreign currencies owned  
by the U.S. are utilized  
in lieu of dollars.

The GOP will contribute the equivalent  
of approximately \$35.8 million in local  
currency during the life of the project  
which is 64 percent of the total cost  
of the project.

The Mission Director has certified  
the disbursement of U.S. dollars in  
lieu of U.S. Treasury-owned excess  
rupees to cover local costs under this  
project. This action is consistent  
with one of the major objectives of  
the renewed economic assistance program  
to Pakistan which is to maximize  
the balance of payments impact of the  
Program.

Yes, but the use of these rupees is not  
appropriate for this Project.

10. FAA Sec. 612(d). Does  
the U.S. own excess  
foreign currency of the  
country and, if so, what  
arrangements have been  
made for its release?

11. FAA Sec. 601(e). Will  
the project utilize  
competitive selection  
procedures for the  
awarding of contracts,  
except where applicable  
procurement rules allow  
otherwise?

Yes

12. FY 1982 Appropriation Act  
Sec. 521. If assistance  
is for the production of  
any commodity for export,  
is the commodity likely  
to be in surplus on world  
markets at the time the  
resulting productive  
capacity becomes  
operative, and is such  
assistance likely to  
cause substantial injury  
to U.S. producers of the  
same, similar or  
competing commodity?

N.A.

13. FAA 118(c) and (d).  
Does the project comply  
with the environmental  
procedures set forth in  
AID Regulation 167 Does

Yes

121

the project or program take into consideration the problem of the destruction of tropical forests?

N.A.

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

N.A.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

This is an E.S.P. Project

a. PAA Sec. 102(b), 111, 113, 261(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and

N.A.

-6-

otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

N.A.

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N.A.

d. FAA Sec. 116(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?

N.A.

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e. FAA Sec. 110(b).  
Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.

N.A.

f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

N.A.

g. FAA Sec. 261(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage

N.A.

-8-

institutional development;  
and supports civil  
education and training in  
skills required for  
effective participation in  
governmental processes  
essential to self-government.

2. Development Assistance Project  
Criteria (Loans Only)

This is an E.S.F. Project

a. FAA Sec. 122(b).

Information and conclusion  
on capacity of the country  
to repay the loan, at a  
reasonable rate of interest.

N.A.

b. FAA Sec. 620(d). If  
assistance is for any  
productive enterprise which  
will compete with U.S.  
enterprises, is there an  
agreement by the recipient  
country to prevent export  
to the U.S. of more than  
20% of the enterprise's  
annual production during  
the life of the loan?

N.A.

c. ISDCA of 1981, Sec. 724  
(c) and (d). If for

Nicaragua, does the loan  
agreement require that the  
funds be used to the  
maximum extent possible for  
the private sector? Does  
the project provide for  
monitoring under FAA Sec.  
624(g)?

N.A.

3. Economic Support Fund  
Project Criteria

a. FAA Sec. 531(a). Will  
this assistance promote  
economic or political

Yes. By reducing infant  
mortality, and thus promoting  
reduced fertility, the project  
will contribute to the reduction

125

-9-

stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

of the population growth rate, and thereby facilitate the achievement of the GOP's development goals as they relate to economic stability.  
Yes.

b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities?

No

c. FAA Sec. 534. Will ESP funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives?

No

d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

N.A.

Best Available Document



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO PAKISTAN

Cable : (USAIDPAK

HEADQUARTERS OFFICE  
ISLAMABAD

THE DIRECTOR

PRIMARY HEALTH CARE PROJECT  
FAA SECTION 611(e) CERTIFICATION

I, Donor M. Lion, the principal officer of the Agency for International Development in the Islamic Republic of Pakistan, having taken into account, among other things, the maintenance and utilization of projects in the Islamic Republic of Pakistan previously financed or assisted by the United States, do hereby certify, pursuant to Section 611(e) of the Foreign Assistance Act of 1961, as amended, that, in my judgement, the Islamic Republic of Pakistan has both the financial capability and the human resources capability to effectively implement, utilize and maintain the proposed Primary Health Care Project.

This judgement is based upon the project analysis as detailed in the Primary Health Care Project Paper and is subject to the conditions imposed therein.

*Donor M. Lion*  
\_\_\_\_\_  
Donor M. Lion  
Director  
USAID/Pakistan

*Sept 22 1982*

\_\_\_\_\_  
Date



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO PAKISTAN

Cable : USAIDPAK

HEADQUARTERS OFFICE  
ISLAMABAD

THE DIRECTOR

PRIMARY HEALTH CARE PROJECT  
FAA SECTION 612 (b) CERTIFICATION

A major purpose of the \$1.625 billion economic assistance program negotiated between the governments of the U.S. and Pakistan, acknowledged by both governments and a primary reason for both governments having decided to develop an economic assistance package, is to provide balance of payments assistance to Pakistan.

I have carefully reviewed the advisability of disbursing U.S. dollars in lieu of U.S.-owned excess foreign currency to pay for local costs of projects being implemented in Pakistan. In light of the U.S. Government's objectives concerning the program, I have determined that it would be prejudicial to U.S. interests and goals to pay for all local currency costs with U.S.-owned rupees. Such a procedure would prevent the U.S. from providing the maximum amount of balance of payments support under the economic assistance package, and would consequently undercut one of the basic objectives of the program. The objective of providing balance of payments assistance to Pakistan can best be achieved by disbursing U.S. dollars to pay for local costs of the program. Section 612(b) of the Foreign Assistance Act of 1961, as amended, authorizes the administrative official approving the voucher to determine that local costs will be funded with direct payment of dollars for the program. Pursuant to this provision, Handbook 19 requires that the Mission Director (or his designee) make a determination as to the reason in any instance where U.S. dollars are used (disbursed) when U.S.-owned foreign currency is available. Where dollars are used for local cost financing, therefore, USAID/Pakistan will make disbursements to the GOP in U.S. currency.

FAA Section 612 (b) Certification (Continued)

In view of the above rationale, I, Donor M. Lion, principal officer of the Agency for International Development in Pakistan, pursuant to Section 612(b) of the Foreign Assistance Act of 1961, as amended, do hereby certify the need to disburse dollars to cover local currency costs in lieu of using U.S.-owned excess rupees under the Primary Health Care Project.

*Donor M. Lion*

\_\_\_\_\_  
Donor M. Lion  
Director  
USAID/Pakistan

*Sept. 22, 1972*

\_\_\_\_\_  
Date



Telegram : ECONOMIC  
Telex : ECON No: 04-834  
SECRETARY,  
Tele: 20629

No. 1(24)CH-VI/81.  
Government of Pakistan  
MINISTRY OF FINANCE AND  
ECONOMIC AFFAIRS  
(ECONOMIC AFFAIRS DIVISION)

Islamabad, 24th August, 1982.

Dear Dr. Lion,

As part of our two Governments' agreement on a six-year \$ 1.625 billion economic assistance program, the Government of Pakistan formally requests United States assistance from USAID/Pakistan of twenty million dollars (\$ 20,000,000) in dollar funding to finance a Primary Health Care Project.

2. This Project is designed to support the Government of Pakistan's efforts to improve the quality and expand the coverage of primary health care services in rural areas.

3. Subject to the availability of funds, approximately \$20 million of ISF grant funds would be provided over a five-year period to improve, expand and institutionalize the primary health care approach that would be approved in the Sixth Five Year Plan. This project will be co-ordinated and directed by primary health care units created in the Federal Health Ministry and Provincial Governments. The project will finance: (a) technical assistance in management and training at both levels of government; (b) the construction and equipping of 13 consolidated medical technician schools to replace the present inadequate facilities; (c) translation and publication of a revised curriculum and the purchase of related training aids; (d) simple medical kits and uniform for field workers; (e) design and procurement of low cost transport for medical technicians; (f) village level health education campaign; (g) a continuing programme of in-country management and training seminars and workshops; (h) overseas short-term training for programme managers and technicians; (i) vaccines for the WBC included

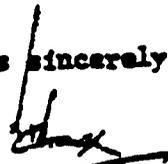
Cont'd...../2.

immunisation programme and chemicals for oral rehydration salts.

4. The Government of Pakistan assures the United States Government of its full cooperation in carrying out the Primary Health Care Project. The manpower, financial and other inputs required of us will be provided in an expeditious manner.

5. We look forward to a continued, combined effort by both our Governments to yield a productive and beneficial programme for the people of Pakistan.

Yours sincerely,

  
( EJAZ AHMAD NAIK )

Dr. Donor M. Lion,  
Director,  
USAID Mission,  
Islamabad.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

ANNEX E  
Page 1  
From FY 1981 to FY 1987  
Total U.S. Funding \$20 million  
Date Prepared 2/5/82

Project Title & Number: Pakistan-Primary Health Care (391-0-75)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPLICIT ASSUMPTIONS
<p>Program Sector Goal: The broader objective to which this project contributes:</p> <p>To improve the health status of the rural population</p>	<p>Measures of Goal Achievement:</p> <p>In areas served by the Project:</p> <ul style="list-style-type: none"> <li>- At least a 20% reduction in infant and child mortality.</li> <li>- At least a 20% reduction in moderate to severe malnutrition.</li> <li>- At least a 35% reduction in deaths due to diarrheal disease.</li> </ul>	<ul style="list-style-type: none"> <li>- Morbidity and mortality data from the federal and provincial health ministries.</li> <li>- Health facility service statistics and treatment records.</li> <li>- Annual program evaluations and final impact evaluation.</li> <li>- Baseline and end-of-project health surveys.</li> <li>- Double round health survey.</li> <li>- Periodic reviews of Federal Advisory Council and Provincial Steering Committees.</li> </ul>	<p>Assumptions for achieving goal targets:</p> <ul style="list-style-type: none"> <li>- Continued GOP commitment to the provision of health services to the population as evidenced by adequate budgetary support.</li> <li>- Adequately staffed, equipped, and supplied health facilities which are able to attract clients.</li> </ul>
<p>Project Purpose:</p> <p>To improve the quality and expand the coverage of Primary Health Services in the rural areas.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status:</p> <ul style="list-style-type: none"> <li>- 75% of the MTs devoting at least half of their time to training and supervising CHWs;</li> <li>- 80% of the IRHCs with authorized drugs and medical supplies available.</li> <li>- 75% of BHCs receiving at least one visit weekly from MT supervisors posted at IRHCs.</li> <li>- At least 50% of all deployed MTs and CHWs are females. (Contd. on P/2)</li> </ul>	<ul style="list-style-type: none"> <li>- Morbidity and mortality data from the federal and provincial health ministries.</li> <li>- Health facility service statistics and treatment records.</li> <li>- Annual program evaluations and final impact evaluation.</li> <li>- Baseline and end-of-project health surveys.</li> <li>- Double round health survey.</li> <li>- Periodic reviews of Federal Advisory Council and Provincial Steering Committees.</li> </ul>	<p>Assumptions for each purpose:</p> <ul style="list-style-type: none"> <li>- Provincial Governments will continue to train and deploy MTs and CHWs.</li> <li>- Modified management and supervisory practices will be adopted and implemented at the IRHCs.</li> <li>- Adequate amounts of appropriate drugs and medical supplies will be provided to IRHCs. (Contd. on P/2)</li> </ul>
<p>Inputs:</p> <ul style="list-style-type: none"> <li>- Federal Advisory Council established and functioning effectively</li> <li>- Provincial Steering Committees established and functioning effectively</li> <li>- Permanent consolidated MT training schools constructed, equipped, and furnished</li> <li>- Approved annual provincial operational PBC plans</li> <li>- Planning and management system for IRHCs</li> <li>- Revised MT curriculum and training materials developed and translated into Urdu for MTs and CHWs. (Contd. on P/2)</li> </ul>	<p>Magnitude of Outputs:</p> <ul style="list-style-type: none"> <li>= 1</li> <li>= 6</li> <li>= 13</li> <li>= 20</li> <li>= 1</li> <li>= 1 (Contd. on P/2)</li> </ul>	<ul style="list-style-type: none"> <li>- Morbidity and mortality data from the federal and provincial health ministries.</li> <li>- Health facility service statistics and treatment records.</li> <li>- Annual program evaluations and final impact evaluation.</li> <li>- Baseline and end-of-project health surveys.</li> <li>- Double round health survey.</li> <li>- Periodic reviews of Federal Advisory Council and Provincial Steering Committees.</li> </ul>	<p>Assumptions for achieving purpose:</p> <ul style="list-style-type: none"> <li>- Required number of posts is sanctioned for the training staff and filled with qualified personnel at the MT training schools.</li> <li>- The Federal and Provincial BHS Cells are adequately staffed with qualified personnel.</li> <li>- Posts are sanctioned for MT supervisors and MTs. (Contd. on P/2)</li> </ul>
<p>Inputs:</p> <p>1. A.I.D.</p> <ul style="list-style-type: none"> <li>- Short and long-term technical assistance.</li> <li>- Support for in-country training programs.</li> <li>- Short-term fellowships outside of Pakistan</li> <li>- Support for baseline and end-of-project health surveys, a double round health survey, and recurrent cost studies. (Contd. on P/2)</li> </ul>	<p>Implementation Target (Type &amp; Quantity)</p> <p>See financial analysis, implementation schedule, and commodity, technical assistance, and training plans in the project paper.</p>	<ul style="list-style-type: none"> <li>- A.I.D. and GOP project records and financial documents.</li> <li>- Annual project evaluations and final impact evaluation.</li> </ul>	<p>Assumptions for proc. Inp. inputs:</p> <ul style="list-style-type: none"> <li>- A.I.D. and GOP proposed funding levels are approved by their respective governments and disbursements are made on a timely basis.</li> <li>- Appropriate management training programs will be established. (Contd. on P/2)</li> </ul>

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PROJECT DESIGN SUMMARY  
LOGICAL FRAME WORK

ANNEX E  
Page 2  
Line of Project:  
From FY 1982 to FY 1987  
Total U.S. Funding \$20 million  
Date Prepared: 9/10/87

Project Title & Number: Pakistan-Primary Health Care (391-0475)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p>	<p>Conditions that will indicate purpose has been achieved: End of project status:</p> <ul style="list-style-type: none"> <li>- a total of 53 additional operational IRHCs in the country.</li> <li>- at least 3,250,000 inhabitants with access to PHC services at functional IRHCs.</li> <li>- at least 90% of CHWs and MTs utilizing uniform apparel, training materials, and medical kits.</li> <li>- increased attendance of female patients at health facilities.</li> <li>- each MT deployed by December 1975 training and supervising an average of 10 CHWs who in turn are serving up to 1,000 villagers.</li> </ul>		<p>Assumptions for achieving purpose:</p> <ul style="list-style-type: none"> <li>- The Federal Advisory Council and Provincial Steering Committees are functioning effectively.</li> <li>- Training curricula and materials and operations manuals are used effectively by health workers.</li> <li>- Increased cooperation and participation of the general population in the public sector health care delivery system.</li> <li>- Increased credibility and effectiveness of MTs and CHWs as evidenced by increased acceptability by the general public and other health members, notably physicians.</li> </ul>
<p>Outputs:</p> <ul style="list-style-type: none"> <li>- Standard operations manuals for IRHCs and BHUs developed, published, and put into use.</li> <li>- New MTs trained.</li> <li>- New CHWs trained.</li> <li>- Additional operational IRHCs established.</li> <li>- In-service training workshops for MTs and CHWs conducted.</li> <li>- A culturally acceptable and fuel efficient transport vehicle designed and put into use in the field.</li> <li>- Recurrent cost studies completed.</li> <li>- Double round survey completed.</li> <li>- Baseline and end-of-project health surveys completed.</li> <li>- Health education campaign designed and launched.</li> </ul>	<p>Magnitude of Outputs:</p> <ul style="list-style-type: none"> <li>- 2</li> <li>- 1359</li> <li>- 6400</li> <li>- 53 consisting of 29, 12, 7 and 5 in the Punjab, NWFP, Sindh and Baluchistan, respectively.</li> <li>- 258</li> <li>- 1</li> <li>- 1</li> <li>- 1</li> <li>- 2</li> <li>- 1</li> </ul>		<p>Assumptions for achieving outputs:</p> <ul style="list-style-type: none"> <li>- Assumptions re: the recruitment and deployment of MTs (see Annex B) remain valid.</li> <li>- Adequate numbers of appropriate personnel are made available to attend the planned training workshops.</li> <li>- Federal Advisory Council approves annual provincial PHC program plans.</li> </ul>
<p>Inputs:</p> <ul style="list-style-type: none"> <li>- Construction of MT training schools.</li> <li>- Commodities including vehicles; apparel and kits for CHWs and MTs; training equipment and supplies; furniture and office equipment; printing of training materials and manuals; vaccines; cold storage equipment for vaccines; bacterial fermentor for DPT vaccine; chemicals for oral rehydration salts;</li> </ul>	<p>Inputs:</p> <ul style="list-style-type: none"> <li>- household/office equipment for LT expatriate advisors.</li> <li>2. OOP                     <ul style="list-style-type: none"> <li>- Personnel salaries and allowances.</li> <li>- Capital costs of 53 additional IRHCs</li> <li>- Recurrent costs of IRHCs.</li> <li>- Recurrent costs of permanent consolidated MT training schools.</li> <li>- Costs of the Accelerated EPI.</li> </ul> </li> </ul>		<p>Assumptions for providing inputs:</p> <ul style="list-style-type: none"> <li>- Appropriate sites can be located for the MT training schools and construction is undertaken according to agreed upon standards and within the budget.</li> <li>- Appropriate consultants can be recruited to provide the required technical assistance.</li> <li>- COP meets the conditions precedent for constructing, furnishing and equipping the MT training schools and for the Accelerated EPI.</li> </ul>

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FOR ASIA/PD:VAN RAALTE: ASIA/PNS, BRASHICH

F.C.12356 4/A

SUBJECT: PRIMARY HEALTH CARE PROJECT (391-0475):  
 - DRAFT CONGRESSIONAL NOTIFICATION

1. THIS CABLE TRANSMITS DRAFT LANGUAGE FOR THE C.N. FOR THE SUBJECT PROJECT. MISSION WOULD APPRECIATE YOUR PROCESSING THIS C.N. ASAP AND ADVISING US WHEN FIFTEEN-DAY WAITING PERIOD EXPIRES.

2. ACTIVITY DATA SHEET:

COUNTRY: PAKISTAN

TITLE: PRIMARY HEALTH CARE

NUMBER: 391-0475

NEW GRANT FUNDS: ZSF

PRIOR REFERENCE: NONE

PROPOSED OBLIGATION: FY 82 - 3,700,000  
 - LOP -20,000,000

INITIAL OBLIGATION: FY 82

ESTIMATED FINAL OBLIGATION: FY 85

ESTIMATED COMPLETION DATE OF PROJECT: FY 87

3. NARRATIVE IS AS FOLLOWS:

PURPOSE: TO IMPROVE THE QUALITY AND EXPAND THE COVERAGE OF PRIMARY HEALTH CARE SERVICES IN THE RURAL AREAS.

BACKGROUND: PAKISTAN'S ESTIMATED POPULATION OF 83.7 MILLION (MARCH 1981) IS PREDOMINANTLY RURAL, POOR AND ILLITERATE. THERE ARE ROUGHLY 45,000 VILLAGES CONTAINING ABOUT 72 PERCENT OF THE COUNTRY'S PEOPLE. THE EXISTING PUBLIC AND PRIVATE HEALTH SYSTEMS REFLECT A PATTERN FOUND IN MANY DEVELOPING COUNTRIES. ALL TYPES OF FACILITIES AND MANPOWER ARE SCARCE AND ARE HEAVILY SKewed TOWARD URBAN AREAS. MODERN HEALTH SERVICES EXTEND TO PERHAPS AS LITTLE AS 5 PERCENT OF THE RURAL POPULATION. AS A RESULT, THE CRUDE DEATH RATE IS 14 PER THOUSAND POPULATION, AND AN INFANT MORTALITY RATE OF 105 PER THOUSAND LIVE BIRTHS ACCOUNTS FOR ABOUT 15 PERCENT OF THE CRUDE DEATH RATE. TWENTY PERCENT OR 700,000 OF THE CHILDREN THAT ARE BORN EACH YEAR DIE BEFORE THE AGE OF FIVE. THE PRINCIPAL INFANT KILLERS ARE DIARRHEAL AND RESPIRATORY DISEASES, WHICH ACCOUNT FOR ABOUT 60 PERCENT OF ALL INFANT DEATHS. IN 1977, THE GOVERNMENT OF PAKISTAN (GOP), RECOGNIZING THAT IT WAS IMPOSSIBLE TO REMEDY THIS SITUATION WITH PHYSICIAN - BASED MEDICAL

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CARE, LAUNCHED A RURAL HEALTH PROGRAM WITH A.I.D. ASSISTANCE. THE PROGRAM WAS BASED ON THREE-TIERED INTEGRATED RURAL HEALTH COMPLEXES STAFFED WITH A NEW, BETER-PREPARED TYPE OF PARAMEDIC, THE MEDICAL TECHNICIAN (MT). IN THIS SYSTEM, DOCTORS AND MT ASSISTANTS AT A RURAL HEALTH CENTER SUPERVISE AND SUPPORT MTS IN SATELLITE BASIC HEALTH UNITS, SERVING POPULATIONS OF 5,000 TO 10,000 EACH. THESE MTS IN TURN RECRUIT, TRAIN AND SUPERVISE VOLUNTARY COMMUNITY HEALTH WORKERS (CHWS) WHO RESIDE AND WORK IN NEIGHBORING VILLAGES. THE TECHNICAL FEASIBILITY OF THIS APPROACH OF USING PARAMEDICS IS BASED ON THE FACT THAT FEWER THAN 10 SIMPLE HEALTH PROBLEMS COMPRISE HALF OF ALL PATIENT VISITS IN RURAL AREAS IN DEVELOPING COUNTRIES. PREVENTIVE MEDICINE IS ALSO STRESSED BECAUSE MOST OF THE ILLNESSES IN RURAL PAKISTAN ARE THE RESULT OF POOR ENVIRONMENTAL CONDITIONS, NAMELY, LACK OF SANITATION, INADEQUATE SHELTER, POOR PERSONAL HYGIENE AND INADEQUATE NUTRITION. THE PREVIOUS A.I.D. PROJECT ACHIEVED THE FOLLOWING: (1) IT FIRMLY ESTABLISHED THE CONCEPT THAT PROPERLY TRAINED PARAMEDICS COULD PROVIDE EFFECTIVE SIMPLE CURATIVE AND PREVENTIVE HEALTH CARE; (2) A SIX-VOLUME, COMPETENCY-BASED CURRICULUM FOR MEDICAL TECHNICIANS WAS DEVELOPED AND ADOPTED AND RESULTED IN THE FORMATION OF SIX OPERATIONAL RURAL HEALTH COMPLEXES; AND, (3) 27 MT SCHOOLS WERE ESTABLISHED THAT HAVE CONTINUED TO FUNCTION EFFECTIVELY AFTER A.I.D. ASSISTANCE TERMINATED. THE PROPOSED PROJECT WILL BUILD ON THE ACCOMPLISHMENTS OF THE PREVIOUS A.I.D. PROJECT.

PROJECT DESCRIPTION: THE PROPOSED FIVE-YEAR PROJECT WILL PROVIDE LOCAL GOVERNMENT IN EST GRANT FUNDS TO IMPROVE, EXPAND AND INSTITUTIONALIZE THE PRIMARY HEALTH CARE APPROACH THAT WAS DEVELOPED UNDER THE PREVIOUS A.I.D. PROJECT. THIS PROJECT WILL BE COORDINATED AND DIRECTED BY NEWLY CREATED HIGH LEVEL POLICY COMMITTEES AT THE FEDERAL AND PROVINCIAL DEPARTMENTS OF HEALTH. THE PROJECT WILL FINANCE: (1) TECHNICAL ASSISTANCE IN MANAGEMENT AND TRAINING AT BOTH LEVELS OF GOVERNMENT; (2) THE CONSTRUCTION AND EQUIPPING OF 13 CONSOLIDATED MT SCHOOLS TO REPLACE THE PRESENT MAKE-SHIFT FACILITIES; (3) TRANSLATION AND PUBLICATION OF A REVISED CURRICULUM

AND THE PURCHASE OF RELATED TRAINING AIDS; (4) SIMPLE MEDICAL KITS AND UNIFORMS FOR FIELD WORKERS; (5) DESIGN AND PROCUREMENT OF LOW COST TRANSPORT VEHICLES; (6) A VILLAGE LEVEL HEALTH EDUCATION CAMPAIGN; (7) A PILOT TEST OF SOLAR-POWERED TWO-WAY RADIO COMMUNICATIONS IN SELECTED RURAL HEALTH COMPLEXES; (8) A CONTINUING PROGRAM OF IN-COUNTRY MANAGEMENT AND TRAINING SEMINARS AND WORKSHOPS; (9) OVERSEAS SHORT-TERM TRAINING FOR PROGRAM MANAGERS AND TECHNICIANS; AND, (10) VACCINES FOR PAKISTAN'S EXPANDED PROGRAM OF IMMUNIZATION FOR CHILDREN 5 AND UNDER.

THE PROJECT IS DESIGNED TO: (1) CORRECT EXISTING WEAKNESSES IN PROGRAM MANAGEMENT, SUPERVISION, TRAINING AND OPERATIONS IN ORDER TO ESTABLISH A SYSTEM IN THE MAJORITY OF PAKISTAN'S 67 DISTRICTS WHICH IS CAPABLE OF EFFECTIVELY RECRUITING, TRAINING, SUPERVISING AND SUPPORTING HEALTH CARE WORKERS IN THE RURAL AREAS AND WHICH CAN BE READILY EXPANDED; AND, (2) TO RECRUIT, TRAIN AND RETAIN INCREASING NUMBERS OF FEMALE HTS AND CHWS IN ORDER TO REACH THE MOST CRITICAL TARGET POPULATION - WOMEN AND YOUNG CHILDREN. FEMALE HEALTH WORKERS ARE ESSENTIAL BECAUSE, IN THE PAKISTANI CULTURE, RURAL WOMEN SELDOM CONSULT A MALE HEALTH WORKER. A BASELINE SURVEY TO MORE PRECISELY MEASURE THE INCIDENCE OF SELECTED DISEASES, A SPECIAL MID-PROJECT DOUBLE ROUND SURVEY TO MEASURE THE EFFECT OF THE PRIMARY HEALTH CARE PROGRAM AND THE EXPANDED PROGRAM OF IMMUNIZATION ON NEONATAL MORTALITY, MALNUTRITION AND THE IMMUNIZATION STATUS OF CHILDREN UNDER FIVE, AND ANNUAL EVALUATIONS WILL BE CONDUCTED.

RELATIONSHIP OF PROJECT TO A.I.D. COUNTRY STRATEGY: THE A.I.D. STRATEGY FOR PAKISTAN HAS THE DUAL OBJECTIVES OF HELPING PAKISTAN TO FULFILL THE BASIC HUMAN NEEDS OF ITS PEOPLE AND TO ADDRESS THE COUNTRY'S FOREIGN EXCHANGE NEEDS. THIS PROJECT WILL ACHIEVE BOTH OBJECTIVES BY IMPROVING AND EXPANDING THE HEALTH CARE SYSTEM SO THAT THE RURAL POPULATION WILL HAVE ACCESS TO ADEQUATE AND RELIABLE BASIC HEALTH SERVICES AND BY FINANCING LOCAL COSTS FOR SCHOOL CONSTRUCTION, PAKISTANI TECHNICAL ADVISORS AND LOCAL COMMODITIES. RECENT RESEARCH, BOTH IN PAKISTAN AND ELSEWHERE IN THE DEVELOPING WORLD, INDICATES THAT PARENTS WHO EXPERIENCE SIGNIFICANT CHANGES IN THE PROBABILITY OF CHILD SURVIVAL ALTER THEIR FERTILITY BEHAVIOR ACCORDINGLY AFTER A PERIOD OF TIME. THUS THIS PROJECT SHOULD CONTRIBUTE TO THE FERTILITY REDUCTION GOAL OF A.I.D.'S TWO POPULATION PROJECTS IN PAKISTAN. THE PROJECT WILL ALSO SUPPORT THE MALARIA CONTROL PROJECT BY EXPANDING THE CADRE OF WORKERS CAPABLE OF TAKING SLIDES TO DOCUMENT OR VERIFY MALARIA CASES AND TREATING THE DISEASE. IN ADDITION, THE PROJECT IS COMPATIBLE WITH A.I.D.'S HEALTH POLICY WHICH PLACES HIGHEST PRIORITY ON PRIMARY HEALTH CARE.

BENEFICIARIES: THE PRIMARY DIRECT BENEFICIARIES OF THIS PROJECT WILL BE APPROXIMATELY 2,000,000 RURAL PEOPLE (INCLUDING SOME 300,000 CHILDREN UNDER THE AGE OF 5) WHO

WILL HAVE ACCESS FOR THE FIRST TIME TO SIMPLE EFFECTIVE, MODERN HEALTH CARE. MILLIONS OF PEOPLE WILL BE SIMILARLY SERVED AS THE PROGRAM CONTINUES TO EXPAND AFTER A.I.D. FUNDS TERMINATE. IN ADDITION TO GENERALLY IMPROVED HEALTH AND WELL-BEING, THE PROJECT HAS THE SPECIFIC GOALS FOR CHILDREN OF SIGNIFICANT REDUCTIONS IN: (1) INFANT AND CHILD MORTALITY; (2) MODERATE AND SEVERE MALNUTRITION; AND (3) DEATHS DUE TO DIARRHEAL DISEASE. OTHER DIRECT BENEFICIARIES WILL BE THE ROUGHLY 2,500 PERSONS WHO WILL BE TRAINED AS NTS WITH MODERN TRAINING METHODS AND THE NTS FROM THEM, IN TURN, WILL TRAIN. SELECTED GOVERNMENT OFFICIALS AND TECHNICIANS WILL ALSO BENEFIT FROM IN-COUNTRY TRAINING AND SHORT-TERM TRAINING ABROAD.

HOST COUNTRY AND OTHER DONORS: THE GOVERNMENT OF PAKISTAN WILL FULLY FUND THE CONSTRUCTION OF RURAL HEALTH COMPLEXES AND WILL CONTRIBUTE THE EQUIVALENT OF ABOUT PAKS 8,000,000 OVER THE LIFE OF THE PROJECT TO COVER OPERATING COSTS FOR THE NT SCHOOLS, THE HEALTH COMPLEXES AND THE SUPERVISORY STRUCTURE. MOST DONOR ASSISTANCE IN THE HEALTH SECTOR IN PAKISTAN IS CONCENTRATED ON RELATIVELY SOPHISTICATED HEALTH CARE IN THE URBAN AREAS. HOWEVER, UNICEF, UNDP, W.P.O. AND CACAIA HAVE PROVIDED AND ARE EXPECTED TO CONTINUE TO PROVIDE LIMITED ASSISTANCE TO PRIMARY HEALTH CARE THAT IS COMPLEMENTARY TO AND WILL BE CAREFULLY COORDINATED WITH THE A.I.D. PROJECT.

MAJOR OUTPUTS	ALL YEARS
NEW INTEGRATED RURAL HEALTH COMPLEXES STAFFED AND FUNCTIONING	53
SERVICE CURRICULUM (WITH ALLIED TRAINING MATERIALS) DEVELOPED, TRANSLATED AND PUT INTO USE	1

MTS SCHOOLS WITH HOSTELS CONSTRUCTED 13  
INCREASED NUMBER OF FEMALE  
MTS AND CHWS

AT LEAST 40 PERCENT  
OF ALL MTS AND CHWS

A.I.D. FINANCED INPUTS

LIFE OF PROJECT  
(DOLS 000)

TECHNICAL ASSISTANCE

3,467,000

TRAINING

4,545,000

COMMODITIES

4,912,000

CONSTRUCTION

6,183,000

RESEARCH AND EVALUATION

827,000

TOTAL

20,022,000

U.S. FINANCING

PROPOSED FY 1982: OBLIGATIONS - 3,700,000

FUTURE YEAR OBLIGATIONS 15,300,000

ESTIMATED TOTAL COST 20,000,000

PRINCIPAL CONTRACTORS OR AGENCIES :  
U.S. HEALTH SPECIALISTS AND PAKISTANI HEALTH CONSULTANTS  
AND ARCHITECTURAL AND ENGINEERING AND CONSTRUCTION  
CONTRACTORS SELECTED IN ACCORDANCE WITH A.I.D. COMPETITIVE  
PROCUREMENT PROCEDURES. SPIERS

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DRAFT VEHICLE WAIVER

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR  
FOR ASIA

From: ASIA/PD - G. Reginald Van Raalte

I. PROBLEM

To obtain a source/origin waiver from A.I.D. Geographic Code 000 to A.I.D. Geographic Code 935 (Special Free World) to permit the purchase of 10 diesel, right-hand drive pick-up trucks, and 18 diesel, right-hand drive 12-passenger vans and spare parts for the Primary Health Care Project (391-0475).

II. BACKGROUND

A. Cooperating Country	: Pakistan
B. Geographic Code	: 000 and Pakistan
C. Name of Commodity Importer	: USAID/Pakistan or an organization contracted by USAID/Pakistan
D. Description of Commodity Sought	: 10 diesel, right-hand drive pick-up trucks, and 18 diesel, right-hand drive 12-passenger vans and spare parts
E. Manufacturer of Commodity Sought	: Most probably Toyota, Mazda, or Datsun since adequate spare parts and maintenance and repair capability exist in Pakistan for these Japanese vehicles
F. Approximate Value of Commodity Sought	: 10 pick-up trucks and spare parts @\$10,000 each = \$100,000 18 vans and spare parts @ \$13,200 each = \$237,600 Total: <u>\$337,600</u>
G. Nature of Funding	: Economic Support Fund Grant

- H. Procurement Origin : Most probably Japan
- I. Procurement Source : Most probably Pakistan
- J. Is the commodity sought from a sole or from more than one source? : Bids will be solicited from multiple distributors

### III. DISCUSSION

In the previous A.I.D.-financed Basic Health Services Project, lack of fuel efficient transport for Primary Health Care workers resulted in severe management problems particularly in the areas of supervision and training. In order to address these problems, transport vehicles will be provided under the Primary Health Care Project for two important activities : (A) to facilitate the practical field phase at Rural Health Centers of the mid-level health worker (medical technician) training program by providing one to two right-hand drive 12-passenger vans for each of the 13 new consolidated medical technician training schools which will be constructed or renovated under the Project; and, (B) to facilitate communication and effective supervision at all levels of the Primary Health Care Program and to provide appropriate transport for equipment and supplies and field workers as necessary by expatriate and local consultants and staff from the Federal and four Provincial Basic Health Services Cells by providing ten right-hand drive pick-up trucks (i.e. two each at the Federal and four Provincial Basic Health Services Cells).

Right-hand drive is a necessary safety feature for vehicles in Pakistan where traffic moves forward on the left hand side of the road and hazardous conditions exist due to poor driving practices, little regard for general safety procedures and traffic laws, and poor driving conditions. Another important consideration in vehicle procurement relates to the maintenance and repair capability and the availability of spare parts for vehicles in Pakistan. Due to considerable imports of Japanese-made vehicles into Pakistan, an extensive service and repair network and an adequate spare parts inventory exist for Japanese vehicles throughout the country. There is no such comparable maintenance and repair capability and spare parts inventory for U.S. vehicles in Pakistan particularly in the isolated rural areas where the Project vehicles will be used. Such services are essential to ensure that vehicles can be adequately maintained to facilitate the timely movement of personnel and trainees throughout the country for successful and timely Project implementation.

At the present time, the American Motors Corporation (AMC) is the only U.S. automobile company which manufactures right-hand drive vehicles as part of its regular vehicle inventory. AMC does not currently manufacture the right-hand drive passenger vans and pick-up trucks with the specifications required for this Project.

#### IV. JUSTIFICATION

Section 636 (1) of the Foreign Assistance Act of 1961, as amended, requires A.I.D. to procure U.S. manufactured vehicles but allows for special circumstances that may justify waiving this requirement. A.I.D. Handbook 1, Supplement B, Chapters 4C2d and 5B4d (2) set forth special circumstances under which a waiver may be justified. The circumstances which pertain to this waiver request are the inability of U.S. manufacturers to provide a particular type of needed vehicle, i.e. right-hand drive, the lack of adequate service facilities and supplies of spare parts of U.S. manufactured vehicles, and the unavailability of the commodity from any countries (U.S. and Pakistan) included in the authorized geographic code. Handbook 1, Supplement B, Chapter 4C2d(3) and Delegation of Authority No.40 authorize the Assistant Administrator to waive source/origin requirements in this instance.

#### V. ACTION REQUESTED

For the above reasons, it is recommended that you :

A. determine that pursuant to the waiver provisions of Handbook 1, Supplement B, Section 4C d, a waiver of source/origin requirements is justified, and hereby authorized, to permit the procurement of 10 right-hand drive, diesel, pick-up trucks and spare parts and 18 right-hand drive, diesel, 12-passenger vans and spare parts valued at \$337,600 from countries included in A.I.D. Geographic Code 935; and,

B. certify, by signature below, that, pursuant to Section 5B4c of A.I.D. Handbook 1, Supplement B, exclusion of procurement of these Project vehicles from Free World Countries other than the Cooperating Country and countries included in A.I.D. Geographic Code 941 would seriously impede the attainment of U.S. foreign policy objectives and the objectives of the foreign assistance program.

Approved \_\_\_\_\_

Disapproved \_\_\_\_\_

Date \_\_\_\_\_



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO PAKISTAN

Cable : USAIDPAK

HEADQUARTERS OFFICE  
ISLAMABAD

THE DIRECTOR

USAID/PAKISTAN MISSION DIRECTOR'S WAIVER FOR A.I.D.  
PAYMENT OF INTERNATIONAL PARTICIPANT TRAVEL COSTS

A.I.D. Handbook 10, Chapter 15B1, provides that the cost of international travel, including incidental costs en route as well as the cost of travel between the participant's city and the points of departure and return in the participant's home country, shall be paid by the host government or other sponsor unless, in the case of Mission-funded programs, the Mission Director has justified and authorized full or partial waivers and has so notified S&T/IT.

Training and institution-building are important components of the \$1.625 billion economic assistance program negotiated between the Governments of the U.S. and Pakistan. USAID/Pakistan's experience, however, has been that the Government of Pakistan (GOP), due to serious foreign exchange and budgetary constraints, has been historically unable to fund international travel costs for short-term training programs. The consequence has been that Pakistani participants have, on numerous occasions, been denied worthwhile and much needed training, inhibiting the achievement of project targets.

I have carefully reviewed the advisability of requiring full GOP funding for travel costs for participant training of one year or less and the alternative of funding such travel with grant and loan funds provided through USAID/Pakistan to the GOP. Recognizing the objectives of many of our projects and the fact that project success will be enhanced by encouraging opportunities for short-term training, I have determined that it would be prejudicial to U.S. interests to require that the GOP pay the entire international participant travel costs for training programs of one year or less.

Therefore, on all Mission-funded training programs up to and including one year, USAID/Pakistan shall be responsible for the entire cost of the round-trip economy class air ticket and other necessary incidental costs en route. Where a PIO/P has been originally written for a program of one year or less, but, after the participant has initiated his or her program, the program is extended so that it exceeds one year in total, USAID/Pakistan shall also fund the round-trip ticket. The justification for funding programs that are extended is to minimize administrative problems which are otherwise likely to occur.

On the basis of the above justification and pursuant to Handbook 10, Chapter 15B1a, I, Donor M. Lion, principal officer of the Agency for International Development in Pakistan, do hereby waive the requirement that the host government fully fund international travel for training courses of one year or less and authorize payment with USAID/Pakistan loan and grant funds for travel costs as specified above.

*Donor M. Lion*

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Donor M. Lion  
Director  
USAID/Pakistan

*March 17, 1962*

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Date

PROJECT DESCRIPTION FOR INCLUSION IN  
PROJECT AGREEMENT

A. Background

In 1977, the Government of Pakistan (GOP), recognizing that it was impossible to adequately respond to the health problems in the country with a physician-based system of medical care, launched a rural health program involving the use of paramedics. The GOP's program, which received support from A.I.D. under the Basic Health Services Project (391-0415) between 1977 and 1981, was based on a system of Integrated Rural Health Complexes (IRHCs) consisting of three tiers as follows :

1. a Rural Health Center (RHC) staffed by one male and one female doctor and male and female medical technicians (MTs);
2. satellite Basic Health Units (BHUs) staffed by one male and one female MT; and,
3. one male and one female Community Health Worker (CHW), trained and supervised by the MTs in the nearest BHUs, and living and working in their own village to serve up to 1,000 villagers.

While the previous A.I.D. Project fell short of its ambitious objectives, it did achieve the following results:

1. It introduced a cadre of health providers that was previously non-existent;
2. It firmly established the concept that properly trained paramedics could provide effective, simple, curative and preventive health care;
3. A six-volume, competency-based curriculum for MTs was developed and adopted and, by the end of the project, a total of 85 MT tutors, 124 MTs, and 55 CHWs were trained and deployed;
4. 6 RHCs and 24 BHUs were constructed and fully staffed, resulting in the formation of 6 operational IRHCs; and,
5. 27 MT training schools were established throughout the country and have continued to operate even after A.I.D. input terminated.

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The GOP has firmly adopted this new approach to health care and is proceeding with training of paramedical personnel and the construction of RHCs and BHUs. However, the GOP recognizes the need to strengthen the system in the key areas of management, supervision, and training, and to identify ways to accelerate the recruitment of female health workers. The proposed Primary Health Care Project is designed to build on the accomplishments and apply the lessons learned from the previous Project by assisting the GOP in these areas to improve the quality and expand the coverage of Primary Health Care services in the rural areas. This will be accomplished by:

1. training and deploying significant numbers of female MTs and CHWs to reach women and children who are unable to obtain services because of cultural constraints;
2. increasing the management and supervisory capability at all levels of the health system and institutionalizing a monitoring system to measure program effectiveness;
3. improving the quality of the on-the-job performance of the MTs and CHWs; and,
4. promoting community participation in health activities by an effective outreach program.

As a result of the Project, Federal and Provincial health authorities will be better able to implement those health care interventions which will impact most effectively on diseases of high prevalence or significant morbidity and mortality and to make the RHCs and BHUs truly functional facilities.

#### B. Project Goal and Purpose

The goal of this Project is to improve the health status of the rural population. This will contribute substantially to the Government's overall objective of social and economic development. The Project purpose is to improve the quality and expand the coverage of Primary Health Care services in the rural areas. Measures of purpose achievement by the end of the project include the following:

1. In areas served by the Project:
  - a. at least a 20 percent reduction in infant and child mortality;
  - b. at least a 20 percent reduction in moderate to severe malnutrition; and,
  - c. at least a 35 percent reduction in deaths due to diarrheal disease;

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2. 75 percent of the MTs devoting at least half of their time to training and supervising CHWs;
3. 80 percent of IRHCs with authorized drugs and medical supplies available;
4. 75 percent of BHUs receiving at least one visit weekly from MT supervisors posted at IRHCs; and,
5. 29, 12,7 and 5 or a total of 53 additional operational IRHCs in the Punjab, NWFP, Sindh and Baluchistan, respectively.

### C. Project Outputs

The Project is expected to produce the following outputs which together should achieve the Project purpose:

1. one Federal Advisory Council and four Provincial Steering Committees (one per province) established and functioning effectively;
2. approved annual Provincial operational Primary Health Care plans for each province;
3. a planning and management system for IRHCs implemented with an institutionalized mechanism for continuing analysis and review of the system;
4. a revised MT curriculum and training materials developed and translated into Urdu for MTs and CHWs;
5. all currently deployed MTs and tutors retrained in the revised curriculum;
6. each MT deployed by December 1975 training and supervising at least 10 CHWs;
7. 13 permanent consolidated MT training schools with hostel accommodations constructed or renovated;
8. a simple surveillance system designed and in use to monitor IRHC operations; and,
9. at least 40 percent of all MTs and CHWs are females.

### D. Project Components

The proposed Primary Health Care Project will provide funds in support of an integrated package of five components which are designed to achieve the above objectives :

## 1. Program Management

High level Federal and Provincial Advisory Committees will be created to formulate policy and provide effective leadership. The Committees, project managers, and other key officials involved in the Primary Health Care system will be supported and strengthened by : long and short-term expatriate and Pakistani consultants; management workshops for personnel at all levels; participant training in the U.S. and third countries; and in-country observational visits. Provincial operating plans, management systems and procedures, and operating manuals for RHCs and BHUs will be developed as a part of this process.

## 2. Medical Technician and Community Health Worker Training

Long and short-term U.S. and Pakistani training advisors will assist GOP health officials to revise the curriculum and to develop training materials, both of which will be translated into Urdu, for both MTs and CHWs and to design and conduct training workshops, including in-service workshops for deployed MTs. Participant training in the U.S. and third countries will be provided for key personnel. Thirteen consolidated permanent MT schools will be constructed or rehabilitated, furnished and equipped, and provided with transport. Hostels will be built at each school for male and female students, the latter being especially important for the recruitment of females.

## 3. Program Operations

In addition to improved management and training inputs, the performance of MTs and CHWs will be enhanced by the provision of suitable uniforms, medical kits, and low-cost transport (probably a motorized bicycle). A health promotion and education campaign will be designed and implemented to enhance the status and acceptance of field workers and to foster community awareness and participation in the health system.

## 4. Research and Evaluation

Field studies will be undertaken at the beginning of the Project to provide baseline data on the prevalence and associated mortality of selected diseases to be used for a major end of project evaluation of program effectiveness, which will be conducted jointly by the GOP, WHO, UNICEF and A.I.D. Other research to be undertaken during the Project will include the collection of data on mortality trends of children 0 to 4 years of age in selected areas served by the Project and research on recurrent costs. In addition, Project progress will be assessed annually in evaluation workshops involving Federal and Provincial health personnel, Project staff, and representatives of A.I.D. and WHO.

## 5. Accelerated Expanded Program of Immunization (EPI)

As one of three accelerated interventions in health, the Government is launching an Accelerated EPI, a two-year effort designed to immunize 15 million young children against six preventable diseases that cause about 33 percent of all deaths in children under five. The Project will support this effort by financing equipment for the production of DPT vaccine, vaccines, and simple cold storage equipment. In addition, funds will be provided to procure chemicals for the preparation of oral rehydration salts. This assistance will be provided in a manner that will reinforce the Primary Health Care Project's long-term institution-building objectives.

### E. Implementation Plan

#### 1. A.I.D. Responsibilities

A.I.D. will be responsible for: (a) contracting with all expatriate and Pakistani advisors; (b) procuring all off-shore project-financed vehicles and commodities and other commodities as agreed to by the GOP and A.I.D.; (c) contracting with a Pakistani Architectural and Engineering (A&E) firm to design and supervise the construction or renovation of Medical Technician training schools; (d) contracting with Pakistani firm(s) to construct or renovate the schools; (e) financing all costs of in-country training workshops, the translation and printing of training materials, and research studies; (f) arranging for short-term training in the U.S. and other countries for selected participants; and, (g) providing sufficient staff to participate in the scheduled Project evaluations and to liaise with appropriate Federal and Provincial Government agencies in the implementation of this Project.

#### 2. Federal and Provincial Government Responsibilities

Project activities will be implemented by the four Provincial Departments of Health under the overall guidance and direction of the Federal Ministry of Health.

The Federal Ministry of Health will be responsible for: (a) preparing a plan of operations for the life of the Project; (b) establishing a Federal Advisory Council for the Project; (c) ensuring that its Basic Health Services Cell is fully staffed; (d) coordinating all in-country training workshops and seminars; (e) contracting in the first Project year with an appropriate Pakistani firm to design appropriate transport for MTs, visual training aids, other training materials and MT and CHW promotional materials;

(f) distributing project-financed equipment and training supplies; and, (g) arranging, coordinating, and participating in Project evaluations and project-financed research activities.

The Provincial Health Ministries will be responsible for:  
(a) constructing Rural Health Centers and Basic Health Units and operating Integrated Rural Health Complexes; (b) preparing annual provincial plans for the Project; (c) establishing Provincial Steering Committees for the Project; (d) operating, supervising, and evaluating MT schools; (e) creating posts for newly graduated MTs and arranging for their immediate deployment; (f) training, monitoring and evaluating CHWs; (g) developing management and operational rules and regulations for IRHCs; (h) nominating and releasing Provincial health personnel for the various management and training workshops held over the life of the Project; and, (i) providing staff to participate in Project evaluations.

PRIMARY HEALTH CARE PROJECT

SUMMARY OF PROJECT COSTS BY EXPENSE CATEGORY AND SOURCE OF FUNDING

(in 000s)

Expense Category	FY 1982		Life of Project <sup>1/</sup>	
	A.I.D. Dollar Grant (in \$)	GOP (in Rs)	A.I.D. Dollar Grant (in \$)	GOP (in Rs)
Technical Assistance	2,017	-	2,856	-
Training	1,218	5,765	3,963	61,920
Commodities	866	1,340	4,726	46,200
Other Costs <sup>2/</sup>	932	37,895	5,670 <sup>3/</sup>	326,6m <sup>4/</sup>
Total	5,033	45,000	17,215	434,720
Contingency	467	-	2,785	-
GRAND TOTAL	5,500	45,000	20,000	434,720

<sup>1/</sup> Subject to the availability of funds to A.I.D. for this purpose, and to the mutual agreement of the parties to proceed at the time of each subsequent increment.

<sup>2/</sup> Includes costs associated with construction, research and evaluation, and operational costs.

<sup>3/</sup> Includes \$5,443,000 for construction or renovation of 13 Medical Technician Training Schools.

<sup>4/</sup> Includes Rs 275,600,000 for the construction of 53 Integrated Rural Health Complexes.

PROPOSED MANAGEMENT PLAN <sup>a/</sup>

A. Management Development Plan

A major objective of the Primary Health Care (PHC) Project is to strengthen the management infrastructure of the rural health services delivery system to adequately support functioning Integrated Rural Health Complexes (IRHCs). One of the most difficult problem areas in rural health services delivery is the inadequacy of planning, management, and supervisory capability. While the Pakistan Government has recognized the need for improved planning and management within hospitals, it is only at the threshold of understanding the need for improved planning and management of rural health services. This need is particularly critical for IRHCs which involve a higher ratio of para-professional workers to professional workers than do hospitals, requiring greater attention to supervision, performance evaluation and continuing education to sustain the quality and productivity of these para-professional workers (MTs and voluntary CHWs).

Sound strengthening of existing planning and management practices requires two major kinds of interventions:

1. Analysis and redesign of existing management policies, procedures and practices for each of the following management support/control systems, and then the implementation of improvements. This usually requires Provincial ministerial level approvals (and often Federal government level also); the preparation, publishing and distribution of new and revised policies and procedures; retraining of existing workers; and follow-up evaluation:

- a. Program and operations evaluation and planning;
- b. Supervision and patient referral;
- c. Personnel;
- d. Drug, medical and general supplies;
- e. Transportation;
- f. Communications;
- g. Facility and equipment maintenance;
- h. Information; and,

<sup>a/</sup> Prepared by Mr. Ernest Petrich, Management Consultant, University of Hawaii Medex Program, April 1982.

1. Finance.

2. Preparation of new and revised management training curricula; the training of tutors; and, the conduct of in-service training (for existing workers) and pre-service training (for new workers), for the following categories of personnel who have a function in IRHC activities:

- a. Medical Officer administrators posted at Provincial, Division and District levels;
- b. Medical Officers who supervise IPHCs and who are posted at RHCs;
- c. Supervisory level Medical Technicians posted at RHCs to supervise other Medical Technicians;
- d. Medical Technicians; and,
- e. Management specialists and technicians working within any of the above management support/control systems and directly serving the IRHCs.

Experiences in strengthening the management infrastructure for rural health services of developing countries elsewhere, supported by experiences to date in Pakistan, have amply demonstrated some very basic development principles that, if followed, result in a far greater chance of success in management systems strengthening efforts. These principles in the management improvement processes, which will be followed under this Project, are as follows:

1. The application of western management technology usually must be tempered by careful adaptation to cultural and environmental conditions. There are times when such technology must simply be discarded and indigenous practices accepted and strengthened.
2. Existing management support/control systems, regardless of their deficiencies, should usually be strengthened rather than replaced by new and different systems.
3. Resistance to change in existing systems by personnel working within these systems and others with vested interests is minimized when the need for change is focused specifically on the functional requirements of health care providers - in the case of Pakistan, the peripheral health workers of IRHC - Medical Technicians and Community Health Workers.
4. Also to minimize resistance to change, officials, technicians, and other having vested interests in the system and who will have responsibility for, or influence over,

maintaining the systems, should be intimately involved in their review, in determining changes to be made, and how these should be implemented and maintained.

5. An effective systems review should include a detailed analytical study utilizing basic management analysis methods to ensure that misinformation and false assumptions do not become the basis for decisions on how the system should be changed and maintained in the future.

6. There are usually a variety of alternatives to consider for strengthening an existing system. A group process approach to identifying alternatives is usually most effective and will often result in selection of improvement actions least difficult to implement.

7. A decentralization of authorities, responsibilities, and functions is usually recommended when lower echelon officials participate in the process of deciding how to strengthen a system.

8. The permanency of system strengthening efforts is directly correlated with the extent to which changes in system design are formalized by government decree, by publication and issuance of new or revised operational policies and procedures, and by the incorporation of these materials in the pre-service and in-service training curricula of all workers that are affected by the changes.

9. The lead-time required to achieve sound system strengthening is usually seriously underestimated because of failure to recognize the length of time required to establish and carry out an effective group process strategy pursuant to the principles described above and also the failure to recognize the delay in obtaining formal approval of system changes.

#### B. Program Operational Planning

There has been a continuing problem, within each of the four provinces, in formulating sufficiently complete and detailed multi-year and annual plans for the Basic Health Services Program. Both planning skills and a process that involves lower echelon officials and incorporates the information they have, are needed. More attention needs to be given to management and resources planning than to classic health planning at this stage in the development of IRHCs.

Under the previous A.I.D. Project, some analysis was conducted of existing planning activity and recommendations

were submitted to and endorsed by a National Management Workshop (September 1980). Follow-up at the Provincial level has yet to occur. Development of Provincial operations plans for the Primary Health Care Project during the first Project year is a critical juncture.

The Project will employ and post a senior Pakistani management specialist advisor in each province to assist with the development of more adequate program planning practices. Initially, this will include a program planning process to achieve comprehensive and detailed multi-year project (and program) operations plans by the end of the first Project year, to assist with developing an improved annual planning process, and the subsequent annual updating of the plan for Primary Health Care services development.

C. Guidelines for Project Management (The following guidelines are illustrative only).

During the first Project year, and in conjunction with the posting and orientation (and training if necessary) of Provincial management advisors, the proposed Provincial Steering Committees will provide guidance and direction to the Project Director on Provincial adaptation of Federal policies and guidelines contained in the "Management Systems Studies for Establishment of and Operation of Integrated Rural Health Complexes" prepared by the National Basic Health Services Cell and the University of Hawaii. The Provincial management advisor will assist the Provincial Project Director in preparing appropriate briefing papers for distribution to Division and District level officials, in preparation for a Provincial level Planning and Management Workshop to be held as early as possible during the first Project year. The purpose of this Workshop will be to:

1. discuss Provincial level issues involving multi-year and annual development (Planning Department) and operations (Finance Department) plans for Primary Health Care (IRHCs), which will provide the Provincial framework for District level operations and planning to follow;
2. provide orientation and training in planning at the District level;
3. consider national level guidelines recommended by the "National Management Workshop in Primary Health Care" and to provide the Provincial policy framework for further more detailed analysis of IRHC management support/control systems; and,

4. provide orientation and training in management systems analysis and design.

The following officers should participate in the workshop:

1. PHC Project Director (as Chair);
2. Provincial BHS Cell staff;
3. appropriate Department of Health officials involved in planning and budgeting;
4. Division level health officers;
5. District Health Officers (DHOs) and Assistant District Health Officers (ADHOs) serving in Districts which contain or will contain an IRHC; and,
6. the Provincial management advisor and the Provincial training advisor in each province to serve as technical resources persons.

The Workshop will be planned and conducted using structured worksheets to facilitate participation of workshop members, in both definition of problem/issues and identification and selection of solutions. Upon completion of the Workshop, the Provincial management advisor will assist the Project Director in preparing appropriate reports and related staff papers for distribution to review and approval levels of the system, and then for distribution to Division and District level officials, to guide their subsequent planning and management development activities.

Following the Provincial Workshops, and after the Provincial level policy framework for Primary Health Care has been reviewed and approved by the Secretary of Health and the Provincial Steering Committee, a series of 4-5 day District Planning and Management Workshops will be held, with the assistance of the Provincial management advisor. The purpose of these workshops is to :

1. develop detailed District operations plans and budgets in accordance with Provincial level BHS program policies and plans; and,
2. provide orientation and training in operations evaluation and planning at the District and RHC levels to workshop participants.

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Participants in District Workshops are recommended to include:

1. District Health Officer (as Chair);
2. appropriate ADHO's (if available);
3. Division Health Officer (as resource persons, if available);
4. selected Medical Officers posted at RHCs who are, or may be in the future, involved in the management of IRHCs;
5. selected supervisory level Medical Technicians who are most familiar with conditions at BHUs and with CHWs;
6. representatives of District and local government elected bodies; and,
7. the Provincial management and training advisors to serve as technical resource persons.

District Workshops are expected to produce, with some additional follow-up writing, completed detailed operations plans for the Primary Health Care Project for the subsequent 4-5 year period. Such plans will be submitted to the Provincial Project Director (through Division officials when available) for review and consolidation at the Provincial level. The Provincial management advisor will assist the Project Director in preparing the final multi-year Provincial operations plan for the Primary Health Care Project, and related Project implementation plans, which are to be completed by end of the first Project year. Success of the above planning process depends greatly upon adequately skilled and motivated Provincial management advisors to assist with, and guide, the process.

The Project will employ and provide a senior level management advisor to the Federal Basic Health Services Cell. This Federal level advisor will assist with planning activities at the Provincial level, including the provision of orientation and training to Provincial (and Division) level officials in program and operations planning, management analysis and management planning, as required. In the event one or more of the Provincial management advisors lack knowledge and skills in these areas, a special

training course will be developed and conducted by the Federal management advisor to upgrade their capability.

While the first Project year will concentrate on the formulation of realistic and comprehensive operations and Project implementation plans for each Province, the planning process described above will also provide an opportunity for the Project Director and his advisors to assess the planning process and develop a detailed proposal to guide the subsequent year's planning including detailed procedures and formats to be followed at each of the different echelons of Primary Health Care. Such Provincial level policies and procedures, after review (and revision if needed) at the subsequent year Provincial Planning and Management Workshop, will be submitted for formal Government approval, published and distributed to appropriate officials including DHOs, MOs and to Federal level officials responsible for program and operations planning within Provinces, including officials of the Federal Basic Health Services Cell.

D. Analysis and Redesign of Management Support/  
Control Systems

The second Project year will concentrate on the implementation of Project plans including more detailed analysis, and redesign as needed, of the management support/control systems discussed below, which will be done within the framework of Provincial guidelines established as a result of the first year's Provincial Planning and Management Workshop, and the subsequent review and approval process. The second Project year will focus on more detailed procedural matters within approved Provincial policy for each of the following management support/control systems. This will result in the preparation, publishing and distribution of standardized operations manuals for IRHCs, which process is described below:

1. Supervision and Referral System

Supervision and patient referral are linked together by the very concept of IRHCs, in that the IRHC consists of a tiered manpower system of increasingly sophisticated health care, beginning with the relatively simple interventions that CHWs can deliver at the village level. Since CHWs and MTs are trained to know their technical limits and are required to refer patients requiring more sophisticated care to the next higher level of the system, their supervisors are referral points which operate as an integral part of the supervisory, performance evaluation and continuing (on-the-job) education system within IRHCs. This concept extends beyond IRHCs, to back-up tehsil and district hospitals, which handle cases that cannot be properly handled by doctors posted at

the IRHCs. Supervision and referral are critically important aspect of IRHCs, and little work has yet been done in developing this system, except for inclusion in CHW and MT training curricula knowledge about "when to refer."

Provincial approved procedures, including standards for supervision and performance evaluation at every level of the system, will be established and included in IRHC operations manuals and position descriptions of supervisors. Also, pre-service and in-service training curricula will be developed or revised, covering each of the following categories of personnel:

- a. MTs supervising CHWs;
- b. MTs supervising other MTs;
- c. RHC Medical Officers supervising MTs, including supervisory level MTs;
- d. DHOs and ADHOs supervising RHC Medical Officers; and,
- e. Medical Superintendents of referral hospitals receiving patient referrals from IRHCs.

## 2. Systems for Drugs, Medical and General Supplies

Under the previous A.I.D. Project, this problem area was studied extensively and policy recommendations remain pending. Neither Medical Officers at RHCs nor MTs at BHUs and RHCs can function effectively without drugs and supplies. Chronic drug shortages at rural health facilities have contributed to credibility problems with the communities served, and also under-utilization of Government health service after people learn that drugs are only consistently available at hospitals or from the private sector, in which case, they develop the habit of bypassing RHCs and EHUs altogether. Availability of drugs is a critical component of a credible rural health delivery system, and without an adequate and appropriate supply of drugs, on a continuing basis, community acceptance of new Primary Health Care services will be difficult to establish and sustain.

By the second Project year, Provincial policies and guidelines including standardized formularies, should be established to provide the basis for developing more detailed procedures covering the ordering or purchasing, distribution, storage, security and utilization of drugs, medical and other supplies within IRHCs by Medical Officers, MTs and CHWs. Such procedures will be included in the IRHC operations manuals.

### 3. Transportation

As previously discussed, mobilizing and deploying para-professional workers requires continuing supervision, performance evaluation and continuing education, if this type of delivery system is to be sustained, and this cannot be done without adequate and appropriate transport. MTs must go to the villages to mobilize, train and supervise CHWs. Medical Officers and MTs posted at RHCs must travel to BHUs to evaluate and supervise as well. Not only must supervisors be mobile, but the supply systems supporting the rural periphery cannot function without adequate transport. This problem area was studied under the previous A.I.D. Project. The resulting policy and guideline recommendations for an improved IRHC transportation system remain pending, hopefully to be resolved by Provincial governments during the first Project year. During the second Project year, procedural level matters will be resolved including utilization, performance and maintenance standards for vehicles. The Project will also provide MTs with transport and spare parts.

### 4. Communications

One of the biggest problems in developing and sustaining management capability is the lack of adequate communications and communications practices among different elements of a rural health services delivery system, and Pakistan is no exception. On the contrary, some regions of Pakistan, because of highly mountainous terrain, expansive deserts, or flood areas during monsoon seasons, are cut off for long periods without any kind of adequate communications. In the first Project year, Provincial policy guidelines for communications among different elements of the IRHC scheme will be developed, and these will provide a framework for procedural level problems to be resolved during the second Project year and will eventually be published in IRHC operations manuals. Communications systems should not be viewed as substitutes for adequate transportation and on-site supervision, but rather as an important supplement to these management support/control systems. Consequently, carefully prepared policies and procedures are required to ensure that appropriately designed communications systems are utilized correctly.

### 5. Information

Effective program evaluation, planning and management cannot be done without availability of the right kind of data at the right time. For the past several years, numerous studies have been conducted in this problem area and, for Pakistan, the problems are well-documented. (Besides

the National Management Workshop recommendations, see "Re-organization of Health Statistical Services in Pakistan, Plan of Action", dated February 1981). Existing problems include: too much data being collected and not used; data processing capability seriously lacking; data utilization lacking due to inappropriate data being collected and/or not processed into useable form; and general lack of knowledge and skills in using data for planning and management at all levels of the system. As the Federal and Provincial Governments establish policies and guidelines, procedural issues can be addressed for IRHCs, including the procedures to be used by CHWs, MTs and MOs posted at RHCs in collecting, collating, analyzing and using data involving indicators of health status, service and resource utilization, which they must do if sound operations and resource utilization, which they must do if sound operations evaluation, planning and management are to be achieved. Such procedures will be included in IRHC operations manuals as well as in the training curricula of these health workers.

#### 6. Maintenance of Rural Health Facilities and Equipment

A variety of studies over the past few years have indicated almost a complete lack of maintenance capability for rural health services, including IRHCs. This results in premature deterioration of buildings and equipment and a tremendous waste of capital resources. The Project will not provide transport and other equipment unless there are definite arrangements to significantly upgrade maintenance practices including adoption of the concept of "preventive maintenance". Federal level policy guidelines are currently pending review and adaptation by Provincial Governments. During the second Project year, procedural issues will be addressed for IRHCs and included in IRHC operations manuals.

#### 7. Personnel

The existing public service system within Provincial Governments, which operates within Federal policies and procedures, served as a serious obstacle to the timely establishment and development of the previous Basic Health Services program. Appropriate grade levels for MT tutors and supervisory level MTs provide a career ladder and mobility potential, as yet, not achieved. This will continue to be a difficult challenge, but the achievement of a career ladder concept for MTs is absolutely essential if the emerging Primary Health Care Program in Pakistan is to be permanently institutionalized. This will require much discussion and planning within Provincial Governments, and much staff work to prepare justification papers. The Project proposes, as supervisory level MTs posted at RHCs mature in their jobs, that eventually a senior male and a senior female MT be posted at the District level to assist the DHO in day-to-day

administration and supervision of IRHCs. This will also provide higher graded positions for those especially talented and motivated MTs and give greater career incentives for all MTs. In addition to a rationalized grade structure for workers within IRHCs, matters related to recruitment, selection, deployment and transfer of workers (particularly female MOs and female MTs) and other matters, will be addressed during the first Project year, in conjunction with detailed operations and project implementation planning, and during the second Project year, on matters of a procedural nature which will be reflected in the subsequently publicized IRHC operations manual.

### 8. Finance

The handling of Government funds and related fiscal control becomes an increasing problem as the health services delivery system expands to the most peripheral areas through growing numbers of IRHCs. With the beginning of registration fees for outpatient services at RHCs and the sale of family planning and other supplies, new problems arise which must be addressed in the form of new and/or revised Provincial level policies and procedures. This area will require continuing review and adjustment over time as the need to revise fees and change practices in handling funds occurs. The implication of MOs charging registration fees while MTs currently do not charge for similar services, has implications for future utilization of Primary Health Care services and may have to be addressed. Improved funding may eventually depend upon IRHCs' generating a larger share of the operating (revenue) budget through increased fees and charges.

The finance system also involves policies and procedures covering local purchasing and the use of discretionary District funds to cover exigencies. Present practices need to be reviewed and Provincial policies and guidelines established before procedural level issues and practices can be considered during the second Project year. Authorized financial management policies and procedures for IRHCs should be published in the IRHC operations manuals and used as a continuing reference to guide practices at RHCs and BHUs.

### E. The Management Development Process

Each of the above management support/control systems will be further studied and improvements designed and implemented to significantly strengthen the management of the PHC Project. This will require a long and continuing process over the life of the Project. As described above, the first Project year will be devoted to developing and formalizing Provincial level policies and guidelines for procedural level planning to be conducted during the second Project year. The Federal Basic

Health Services Cell will provide national leadership and guidance to this process with assistance from the Federal management advisor. Federal BHS Cell assistance will include:

1. preparation of staff papers and reports for consideration by the Federal Advisory Council on management infrastructure development needs and issues;
2. provision of orientation and training to Provincial officials on the strategies and processes that should be followed and analysis, redesign and implementation of management systems. This will be done at a National Management Workshop in Primary Health Care to be held towards the end of the first Project year, for the purpose of:

- a. providing each Provincial Government with an opportunity to exchange information on their proposed policies and guidelines for strengthening management support/control systems and to learn about what is being done elsewhere before they finalize and distribute them to Districts to guide procedures, analysis and design work in the second Project year;

- b. seeking agreement on national standards for management support/control matters deemed appropriate; and,

- c. providing further orientation and training to Provincial officials in management systems analysis, design and implementation methods appropriate for District management development work.

Participation in this workshop should include:

- a. Director-General of Health (to serve as Chair);

- b. members of the Federal Basic Health Services Cell;

- c. representatives of each Provincial Government that have been involved in considering national policy guidelines for strengthening management support/control systems and in the formulation of Provincial policies and guidelines. This would include officials of specialist management agencies such as personnel, finance, and the like; and,

- d. the Federal management advisor and each of the four Provincial management advisors to serve as resource persons, and such short-term specialist consultants deemed appropriate also to serve as resource persons.

This National Management Workshop will be organized into sub-workshop groups for each management system to be considered and time will be provided for thorough and detailed exchange of views in sub-workshop groups.

3. the planning and conduct of Provincial Level Management Workshops early in the second Project year, for the following purposes:

a. to promulgate approved Provincial policy guidelines for analyzing and redesigning management systems within Districts, which is to be accomplished by the end of the second Project year;

b. to provide further orientation and training to Medical Officers posted at Districts and IRHCs (or who are expected to be posted in the future), on matters related to management systems, in formulating operating procedures for IRHCs; and,

c. to assist DHOs for Districts that have (or will have) responsibility for IRHCs in designing the specific management systems development process for their Districts to be implemented during the following years.

Participation in the Provincial Management Workshop should include:

- a. Provincial Director of Health Services (Chair);
- b. officials of the Provincial Basic Health Services Cell;
- c. appropriate Division and District level officers;
- d. selected MOs and MTs posted at existing or proposed IRHCs; and,
- e. the Federal management advisor and the Provincial management advisors to serve as resource persons.

4. During the following year, the Provincial management advisor will work closely with DHOs in Districts having existing (or proposed) IRHCs to assist in management systems analysis and redesign activities, in the exchange of information among those Districts, and in the preparation of draft procedures proposed for inclusion in the IRHC operations manuals. (If the Provincial Basic Health Services Cell has employed a permanent management specialist by this time, that person will work closely with the Provincial management advisor to obtain on-the-job training in management development knowledge and skills).

5. At the beginning of the third Project year, each Province will plan and conduct a Management Workshop for the following purposes:

a. to reach final agreement on operating policies and procedures, including standardized forms, to be included in IRHC operations manuals;

b. to provide further orientation and training to MOs posted at District and IRHC levels (or expected to be posted) and to supervisory level MTs posted (or expected to be posted) at RHCs in implementation of new (or revised) management systems procedures to be included in published IRHC operations manuals; and,

c. to assist MOs and Supervisory level MTs in planning for implementation of management systems changes which will occur during the third Project year.

6. Early in the third Project year, and after the above Workshops are held, the Provincial management advisor will assist the Project Director and other Provincial officials in preparing final drafts of proposed IRHC operations manuals and in designing and arranging for a system to periodically issue updated procedures for inclusion in these manuals as may be required in subsequent years. A separate Operations Manual will be prepared for BHU operations, and a longer more complete IRHC Manual will be prepared to guide operations of the overall IRHC, which will include the BHU Operations Manual. These manuals will be distributed to existing and future IRHC workers, at all appropriate levels, who will be trained in their use. The operations manuals will also be incorporated in the pre-service curricula of new health workers, particularly MTs (See Annex J., Proposed Training Plan).

In conclusion, the management development plan for Basic Health Services in Pakistan, represents a reasonable and step-by-step approach which reflects sound management development principles described at the beginning of this section. It is a time-consuming and lengthy process which requires close collaboration at all levels of the service delivery system and competent and motivated technical advisors. By providing a highly qualified senior management specialist advisor at the Federal level, by employing senior management specialist advisors for each province, and by providing for all related operational costs including transport, the Project will demonstrate the need for permanent (non-medical doctor) management specialists within the Federal and Provincial Basic Health Services Programs. The Project will also pay

for all planning and operating costs of conducting the workshops described above, including travel and per diem expenses of workshop participants and special equipment, provision of supplies and training aids, typing, printing and/or reproduction of papers and reports, and other related expenses to ensure that these workshops are adequately and timely planned and conducted. The Project will also pay the costs of printing and distributing IRHC operations manuals.

## PROPOSED TRAINING PLAN <sup>a/</sup>

### A. Educational Materials

At present, there are no adequate educational materials to train Community Health Workers (CHWs). Medical Technicians (MTs) have a good manual for training CHWs that will be translated into Urdu (the present CHW Urdu manual is not a trainers' manual). Complementary visual aids will be designed to assist the trainers and also to provide the CHWs with materials that they can use when educating the villagers. Adequate manuals and guides for CHWs to use at the village will be produced. Some CHWs are illiterate, and all materials developed, including manuals and guides, will be designed for use by illiterate as well as marginally literate workers.

### B. Curriculum

The present curriculum for training MTs has given major emphasis to curative medicine. This is one of the major reasons MTs have considered themselves primarily as mini-doctors and have forgotten that their main role is in the area of community health, preventive medicine and sanitation.

Greater emphasis must be given to the Community Health module in the MT curriculum, and therefore the MT training curriculum must be revised in the first year of the Project to include only basic curative medicine required to answer the needs of the population MTs will be serving and to emphasize the preventive/promotive aspects of community medicine. A majority of MTs lack fluency in English. Therefore, all educational materials will be translated into Urdu so they will continue to be a valuable resource to the MTs in their daily work.

The Federal BHS Cell will oversee revision, adaptation, translation and printing of the modular curriculum. This activity will be initiated early in the Project and will be completed by the end of the first Project year to stay ahead of training requirements. The Federal BHS Cell will coordinate training in the new curriculum for the tutors of the MTs. Prior to the opening of each new school cycle, refresher in-service tutor training will be conducted.

<sup>a/</sup> Prepared by Ms. Adriana Rothkegel, Health Training Specialist, Guatemala, April 1982.

### C. Training

In order to have meaningful changes in the community with regard to health matters, it is essential that the health workers be made conscious of the need and importance of such changes. MTs already deployed will be retrained in the revised curriculum to insure their understanding of their proper role in the health system, and to provide them with the necessary tools to perform to the best of their abilities in serving the community and in training CHWs.

Eight workshops will be given in the first Project year at different Provincial sites to retrain MTs already deployed in IRHCs or in sites selected to become IRHCs. Selections of the facilities where training will take place will be done by the Provincial BHS Cells in collaboration with the Provincial training specialists. Training will be given by the Provincial training specialists, selected tutors and the long-term training advisor assigned to the Federal BHS Cell.

It is known that paraprofessionals have a great need for supervision and support in order to continue to work effectively, especially at the village level. At the present time, MTs who are posted at RHCs and have responsibility for supervision of other MTs have not had any training in their role as supervisors. This Project will train the MT Supervisors in the first Project year and will give periodic in-service training to them throughout the Project life. Six training workshops will be given in the first Project year to MTs who will perform as supervisors, and such workshops will be conducted as a formalized training program providing a formal certificate upon workshop completion which as proposed elsewhere, will entitle the supervisory level MT to a higher pay and grade level.

After the retraining of MT supervisors in the first year, continuing education will be routine for all MTs. This will be done through periodic workshops for MTs and MT supervisors, to update their knowledge and skills so they can perform their daily tasks. CHW training will be continued throughout the Project. This training will be carried out by the MT both at the BHU and in the villages.

### D. Community Health Workers (CHW)

CHWs will serve under the MT at each BHU. Each MT will have ten CHWs to train, supervise and support. It is anticipated that there will be a male and female worker in each village; the two will serve up to 1000 people. They will provide some simple curative health services, but a greater emphasis will be given to preventive health care.

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Consideration will be given to preparing different curricula for male and female CHWs. Greater emphasis will be given to females in the areas of maternal and child health care, nutrition, childbirth, personal hygiene, and the like. Male CHWs will emphasize environmental sanitation. Both will be responsible for curative work,

After an MT identifies CHW candidates at each village, and CHWs are selected from among the candidates by the village council, the CHWs will start receiving training once a week. Every other week they will be visited in the village by the MTs and practical issues will be presented and discussed. Also, every fifteen days, they will meet in a group with other CHWs at the BHU to learn simple medical skills and to acquire knowledge about preventive medicine. Having training sessions with several CHWs present offers the MTs an opportunity to use CHW training aids more efficiently.

The CHW training program will be a continuous process. The intent is to establish a training experience that will consider different learning styles of people which are based on a varying combination of experience, perspectives, concepts and affirmation of reality. A successful learning process should have these elements:

1. People learn more easily in situations of mutual respect, cooperation and trust. Thus the effective aspects of an individual cannot be divorced from his intellectual and cognitive growth. If CHWs are going to be a combination of illiterate and semi-literate villagers, CHW trainers must demonstrate respect for people that do not have formal education. Each person is filled with innumerable experiences from which everybody can learn, and everyone will benefit from a dialogue where people are used to their fullest potential. With frequent meetings between MTs and CHWs alternating between the village and the BHU, each will learn from the other and the effectiveness of the MT/CHW team will be increased.

2. Adults learn much easier when they set their own goals and actively participate in the decision-making process. In the learning environment, CHWs should be encouraged to enter into this learning process as participants. The Project should not promote a learning environment where the individuals come to be objects of the MTs' training activity.

#### E. Medical Technician (MT) Training

Major gaps have been identified in the training of MTs and with poor supervision and no continuing education, there is no way to close the gap. To upgrade their performance, all MTs will be retrained and made familiar with the revised curriculum and they will be taught new techniques for training

of CHWs. After this initial retraining, all MTs will have continuous education through their supervisors and through periodic workshops at the IRHC.

Each MT will have an average of ten CHWs to supervise. They should spend half a day with each CHW every two weeks working with them in the village and half a day with all CHWs every two weeks meeting at the BHU to continue the training process.

The MT supervisors will be based at the RHC and will have ten MTs to supervise at 4 BHU complexes. The supervisors should spend at least half a day every two weeks with each MT to give the support needed.

### F. Training Schools

Among the problems currently affecting the quality of training in the MT schools, the following stand out as being in need of attention:

1. School facilities are not designed to foster effective education. In general, they have small rooms, which were designed for other purposes and are crowded and poorly lit.

2. Tutors are not enthusiastic about being assigned to these posts. They have not been trained to be tutors and they do not have the inclination to perform as tutors.

To improve these conditions, as well as address other problems such as recruitment of female students, a consolidation of present schools is recommended. Model schools, hostels and quarters for tutors will be constructed in all provinces at the divisional level at sites to be selected by Provincial officials. The new schools will be located in small District headquarters towns, but they will serve an entire division. Equipment and educational materials will be given to all schools so tutors will have the necessary tools for high quality training. Incentives will be given to tutors and their MT assistants to motivate them to take this post and to perform their duties for a complete 18-month school cycle. At present, the tutor dropout rate is very high.

In order for the MTs to be able to train the CHWs within the context of a participatory philosophy, they themselves must learn in a similar situation. MTs cannot be expected to act as facilitators if they have been taught in the more traditional style. In other words, the philosophy of learning will have to change in the MT training schools if any change is to be seen at the CHW level.

**G. Specific Training Plans**

Plans for the various proposed workshops and courses are provided below:

1. Title : National PHC Orientation Seminar/Workshop
- Rationale : A problem in the past has been that newly appointed officials, from Medical Officers posted at RHCs to Provincial Secretariats of Health have not had sufficient knowledge of the PHC Program to allow them to function effectively.
- Objective : To enable participants to upgrade their knowledge of the status of the PHC Program and to reach a consensus on the kinds of inputs required of them in implementing the Program.
- Type of Participants : Medical Officers, District Health Officers and other newly assigned officials who have responsibility for some aspect of the PHC Program.
- Number of Participants : 150
- Number Per Workshop : 25 - 30
- Number of Workshops : 5
- Duration : One week
- Frequency : Annually
- Location : Islamabad
- Facilitators : Federal Training Advisor, Federal BHS Education Advisor, Deputy Director BHS, Provincial Training Specialists, Provincial Management Advisors.
2. Title : In-Service Training for Tutors
- Rationale : After completion of curriculum revision, attention will be

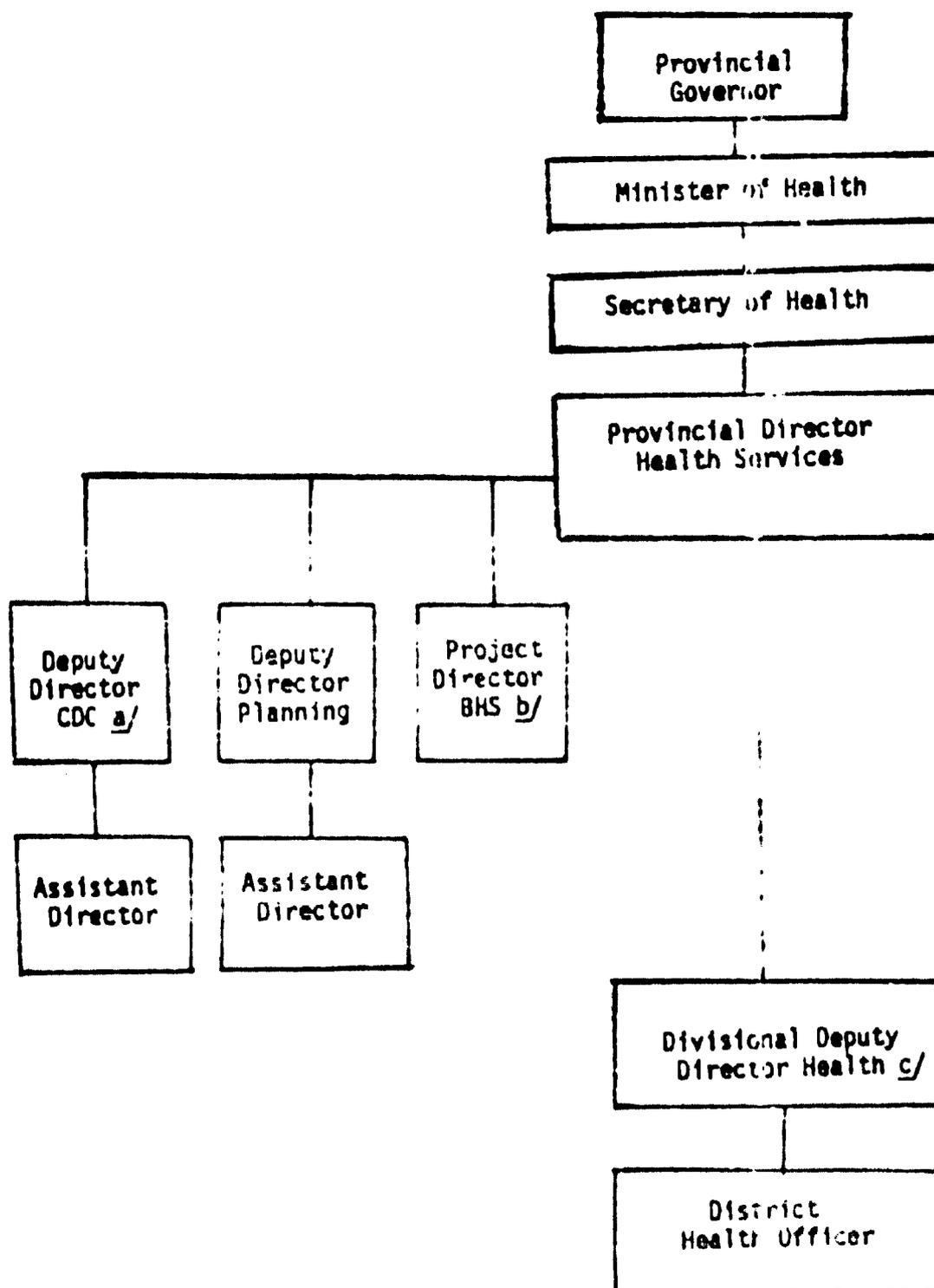
- : focused on the quality of training at the MT training schools. There is a need to standardize the training. To accomplish this, tutors will be given in-service training periodically after each school cycle where they will be encouraged to use a dynamic teaching methodology.
- Objective** : To upgrade MT tutors' knowledge and skills on the new curriculum and training techniques; to familiarize the tutors with formative evaluation instruments and methodology; and, to make recommendations for the improvement of the training schools.
- Type of Participants** : Tutors of MT Training Schools.
- Number of Participants** : 180
- Number Per Workshop** : 15 - 20
- Number of Workshops** : 9 (some tutors will have gone through training more than once).
- Frequency** : Periodically, after each school cycle.
- Duration** : 4 Weeks
- Location** : In each Province on rotational basis.
- Facilitator** : Federal Training Advisor, Provincial Training Specialists, short-term consultants and others to be identified.
- 3. Title** : Supervision Management Skills for new MT Supervisors
- Rationale** : Supervisors are deployed at present without any training in supervisory skills. It is important to train the supervisors to perform their combined roles of supervision and support for the MTs.

- Objective** : To acquire knowledge and skills on the new and revised MT curriculum, CHW training techniques, management and planning skills, and supervisory skills.
- Type of Participants** : MT Supervisors
- Number of Participants** : 150
- Number Per Workshop** : 15 - 25
- Total Workshops** : 8
- Frequency** : Alternate years in each Province.
- Duration** : Four weeks
- Location** : All Provinces
- Facilitators** : Federal Training Advisor, Provincial Training Specialists, Provincial Management Advisor, and Federal Management Advisor.
- 4. Title** : MT Retraining Workshop
- Rationale** : The workers performance evaluation undertaken in February 1982 indicated that more than one third of the MTs performed poorly. This is in part due to variations in the quality of teaching and supervision. To bring all MTs to an acceptable level, it is necessary to retrain them. More emphasis on the quality of training CHWs is also essential.
- Objective** : To upgrade the knowledge and skills of MTs in the areas of community health management and non-formal education training techniques.
- Type of Participants** : MTs already deployed in BHUs
- Number of Participants** : All in-service MTs
- Number Per Workshop** : 20 - 25

- Number of Workshops** : 8
- Frequency** : One time
- Duration** : Two weeks
- Location** : All Provinces
- Facilitators** : Federal Training Advisor, Provincial Training Specialists, selected MT Supervisors and MT Tutors.
- 5. Title** : In-Service Training for MT Supervisors
- Rationale** : In order to stimulate learning and update managerial and supervisory skills, it will be necessary to have seminars and workshops to continuously provide upgrading of the performance of MT Supervisors.
- Objective** : To update knowledge and skills on management and supervision, to update training skills, and, to revise learning philosophy.
- Type of Participants** : MT Supervisors
- Number Per Workshop** : Upto 25
- Number of Participants** : All in-service MT supervisors
- Number of Workshops** : 20
- Location** : All Provinces; Location to differ each year based on requirement
- Frequency** : Annually
- Duration** : Two weeks
- Facilitators** : Education Specialist, Federal Training Advisor, short-term consultants, selected MTs and other human resources as needed.
- 6. Title** : In-service Training for MTs
- Rationale** : Most MTs have limited educational backgrounds and serve in remote rural areas, and they are backed up at the present time by only minimal supervision and

- support. A system of regular in-service training appears essential for building their competencies and maintaining their commitment.
- Objective** : To update skills and introduce additional information and practices to match the increased demands of the program.
- Type of Participants** : MTs posted at BHUs
- Number per Workshop** : Upto 20
- Number of Participants** : All deployed MTs
- Number of Workshops** : 240
- Frequency** : Annually
- Duration** : One week
- Location** : IRHCs
- Facilitators** : MT Supervisors, Provincial Training Specialists, Federal Training Advisor, Medical Officers and MT Tutors.
- 7. Title** : Project Evaluation Workshop
- Rationale** : In order to insure involvement of GOP officials in all stages of the project, it will be necessary to build in a process to promote their participation. During the life of the project, a formative evaluation component will be an integral part of the CHW, MT and MT supervisors work. Evaluation methodology and instruments will be designed and tested to evaluate not only the performance at the village level but also the attitude of MTs and CHWs in their work. Reports will be completed every six months.

- Objective** : To study and analyze Program progress, recommended changes, and modify specific objectives, training methodology, educational materials, and the like. These recommendations will be implemented after presenting them to the Provincial Steering Committees and the Federal Advisory Council.
- Type of Participants** : Federal & Provincial Project staff and representatives of A.I.D., WHO, and UNICEF.
- Number Per Workshop** : 20 - 25
- Number of Workshops** : 5
- Frequency** : Annually
- Duration** : One week
- Location** : Islamabad
- Facilitators** : Federal Management Advisor and Provincial Management Specialists.

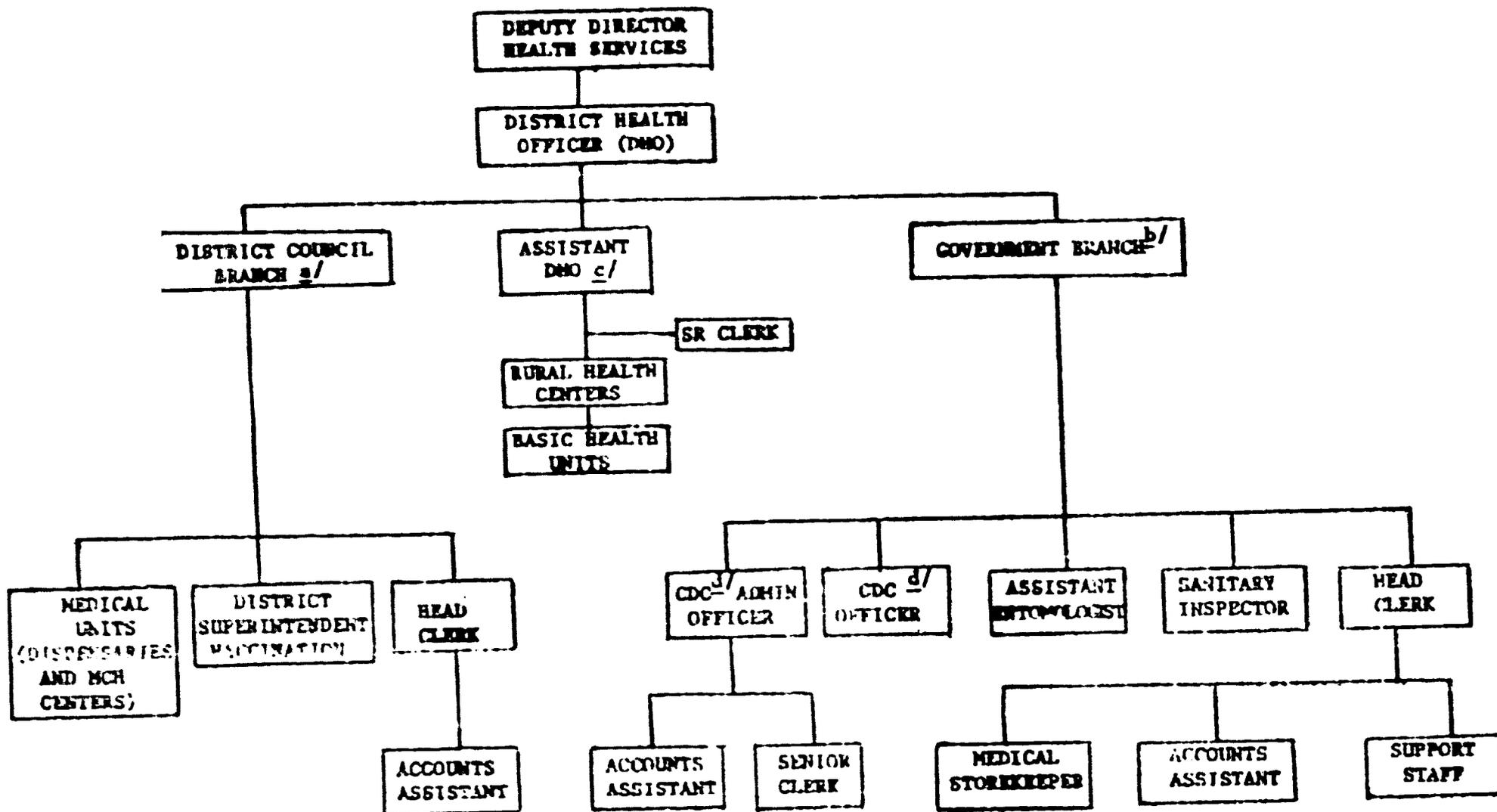
ORGANIZATION CHART OF THE PROVINCIAL HEALTH STRUCTURE

a/ CDC = Communicable Disease Control

b/ BHS = Basic Health Services

c/ This position exists only in the Punjab

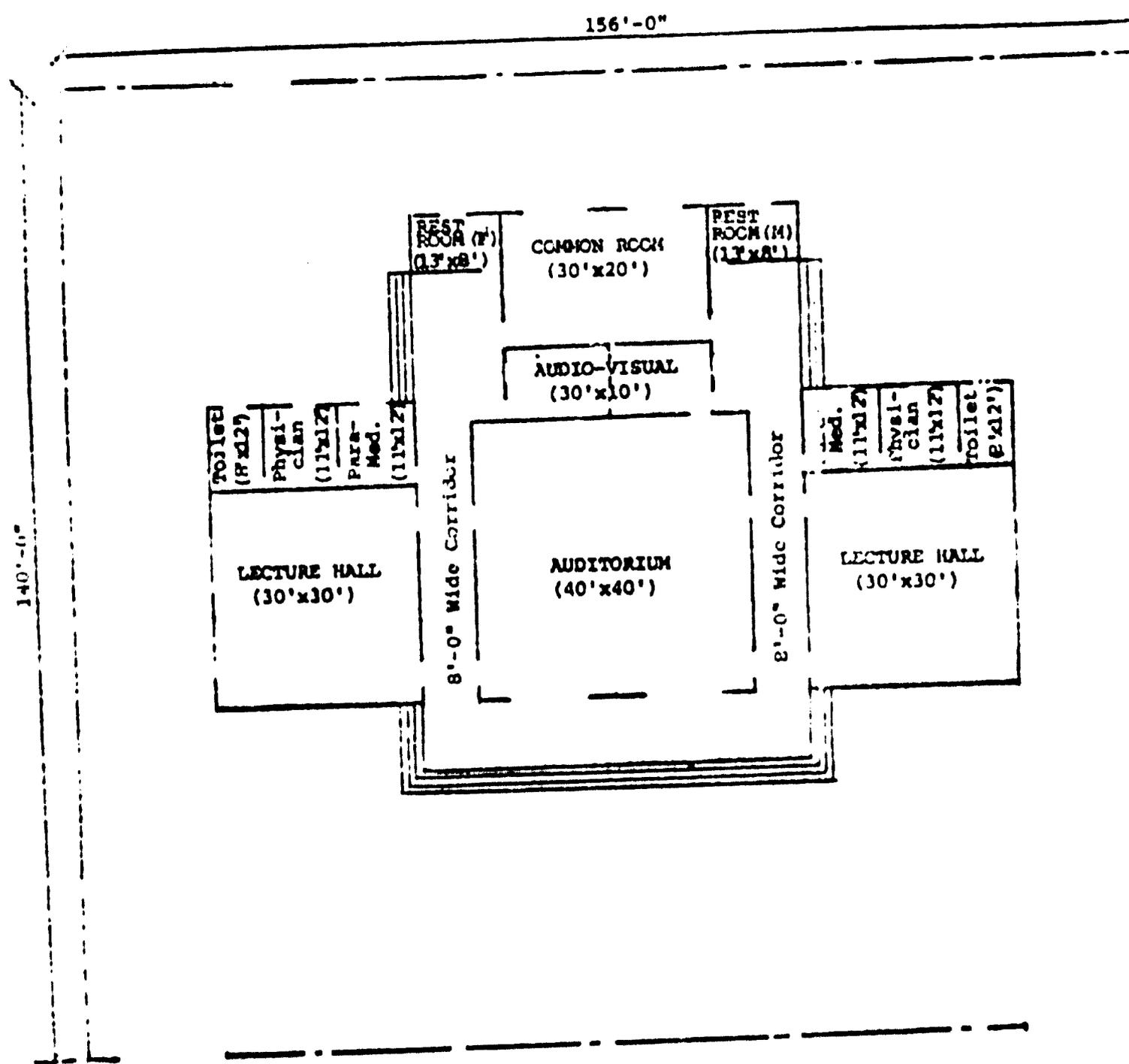
ORGANIZATION CHART OF DISTRICT HEALTH OFFICE



- a/ These staff are paid by the District Council
- b/ These staff are paid by the Provincial Government
- c/ One each for those Tehsils wherein RHC(s) exist
- d/ CDC = Communicable Disease Control

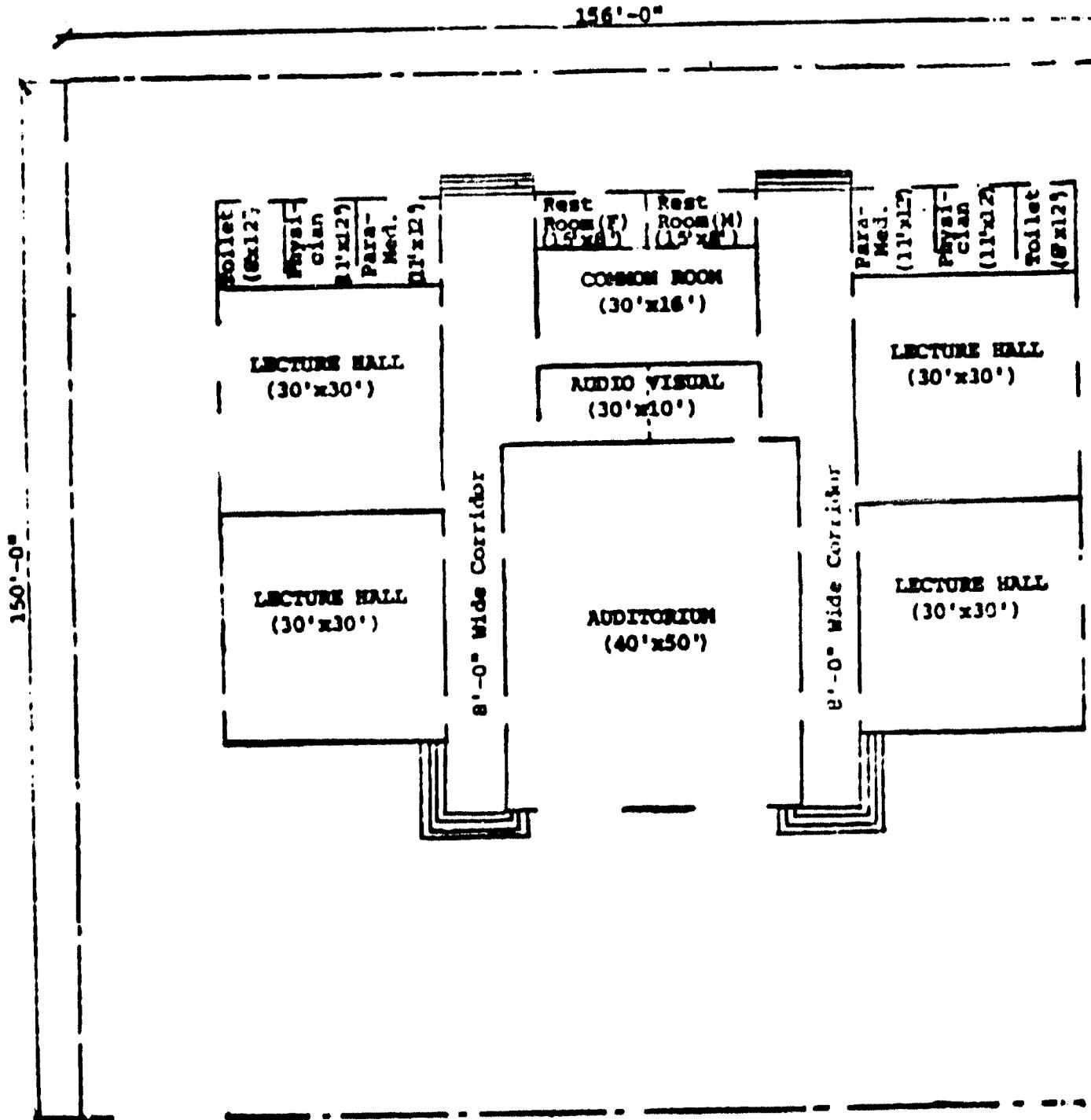
PRELIMINARY DESIGNS OF  
MEDICAL TECHNICIAN TRAINING SCHOOLS

1. Proposed Design for 50 Trainees



Best Available Document

2. Proposed Design for 100 Trainees



Covered Area = 9024 Sq.Ft.

PROVINCE	1982		1983		1984		1985		1986		1987		Totals		GRAND TOTAL
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
<b>PUNJAB</b>															
Beginning Strength	36	36	72	68	178	91	237	148	225	139	134	232	36	36	
12-month Schools	30	14	30	30	30	30	-	-	-	-	-	-	110	74	
18-month Schools	-	-	70	19	30	30	-	-	-	-	-	-	100	16	
Consolidated Schools	-	-	-	-	-	-	-	-	120	100	120	100	240	200	
Sub-Total	74	60	170	93	308	151	237	148	345	239	254	332	492	306	
Attrition	8	8	4	2	9	5	12	7	11	7	14	12	62	38	
Not Available at End of Yr.	72	52	174	91	237	146	225	139	234	232	140	210	140	278	
Required for IMCs	36	36	60	60	30	30	144	144	168	168	210	210	-	-	
Excess (+) or Deficit (-)	+38	+22	+114	+31	+147	+66	+91	-5	+66	+64	+20	+10	-	-	
Potential Additional Operational IMCs	-	-	-	-	-	-	-	-	-	-	-	10	-	-	
<b>MPP</b>															
Beginning Strength	12	4	12	4	89	21	84	20	43	61	36	36	12	4	
Existing Schools	-	-	70	17	-	-	63	42	-	-	-	-	141	39	
Consolidated Schools	-	-	-	-	-	-	-	-	-	-	36	36	36	36	
Sub-Total	12	4	80	21	89	21	147	62	43	61	72	72	189	79	
Attrition	-	-	1	-	5	1	4	1	7	3	7	3	24	6	
Not Available at End of Yr.	12	4	80	21	84	20	143	61	36	58	65	69	165	73	
Required for IMCs	12	12	24	24	30	30	94	94	60	60	84	84	-	-	
Excess (+) or Deficit (-)	0	-8	+56	-3	+54	-10	+49	+7	76	+2	+81	+1	-	-	
Potential Additional Operational IMCs	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
<b>SINDH</b>															
Beginning Strength	18	2	18	2	17	2	40	22	36	21	26	26	18	2	
Existing Schools	-	-	-	-	24	20	-	-	24	20	-	-	48	40	
Consolidated Schools	-	-	-	-	-	-	-	-	23	20	20	20	72	60	
Sub-Total	18	2	18	2	41	22	40	22	60	41	46	46	120	102	
Attrition	-	-	1	-	1	-	1	1	2	1	6	4	11	6	
Not Available at End of Yr.	18	2	17	2	40	22	39	21	58	40	40	42	109	96	
Required for IMCs	18	18	18	18	18	18	36	36	42	42	60	60	-	-	
Excess (+) or Deficit (-)	0	-16	-1	-10	+22	-4	+3	-1	+18	-1	+40	+16	-	-	
Potential Additional Operational IMCs	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
<b>BALUCHISTAN</b>															
Beginning Strength	6	6	6	6	17	12	18	12	27	21	26	26	6	6	
Existing Schools	-	-	11	7	-	-	12	10	-	-	-	-	23	17	
Consolidated Schools	-	-	-	-	-	-	-	-	20	20	24	24	44	36	
Sub-Total	6	6	17	13	17	12	30	22	47	41	50	50	77	59	
Attrition	-	-	-	1	1	-	1	1	1	1	2	2	5	4	
Not Available at End of Yr.	6	6	17	12	16	12	27	21	46	40	48	48	72	55	
Required for IMCs	6	6	18	18	24	24	30	30	30	30	36	36	-	-	
Excess (+) or Deficit (-)	0	0	-1	-6	-7	-12	-3	-9	-16	-11	+12	+12	-	-	
Potential Additional Operational IMCs	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
<b>WEST BENGAL</b>															
Not Available at End of Yr.	108	36	207	26	277	230	323	242	418	298	284	286	-	-	
Required for IMCs	72	72	36	36	362	352	398	398	398	398	398	398	-	-	
Excess (+) or Deficit (-)	+36	-36	+171	-10	-185	-122	-175	-156	+20	-100	-114	-112	-	-	
Potential Additional Operational IMCs	-	-	-	-	-	-	-	-	-	-	-	27	-	-	

Best Available Document

**SOURCE:** USAID/Pakistan Estimates (includes 2 existing IMCs, 6 in the Punjab, 2 in the Sindh, 2 in MPP and 1 in Baluchistan). These projections were based on the following assumptions: (1) that all schools will have 50 percent enrollment; (2) that in 1983, all classes will consist of 50 percent males and 50 percent females; (3) that 60 percent of the students overall will be graduates; (4) that 60 percent of the male graduates and 50 percent of the female graduates will be deployed in the field; (5) that there will be an attrition rate of 1 percent per year for both male and female in all provinces except Baluchistan where the attrition rate will be 60 percent for females in the fourth year and 5 percent per year thereafter; (6) that the consolidated permanent schools to be constructed under this project will be completed and operational in January 1985; (7) that all new training programs will last for 18 months; and, (8) that existing schools will have a 3 month interval between class sessions while the new consolidated permanent schools will begin a new training cycle 2 months after the previous

## ANNEX O

**CONSTRUCTION COST ESTIMATES FOR THE 13 CONSOLIDATED  
PERMANENT MEDICAL TECHNICIAN TRAINING SCHOOLS a/**

	<u>In Rs</u>
5 New Schools for 100 students (9,360 sq. ft. each)	12,948,000
8 New schools for 50 students (8,000 sq. ft. each)	16,640,000
13 Residences for MDs (1200 sq. ft. each)	4,056,000
26 Residences for MTs (800 sq. ft. each)	5,408,000
5 New hostels for 50 male students (5000 sq. ft. each)	6,500,000
5 New hostels for 50 female students (5000 sq. ft. each)	6,500,000
8 New hostels for 25 male students (2500 sq. ft. each)	5,200,000
8 New hostels for 25 female students (2500 sq. ft. each)	5,200,000
	<hr/>
Sub-Total	62,452,000
AsE cost @ 5 percent	3,122,000
	<hr/>
Total	65,574,000
	<hr/>
	Or US \$ <u>5,393,000</u>

a/ Estimates were based on an estimated Unit Construction Cost of Rs 260/sq. ft. in 1984 when actual construction work is expected to take place.