PD-AAD-193-A1 3910415-①

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*****************************************************************
*3910415              PAKISTAN                                  *
*                     PAKISTAN-BASIC HEALTH SERVICES            *
*                     FY77 TO FY80                              *
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PROJECT SUMMARY DESCRIPTION

LOAN AND GRANT TO GOVERNMENT OF PAKISTAN (GOP) HELPS FINANCE NEW SYSTEM FOR BASIC RURAL HEALTH CARE DELIVERY IN PAKISTAN'S FOUR PROVINCES. THE SYSTEM, CALLED INTEGRATED RURAL HEALTH COMPLEXES (IRHC), TO SERVE 50% OF RURAL POPULATION, COMPRISES: 1. RURAL HEALTH CENTER (IN EACH IRHC) STAFFED WITH 2 DOCTORS AND SUPPORT STAFF; 2.BASIC HEALTH UNITS(BHU), 5-10 PER CENTER, EACH WITH 2 TRAINED PARAMEDICS; 3. COMMUNITY HEALTH WORKERS (CHW) IN BHU FOCUSING ON PREVENTIVE HEALTH CARE. COORDINATED WITH GOP MINISTRY OF HEALTH, THE 8-YR, 2-PHASE PROJECT EMPHASIZES TRAINING, PERSONNEL, PLANNING, BUDGETING, ACCOUNTING, COMMUNICATION, SUPPLIES, LOGISTICS. REQUIRES 4 LONG-TERM ADVISORS PLUS OTHER-SHORT TERM. OTHER DONORS: WHO.

DESCRIPTORS

HEALTH DELIVERY	RUR HLTH SRVC	INTEG HLTH COMP	HEALTH CENTER
BASIC HLTH UNIT	HLTH LOGISTICS	CMNTY HLTH WORK	PARAMEDIC TRNG
HEALTH TRAINING	INDIGENOUS TRNG	HEALTH INFO SYS	DIST HLTH OFF
FAMILY PLANNING	MGMT TRAINING	HOME VISIT	HLTH OPER RES
HLTH PROG MANUL	BASIC HLTH SRVC	HEALTH EDUC	INTEG HLTH SRVC

SUB-PROJECT NUMBER: 00 BATCH NUMBER: 15

Docid
3910413
391-4150
PD-AAB-193-B1

UNCLASSIFIED

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

PROJECT PAPER

**Proposal and Recommendations
For the Review of the
Development Loan Committee**

PAKISTAN - Basic Health Services

AID-DLC/P-2206

UNCLASSIFIED

DEPARTMENT OF STATE

AGENCY FOR INTERNATIONAL DEVELOPMENT

WASHINGTON, D.C. 20523

UNCLASSIFIED
AID-DLC/P-2206
October 27, 1976

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: PAKISTAN - Basic Health Services

Attached for your review are the recommendations for authorization of a loan to the Government of Pakistan ("Borrower") of not to exceed Thirteen Million and Five Hundred Thousand United States Dollars ($13,500,000) to assist in financing the local currency costs associated with the development and implementation of a comprehensive system for rural health delivery in Pakistan.

The loan is scheduled for consideration by the Development Loan Staff Committee on November 4, 1976, at 2:00 p.m., in Room 5951 NS; please note your concurrence or objection is requested by close of business on Wednesday, November 10, 1976. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee
Office of Development Program Review

Attachments:
- Summary and Recommendations
- Project Analysis
- Annexes A-I

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE (X appropriate box): [x] Original [ ] Change [ ] Add [ ] Delete

PP

DOCUMENT CODE: 3

2. COUNTRY/ENTITY: Pakistan

3. DOCUMENT REVISION NUMBER: —

4. PROJECT NUMBER: 391-4150

5. BUREAU: a. Symbol: Asia; b. Code: 4

6. ESTIMATED FY OF PROJECT COMPLETION: FY 79

7. PROJECT TITLE (SHORT (stay within brackets)): [BASIC HEALTH SERVICES]

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION: a. INITIAL mo. 10 yr. 76; b. FINAL FY 77

9. ESTIMATED TOTAL COST ($000 or equivalent $1 = 9.90)

a. FUNDING SOURCE	FIRST YEAR FY 77 b. FX	c. L/C	d. Total	ALL YEARS e. FX	f. L/C	g. Total
AID APPROPRIATED TOTAL	1,286	6,214	7,500	1,286	13,714	15,000
(Grant)	(1,286)	(214)	(1,500)	(1,286)	(214)	(1,500)
(Loan)	( )	(6,000)	(6,000)	( )	(13,500)	(13,500)
Other U.S. 1.						
Other U.S. 2.						
HOST GOVERNMENT		338	338		9,795	9,795
OTHER DONOR(S) WHO	160		160	480		480
TOTALS	1,446	6,552	7,998	1,766	23,509	25,275

10. ESTIMATED COSTS/AID APPROPRIATED FUNDS ($000)

a. Appropriation (Alpha Code)	b. Primary Purpose Code	c. Primary Tech. Code	FY 77 d. Grant	FY 77 e. Loan	FY 78 f. Grant	FY 78 g. Loan	FY 79 h. Grant	FY 79 i. Loan	ALL YEARS j. Grant	ALL YEARS k. Loan
PH	530	510		6,000		7,500				13,500
PH	430	440	1,500						1,500	
TOTALS			1,500	6,000		7,500			1,500	13,500
11. ESTIMATED EXPENDITURES				927		3,447		10,626		

12. PROJECT PURPOSE(S) (stay within brackets) [ ] Check if different from PID/PRP

[A functioning system of operational Integrated Rural Health Complexes established.]

13. WERE CHANGES MADE IN BLOCKS 12, 13, 14, or 15 OF THE PID FACESHEET? IF YES, ATTACH CHANGED PID FACESHEET: [x] Yes [ ] No

14. ORIGINATING OFFICE CLEARANCE

Signature: William R. McIntyre

Title: Assistant Director, Population, Health & Nutrition

Date signed: mo. 08 day 11 yr. 76

15. Date Received in AID/W, or For AID/W Documents, Date of Distribution: mo. day yr.

AID 1330-4 (7-75)

BEST AVAILABLE COPY

BASIC HEALTH SERVICES

PROJECT PAPER

(Table of Contents)

ANNEXES

Annex A	PRP approval cable*
Annex B	
Exhibit 1	Detailed Project Background*
Exhibit 2	Financial Tables
Exhibit 3	Detailed Social Analysis*
Exhibit 4	Tables on Current Health Status and Resources*
Annex C	Other Donor Assistance*
Annex D	Logical Framework Matrix. See Project Paper page 35
Annex E	Government Loan Application
Annex F	Section 611 (e), Director's Certificate
Annex G	Checklist of Statutory Criteria*
Annex H	Draft Project Authorization.
Annex I	Draft Description for Project Agreement*

* Annexes marked by an asterisk (*) are not included in the Project Paper but are available upon request from Paul O'Farrell ASIA/PD/SA, 620 R.P., 235-8910.

GLOSSARY FOR BASIC HEALTH SERVICES PP

Allopathic: The western-based medical system.

Allopathic Medicines: Those administered by practitioners of scientific (allopathic, western) medicine, including all medicines proved of value in the treatment of disease.

Barber (nai): A service caste of which there is usually one or more representative families in a village. Barbers not only cut hair but perform certain medical services, such as minor surgery and preparation of ointments.

Biradari: A group of people related to each other by patrilineal descent; lineage.

Dai: (midwife): A woman who has acquired some informal training in midwifery, who delivers babies and treats minor gynecological ailments, generally in a rural setting.

Dam: The reciting, by certain qualified persons, of certain verses of the Quran and blowing of them on a painful part of the body, or on food, for remedial effect.

Dardic: A family of languages spoken in the northern areas of Pakistan: Ex: Shina.

Germ theory of Medicine: The doctrine that infectious diseases are of microbic origin.

Hakim: A physician trained in the Unani medical system (see Unani).

Homeopathic Physicians: Those who treat disease by giving very small doses of medicine that would in a healthy person, or in a large doses, produce or aggravate symptoms of the disease treated.

Indigenous Practitioners: Persons providing medical or quasi-medical services who have not been trained in allopathic medical institutions Ex. Hakim, Pansari.

Lady doctors: A common Pakistani term for a woman doctor trained in the allopathic system.

Lady Health Visitors: An allopathic para-medical worker with two years of training in primary health care, maternal and child health, and gynecology.

Mandroi: A specialist in manders (Skt. mantra), recited verses which are supposed to possess the property of neutralizing insect and snake poisons.

Maulvi: here, a Muslim religious leader in the village, who has studied the Quran and who is attached to the mosque.

Nai: A member of the barber caste (See Barber).

Nurse-dais: A dai with some formal allopathic training in nursing and midwifery.

Panchayat (jirgah): A village council, consisting of the heads of lineages, which settles disputes within the village.

Pansari: A compounder of medicines in the Unani system.

Pir (Saint): A Muslim holy man of a Sufi (mystical) order, who gives religious guidance to individuals.

Purdah: The seclusion of women in Muslim society, which prevents social contact between women and men outside their family circle.

Rite of passage: A ritual marking a major transitional step in the life of an individual, such as marriage, completing one's education, etc.

Sanyasi: A wandering religious mendicant possessing a knowledge of herbal medicines.

Syed: A person who claims descent from the Prophet Muhammad; Syeds have a special status in a community.

Taaveez: An amulet given by a pir to protect the recipient, cure some illness, or assure success in some endeavor.

Unani: The system of medicine developed by the Arabs on the basis of the Greek system, after which it is named. Unani medicine is based on the concept of the four humors, which are supposed to be kept in balance.

Wrestler (pahelwan): Professional or semi-professional athletes, who tour villages giving exhibitions. Thought to have special skill in bonesetting because of the nature of their profession.

Zat: A named, ranked social group composed of lineages, the membership of which is determined by birth.

Ziarat: The tomb of a pir, or saint, which functions as a shrine.

PART I

SUMMARY AND RECOMMENDATIONS

A. Borrower/Grantee and Implementing Agency

The Borrower/Grantee will be the Government of Pakistan. The executing Agency for the Government will be the Federal Ministry of Health (MOH). Within the Ministry the National Basic Health Services Cell (NBHSC) will be the entity responsible for the execution of the project. Below the Federal level, the Provincial Directors of Health Services and the District Health Officers will supervise project execution within their geographic areas of responsibility.

B. The Loan and Grant

1. Amount: Grant, $1.5 million; Loan, not to exceed $13.5 million. (Tranched $6.0 million in FY 1977 and $7.5 million in FY 1978.)

2. Terms: Payment within forty (40) years from the first disbursement with a grace period on principle repayment of ten (10) years. Interest is payable in U.S. dollars at two (2) percent per annum during the grace period and three (3) percent thereafter on the disbursed balance and unpaid interest.

C. Purpose

The purpose of the project is to develop a functioning system of integrated rural health complexes.

D. The Project

The project which the proposed loan will assist in financing will develop and implement a new system for basic rural health care delivery in Pakistan's four provinces. The system call s for an integrated three-tiered health delivery structure, referred to as an Integrated Rural Health Complex (IRHC), and

required support infrastructure. The system when in operation will provide affordable health services to the target population.

The Integrated Rural Health Complexes are composed of:

1. Rural Health Center staffed by both a male and female doctor and support staff. The center is the focal point of the complex. The doctors at the center are responsible for all services within its catchment of 50,000 to 100,000 people.

2. Basic Health Unit staffed by two mid-level workers(trained para medical). The Mid-Level Health Worker will receive 18 months of medical training. There will be from 5 - 10 Basic Health Units under each Rural Health Center. Each Unit will serve a population of 5,000 to 10,000.

3. Community Health Workers will be under each Basic Health Unit and it is anticipated that there will be at least one female worker for each village or homogeneous community. The Community Health Worker will serve an average of 1000 people, though this will vary depending on village size and composition. He/she will provide some curative health services but with the major emphasis on preventive health care. Through short training programs, the workers will acquire limited, though critical, medical skills. They will refer patients with certain categories of symptoms to the Basic Health Units for treatment.

To support these health complexes, the project will emphasize the development and operation of required management and operations support systems: training, personnel, planning, budgeting and accounting, communications, and supply and logistics. Additionally, to provide central coordination for the project, the Government will establish in the Ministry of Health an organization called the National Basic Health Services Cell.

The eight year project is divided into two phases. The first phase, and the phase for which this loan is written, will assist the Government in development and testing of the system. Large scale implementation (rapid expansion of coverage) is planned during Phase II. By the end of Phase II, year 8, it is planned that about 50% of Pakistan's rural population will be covered by the system.

If the project performance proceeds as scheduled, AID plans to consider follow-on loans for the support of Phase II. A formal joint evaluation of the project is planned early in year 3. The recommendations of the evaluation will be considered in determining the viability of further AID support.

E. Purpose of AID Assistance

AID funds will finance technical assistance costs and general project support over the first three years of the project -- Phase I.

1. Technical Assistance - the grant will finance foreign exchange costs of four long-term technical advisors and required short term advisors. These costs are estimated to be $1.3 million. (excludes WHO financed technical assistance)

2. General Project Support - Using a tranched funds release procedure, with an initial advance of funds, the loan will finance general project support. Loan financing will amount to about 60% of Phase I project costs.

F. Other Donor Assistance

There are a number of other donors, both bilateral and multilateral, providing assistance to improve the health status of Pakistan's rural population. The World Health Organization plans to assist this project directly by providing two technical advisors on a grant basis. For a full discussion of other donor assistance refer to Annex D.

G. Issues

All issues relating to the project have been integrated into the project design. ?

H. Statutory Criteria

The Project meets all applicable statutory criteria.

I. Summary of Findings

The technical design of the project is reasonable and the cost estimates are reasonably firm and prices are reasonable. All analysis of the project from the technical, financial, social and economic standpoints indicate that the project will meet its objective and will benefit the rural population of Pakistan.

Recommendation

That a grant of $1.5 million and a loan for $13.5 million to assist with the Pakistan Basic Health Services Project be approved in principal and that the grant and an initial tranch of $6.0 million be authorized.

PART II

PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Background

The purpose of this section is two-fold: to offer a brief assessment of the health status of Pakistan's population and its current resources for meeting the nation's health needs and to call attention to the evolution of health policies and programs in Pakistan.

The age distribution of the current population is such that 44.9 percent of the total population is under the age of 15, 41.6 percent is between the ages of 15 and 44, and only 13.5 percent is over the age of 44. In all cohorts, there are more males than females.

The crude death rate is estimated to be 15.5 per thousand population at the present time. The infant mortality estimate is 115 per thousand live births which accounts for about fifteen percent of the crude death rate.

The present Pakistan health delivery system is characterised by wide regional variation in the quality and quantity of services in both urban and rural areas. Historically, the health system has served urban over rural needs; placed more emphasis on the training of doctors than auxiliary manpower; skimped on operating budgets for the public health sector; and neglected preventive and community health in favor of curative services.

A detailed project background is presented in Annex B, Exhibit 1.

B. Detailed Description

The logical framework for this project and its associated narrative description are presented in the last section of the detailed project description. Since this project, like most social sector projects, is a complex one, a fairly detailed description of the activities to be undertaken is presented to help provide a clear picture of the project.

1. General Description

The project is designed to help the Government of Pakistan achieve its stated health sector goal of improved basic health services for the underserved rural population. A successful program effort will contribute substantially to the Government's overall objective of social and economic development. The strategy which the Government has proposed, and which this project supports technically and financially, will result in the expansion of rural health services through significantly increasing trained health manpower and rural physical health facilities. The system will be supported by an effectively functioning management infrastructure that will insure that high quality basic health services are available to the target population at a cost affordable by the Government. The proposed project will have a strong preventive and promotive emphasis in addition to providing curative services.

This project will be implemented in Pakistan's four Provinces (Punjab, Sind, Baluchistan, and the North West Frontier Province)

The overall project for improved primary rural health care spans eight years and is to be funded in two phases of three and five years each. This project paper is written to seek support only for the first phase but the overall 8 year strategy is fully developed, in order to place Phase I in perspective.

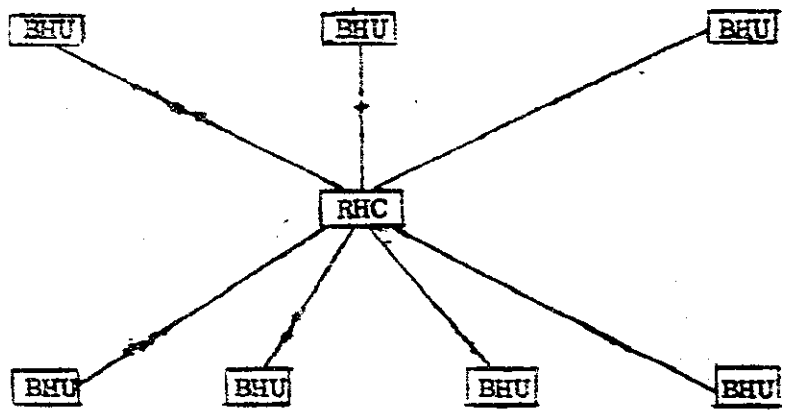
During the eight year period, non-physician health care providers will be trained and deployed into an improved rural health services system which includes adequate supervision and referral, and the ability to maintain medications, supplies, and transport at levels which ensure effective performance. The initial 3 year phase of this project will be involved with laying the groundwork for a rapid expansion of the rural health services which will occur during the second phase.

The narrative concerning project activities proposed for the entire eight year period falls into three major categories: 1) a description of the proposed expanded rural health system, 2) a description of the proposed health worker training program, and 3) a description of the proposed support system development effort. The logical framework narrative follows these descriptions.

2. Expanded Rural Primary Health Care System

The Government of Pakistan's Fifth Five-Year Plan advocates the establishment of an expanded rural health system based on the (IRHC). This complex, shown below, will become the critical functional unit for the delivery of rural basic health services. It is composed of one Rural Health Center (RHC) surrounded by 5 - 10 Basic Health Units (BHU's) and serves 50,000 - 100,000 persons depending on population density. It has a geographic catchment area of 150 - 250 square miles.

Integrated Rural Health Complex



a. The Rural Health Center

The RHC is the focal point for management of the geographical catchment area. It is staffed with one male and one female doctor, two mid-level supervisory health workers, and two mid-level workers delivering care.

It is also the home base for four other mid-level workers who are deployed on a floating basis to the BHU's to provide coverage when regular staff are on vacations or leave for illness or continuing education.

The activities of the RHC are:

-- To provide primary care for its immediate surrounding area

-- To serve as a referral center for all BHU's within its catchment area

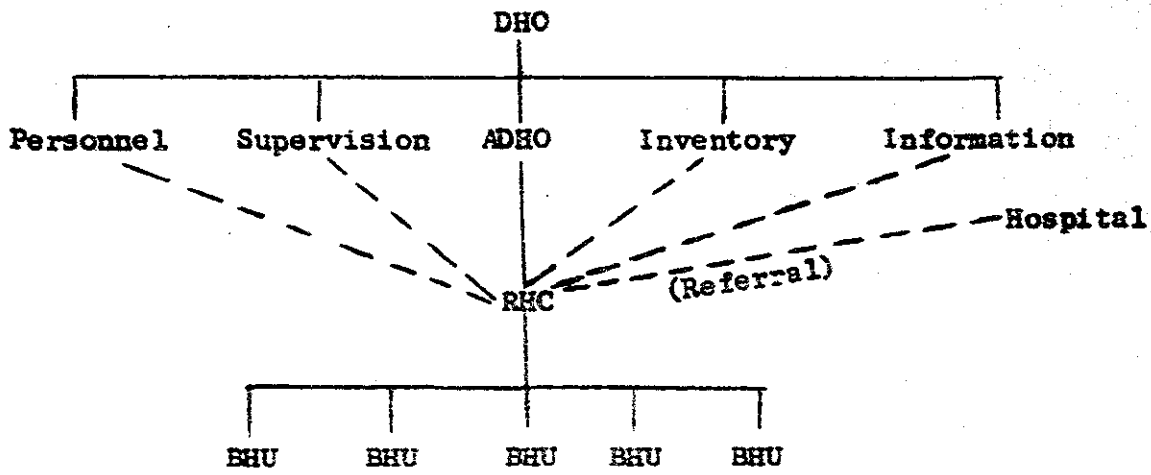
-- To function as a center for all local planning and management of preventive/promotive programs for its catchment area

-- To provide first-line technical and administrative supervision for all workers

-- To be the first collection and collation point for information systems data including data on curative care, case finding and vital registration, immunizations, nutrition, antenatal care, and family planning activities

-- To serve as the first-line drug and equipment warehouse

Each RHC is linked with the District Health Officer (DHC) not only through managerial control by the doctors, but also by technical supervisory relationships with district level persons in personnel, supervision, inventory control and information system management. Line and staff organizational relationships appear as follows:



b. The Basic Health Unit and the Mid-Level Health Worker

The BHU is the most peripheral unit of the rural primary health system. It serves 5,000 - 10,000 people depending on population density and covers an area of 15 - 25 square miles.

Each BHU is staffed with two mid-level workers, as well as their support personnel (chowkidar or guard, sweeper, and so on). Recruitment of these workers is from rural areas and, matriculation is required. Once trained in both curative and preventive care, they perform disease-specific diagnoses and prescribe between twenty-five and thirty drugs with which they are fully familiar. It is estimated that the mid-level primary care worker is capable of competently handling 90 % of a doctor's routine caseload, thereby freeing the physician to focus his or her attention on cases requiring sophisticated medical treatment.

The activities of the BHU staff are as follows:

-- To provide primary care for its geographical catchment area

-- To serve as a referral point for the community health workers (CHWs) who live in the villages

-- To plan and supervise of curative and preventive activities of CHWs

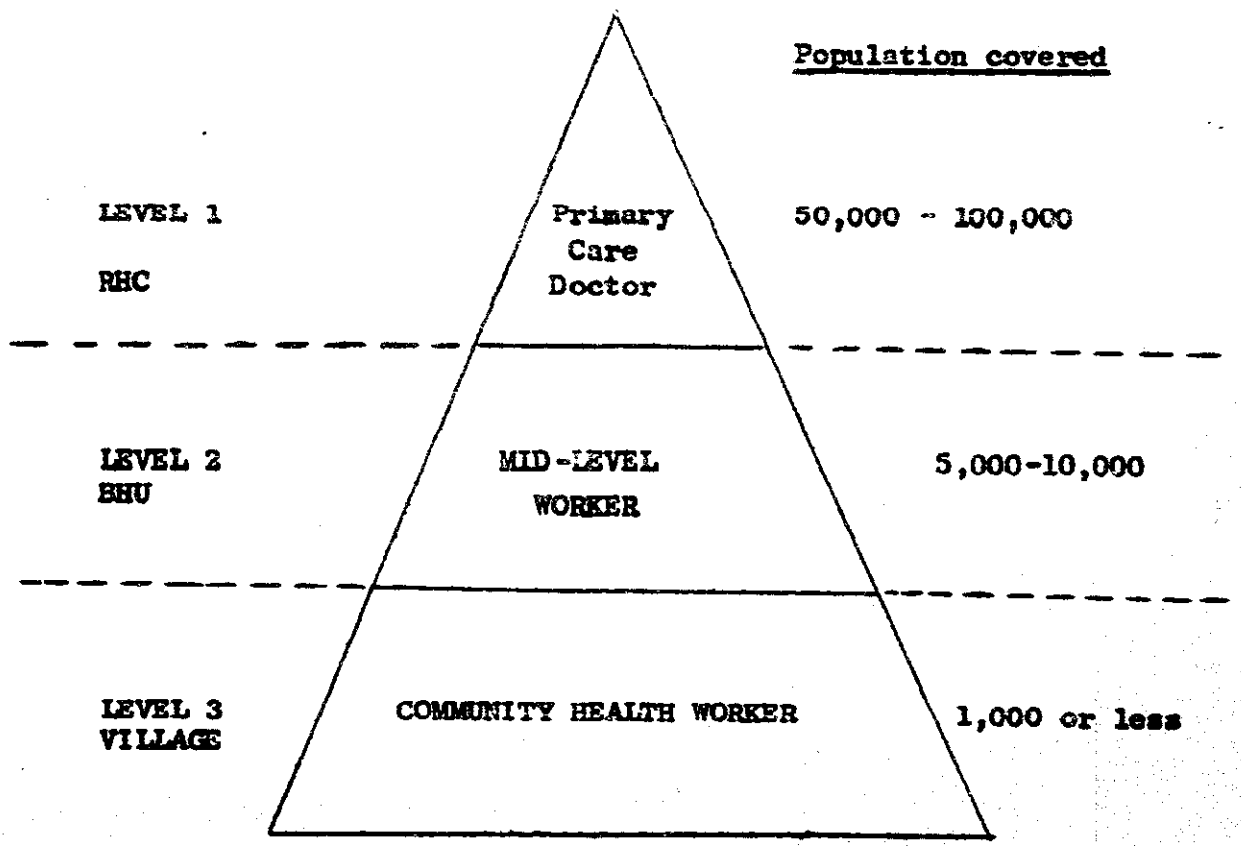
-- To supply CHWs with drugs and equipment

Each BHU and mid-level worker is linked to the RHC by mid-level supervisory personnel who visit each unit at least once every two weeks, and by the doctor who may supervise directly if he or she wishes.

c. The Community Health Worker

The Community Health Worker (CHW) is the individual who brings the preventive and curative medical system to the village level. CHWs are a new class of medical worker in Pakistan and will be recruited from the village in which they will serve. Paid in part by that community, the CHWs form the third tier of the integrated rural primary health system. This staffing concept is derived from both the Fifth Five-Year Plan and the Country Health Programming exercise. Thus, a manpower model of the IRHC looks as follows:

SUGGESTED MANPOWER MODEL FOR THE
INTEGRATED RURAL HEALTH COMPLEX



While there might be slight variations from province to province, the Community Health Worker, living in the village and part of its social life, will be trained in basic preventive tasks such as weighing of children to detect subclinical malnutrition, seeking out pregnant women and carrying out simple "high-risk" assessment as to which women need to see mid-level workers or doctors, and dispensing family planning materials including oral contraceptives and condoms. On an average, there will be one CHW/1000 population.

The CHW has a role in curative medicine as well. Research has shown that fewer than ten simple problems comprise half of all patient visits in rural areas of the developing world.[1] When taught to recognize and treat some simple problems and carefully taught (and supervised) to refer other problems, the CHW not only gains credibility in the village but reduces the load on the Basic Health Units. With these relatively simple skills, CHW's can also translate their knowledge into language understood by villagers and thus can help bridge the social and knowledge gap between the health system and the village social system.

The CHW will be technically supervised every 2 weeks by the mid-level health worker but will be ultimately answerable to the community in which he or she lives.

d. Curative Care in the IRHC

In order to maximize their impact on the communities they serve, the IRHC workers employ "risk analysis" in establishing priorities for treatment of their caseloads. While health workers traditionally attend to simple cases first because they pose the fewest challenges, where risk analysis is used, health workers concentrate their energies on clients with severe medical problems. Thus, for example, they devote themselves more to the child who is the most severely underweight than the one who is marginally underweight. By visiting that child daily and providing both him and his mother with intensive curative and preventive care, the worker

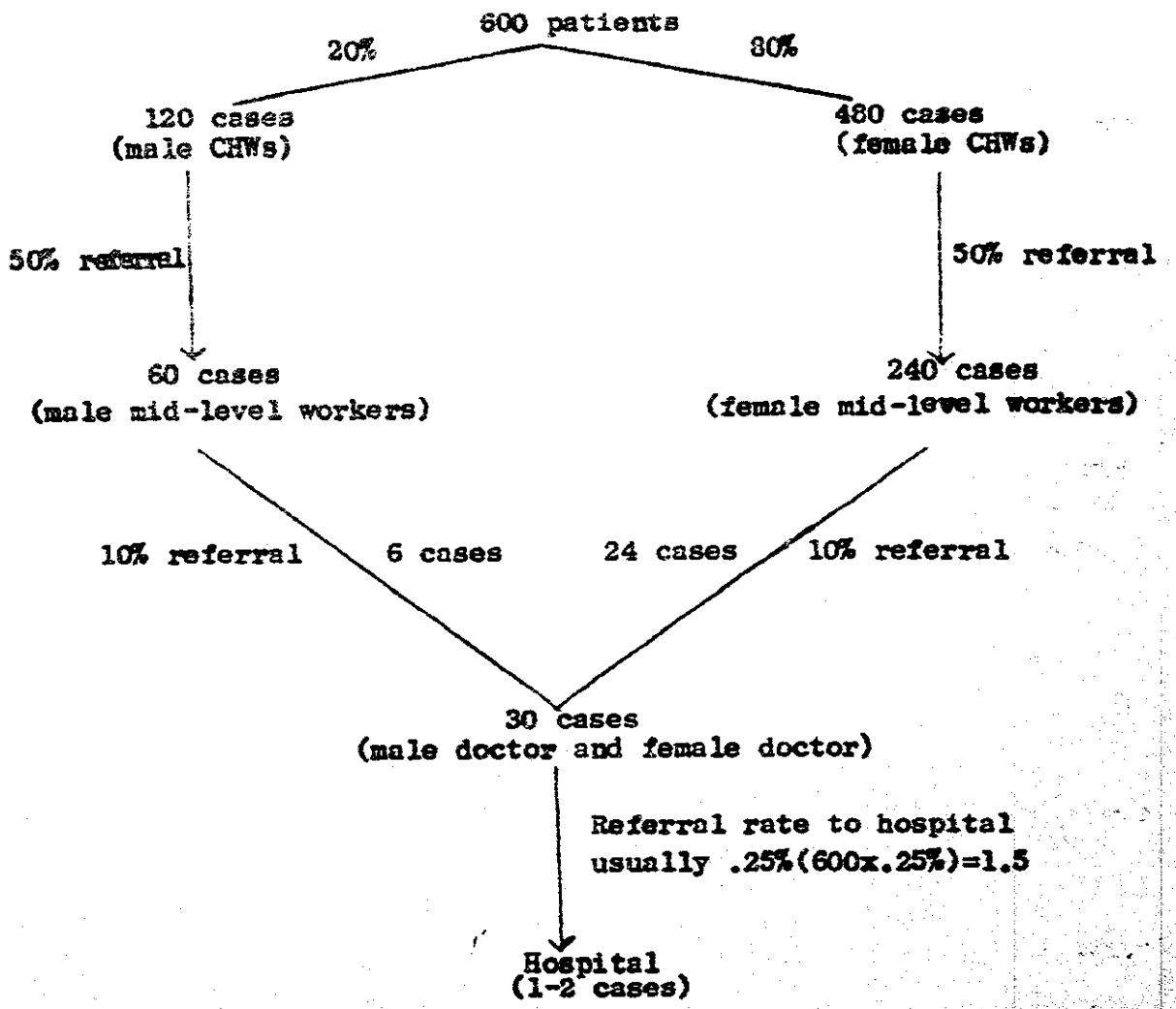
---

[1] An unpublished 1975 study in the Punjab found that 46% of all visits were for muscle aches and pains, stomach problems, fever, and respiratory ailments.

strives for dramatic improvement in his health. In this way, the workers effectively demonstrate their competence, thereby establishing the credibility of the system.

On an average day, an IRHC covering 80,000 people will serve 600 - 700[2] people for sickness-related (curative) services. Of these around 80% will be women and children and 20% men and male children over age 10.

If all these tiers are operational, the people should have an initial screening by the CHW's who can treat about 1/2 of the patients who have the simple, common conditions mentioned previously. The sixteen mid-level workers at the BHUs will therefore see about 300 patients or an average of nineteen patients each/day. The doctors at the RHC should see only referral cases (usually 5% of total) or about 30 cases/day shared by two doctors. Schematically the system would look as follows:



2 @ 2 curative visits/person/year and 250 working days/year, services = 640/day

This results in the following caseloads/day: CHW - 8, mid-level - 19, doctor - 15. Evidence suggests that 10 minutes/visit is ample time for auxiliaries to attend to simple medical problems and record keeping. The doctors require about 15 minutes/visit since their cases are complex ones. Thus daily curative care time is as follows:

CHW	:	80 minutes or about 1-1/2 hours
Mid-level	:	190 minutes or about 3 hours
Doctor	:	225 minutes or about 4 hours

Therefore, the CHW has ample time remaining for preventive work and the mid-level worker has ample time to supervise the CHWs in the villages.

e. Preventive Care in the IRHC

The CHW provides most of the preventive care. His or her job is to visit each family with children 0-5 years of age and/or married women of child-bearing age three times per year. This amounts to two visits/day based on this typical village pattern:

1000 people @ 6 people/household

↓

167 households

↓ 90% with young children and women of child-bearing age

150 households

↓ @ 3 visits/household/year

450 visits / year

↓ @ 250 working days/year

2 home visits/day

Thus the CHW, after 80 - 90 minutes of curative work, visits two houses/day where he or she does the following:

-- Weighs all children 6 months to 3 years with a portable scale to detect early malnutrition and refers cases to the BHU.

-- Asks if married women have missed their menstrual period to detect early pregnancy (pregnancies are referred to the BHU.)

-- Asks if there have been births or deaths in the family during the last 4 months and records these.

-- Asks women if they would like to avoid pregnancy in the next 4 months and offers family planning services if desired

-- Gives DPT and BCG immunizations to children (possibly also polio if a thermos is available).

-- Asks if known tuberculosis cases are taking their medicines

The CHW also talks to mothers about feeding of young children, food storage and handling, child care, child spacing and personal hygiene and sanitation. The educational aspect of the CHW's work is supported by suitable educational materials (see the Social Analysis).

Other preventive work is carried out at the BHU. This work can be organized with a Special Care file where under-weight children, mothers with high-risk pregnancies, tuberculosis patients, and others are noted. These families should be visited frequently by the mid-level worker and by the CHW.

f. Supervisory Activities within the IRHC

The mid-level worker will have an average of five CHWs to supervise and should spend half a day with each CHW every two weeks. The RHC has two senior mid-level workers to supervise

sixteen other mid-level workers (at 7 BHUs/complex). The supervisor should spend a half a day every two weeks with each mid-level worker.

The doctors have ultimate responsibility for all activities of the IRHC. They will receive reports from supervisors and will directly supervise poorly performing workers.

g. Information Gathering Activities Within the IRHC

The CHW and the mid-level worker are record keepers. The supervisor at the RHC has major collation and report generation responsibilities and spend about half of each day on them. The supervisor prepares reports on quality of care, health activities carried out (actual versus planned), drug and equipment status, and certain outcomes such as number of family planning users, number of malnourished children who have improved, immunizations given, and so forth. These are reviewed by the doctor and certain information is forwarded to the district level.

3. Health Worker Training Program

To train the manpower required for the high quality rural health program described above, a major effort will be mounted to develop curriculum materials, train tutors, and establish a series of training schools for the non-physician health care providers.

a. Curriculum Development

At the present time adequate quantities of curriculum materials are not available in Pakistan for training mid-level or community health workers which are specific to the health problems of rural Pakistanis, or written in Urdu. Materials available are not designed for the development of problem - solving skills and

are not based on achieving competence in carrying out the practical activities required in the delivery of primary care. Development of new materials is time consuming, but adaptation of model materials can be done in a reasonable time so that training can be quickly started.

Model materials are available in an active learning mode, with the skills and knowledge required to perform to specified standards carefully delineated. Representatives of the Ministry of Health and of the Planning Commission as well as various training institutions have during the past year participated in workshops on the development of modularized competency-based training programs and the Government has indicated its desire to adapt this kind of simplified, modular, problem-oriented curriculum for Pakistan (with provincial variations as necessary). These modules will be translated into Urdu as well as major dialects, depending on ultimate ethnic responses to recruitment efforts.

The curriculum developed for the mid-level health worker will produce a graduate capable of performing at specified standard levels for all tasks and duties spelled out by the Government. The comprehension level is planned for matriculates (grade 10).

The curriculum for the community health worker will also be modular and problem oriented. The entry level for these students will be matriculates where available, with literacy as a minimum requirement. (However, learning materials can also be adapted for illiterates.)

b. Tutor Training

Completion of curriculum development will be followed by a tutor training program to develop adequate numbers of capable tutors to staff the training schools. This tutor training program will be carried out in two or three major cities in Pakistan. The three month course will include orientation to the concept of a primary health care delivery team and to the preventive and promotive functions of health workers. Exposure to modern

pedagogy, particularly the use of modularized curricular materials, active participatory learning and self instruction, will be given as well as work in evaluation, quality control and competency certification.

c. Training Units

Mid-level health worker training capability will consist of 12 training units by the end of the first project year. These training units will use the new modular curriculum developed and adapted during the first 6 months of the project. The training will begin with didactic training, consisting of supervised instruction, self instruction, and closely supervised practical and field experience, followed by a practical preceptorship experience (on-the-job training). The period of training will be eighteen months. Class size will be 25 and new classes will start at six month intervals so that output per training unit will be 50 mid-level health workers per year.

The initial units will be established at some of the existing Lady Health Visitor schools and at tehsil and district hospital which have facilities and space for classrooms and staff. The criterion for selecting sites will be that they have a minimum of 250 outpatient visits per day to provide sufficient practical experience for the students. Each unit will have newly-trained tutors added to its staff to operate the training program. Each unit will require some audio-visual equipment, and each trainee will be provided with modest examining equipment which he or she will retain when deployed to the basic health unit.

A second group of training units will be opened by month 18, and a third group will be operational by month 30.

d. Community Health Worker Training

These workers will be residents of the village they will serve and will be predominantly females. The Government of Pakistan has suggested matriculation as the optimum educational level but is aware that most of these women will have considerably less education and some will be illiterate. The majority will be mature women but younger non-married women will not be excluded.

CHWs will be selected by their village with the advice of personnel at the RHC and BHC. They will be trained for a period three months. Training will take place at the BHU and RHC and will be carried out primarily by the Mid-Level Health Worker as one of their first tasks when stationed in the BHU. Training materials will be specially developed educational modules. Since the major emphasis of these health workers will be prevention/promotion, their initial training will provide them with simple skills in these areas, such as weighing infants and keeping growth charts, dispensing family planning devices and advice, and participating in immunization programs. Treatment for a very few common illnesses will also be taught. Additional training in more complex tasks will vary depending on regional health, professional and political considerations.

4. Support System Development Program

The present rural primary health care system in Pakistan has a weak support infrastructure. Drugs are often out-of-stock, there are insufficient vehicles, and workers are often unsupervised. The primary manager of the system, the District Health Officer, usually has ten clerical staff to assist in managing up to 900 workers who serve populations of from 300,000 to 1,000,000. As the number of primary care providers greatly expands over the next 8 years, the present management system will obviously be inadequate. Therefore, this project seeks to help strengthen this support infrastructure.

Current awareness of infrastructure support problems varies and often one cannot find strong support for changing organizational arrangements. This seems to be due to lack of technical knowledge

about alternative managerial methods or because persons fear losing power or influence through change. This project seeks to strengthen the infrastructure support for the expanded rural health system in a constructive, collaborative way by:

-- Establishing, within the Federal Ministry of Health, a National Basic Health Services Cell to provide overall coordination for the expansion of basic health services, for the development of the new manpower, and for the strengthening of the support system.

-- Increasing technical skills through technical advisors and formal management training in primary care planning and operations, as well as in specialized technical support functions such as logistics and supply, personnel, supervision, information system, communications, and budget and financial control.

-- Developing simplified and appropriate manuals for primary health care management in operations, inventory control, and supervision, and developing an information system that aids decision making.

-- Using cost-reimbursable financing based on mutually agreed milestones to provide incentives for completion of critical project activities.

a. National Basic Health Services Cell

The National Basic Health Services Cell (the Cell) will be located in the Federal Ministry of Health. It is to be headed by a Deputy Director General of the Ministry which should give the Cell the authority it needs to fulfill its role.

The functions of this Cell will include:

Project Oversight

-- To implement federal policy and to assist the provincial basic health services coordinators in planning and programming all phases of the project.

-- To oversee provincial progress in meeting all project targets, including those for training, physical facilities, and management infrastructure.

-- To communicate provincial progress in meeting targets to senior Ministry of Health officials and to the AID project monitor.

Training

-- To conduct training for mid-level health worker teachers

-- To conduct all training in primary health care system management

-- To set national standards for graduation from mid-level health worker schools

-- To develop and adopt curriculum for mid-level health worker, community health worker, and primary health care systems management training

-- To evaluate curriculum and testing methods

-- To supply audio-visual and other educational support materials

-- To provide technical advice and support to the provinces

Operational Research

-- To conduct an on-going manpower inventory for primary care

-- To evaluate project progress through analyses of basic health services operations, including utilization patterns and determinant efficiency of various manpower mixes, effectiveness of various program activities, and innovative support and managerial methods

-- To conduct on-going economic analyses of current costs and revenues and develop forecasts of future costs and revenues

-- To develop a national health information system

-- To conduct research to set standards for activities of the primary health system

Communications

-- To plan and conduct mass media campaigns to support activities of basic health services system

-- To conduct seminars on rural health for federal and provincial government officials, particularly local government leaders and health officials

-- To develop support materials for communications campaigns

The Cell will become the focal point for the long-term, sustained development of basic health services. It therefore needs to have an adequate staff and budget. Under the Deputy Director General and his assistant it should be organized into separate training, operational health and communications divisions.

b. Special Areas of Management Concern

Project designers have identified seven major functional support areas that will require special attention in strengthening the support capacity of the system. These areas, dealt with more explicity below, include operational planning and management, logistics and supply, personnel, supervision, health information system, communications, and budget and financial control.

1) Operational Planning and Management:

One cornerstone of good management is clear articulation of operational objectives and quantified targets. These objectives, stated rather broadly at national levels, should be more concise at implementation levels, i.e., the district and below. From the operational objectives, come the operational plan which determines the mix of resources and the managerial process necessary to accomplish the objectives. At present, no operational outcome-based objectives exist at the district or provincial level.

The project will strengthen management and operational planning through long and short term technical assistance by qualified international health and management experts. This strategy will combine formal course work such as Executive Management Seminars for senior health officials (Secretaries, Directors of Health Services, Division Chiefs, and selected

Federal officials), Operations Management Courses (for District Health Officers), and on-the-job training. These activities should produce district health plans written in operational terms and operational IRHCs in each district.

2) Strengthening the Logistics and Supply System:

The major problem of the present logistics and supply system is erratic supplies of drugs and equipment. The major causes are lack of detailed specifications for drugs and equipment at each type of primary care unit; lack of standard operating procedures for ordering, warehousing, determining safety stock levels, and inspecting the system; lack of spare parts; and lack of skills to implement the above procedures. Corruption is also a problem, and many government-issued drugs end up in the private sector.

The project will help alleviate these problems by:

-- Developing simplified standard drug and equipment lists for primary care centers.

-- Establishing standard operating procedures for the entire system from Community Health Workers to the provincial warehouse for ordering, safety stock, transport, and repair which will be published as a field manual

-- Training logistics and supply specialists for each district

-- Training users in simple inventory management. (e.g. two-bin system) and in prescribing patterns

-- Establishing repair policies and replacement delivery times

To aid in these vital changes, technical advice and conditions precedent are written into the project.

3) Strengthening the Personnel System

The major problems in the current personnel system are:

Lack of standard operating procedures for career advancement and continuing education for personnel record keeping and for redressing grievences; inadequate job descriptions; and arbitrary and sometimes biased recruitment and placement of personnel.

The project will help to strengthen the personnel system by:

-- Developing clear, concise job descriptions for each primary care worker including entry skills and education and job activities

-- Developing clear policies for redress of grievances, for promotion based on performance as well as length of service, for continuing education and development of new skills

-- Aiding in revision of the personnel record system, particularly to record worker performance over time

-- Encouraging the development of a personnel audit office at the provincial level to oversee all hiring activities to aid in reduction of pay-offs and arbitrary hiring

-- Training of personnel specialists at the provincial levels

-- Developing standard operating procedures for placing trained personnel into temporarily vacant positions (e.g. to cover for workers during continuing education, holiday, maternity leave, sick leave, etc.,) to prevent primary health care units being inadequately covered during absences.

4) Strengthening the Supervisory System:

The major problems in the present supervisory system are lack of explicit criteria for supervision, lack of trained personnel to conduct supervision, and lack of transport for supervisors to

go to the field. Since no clear objectives for operations have heretofore existed, the supervisory process has been limited to casual observations of curative care by the District Health Officer.

This project will strengthen the supervisory process through:

-- The use of protocols in a competancy based training approach, adapted to Pakistan,which set forth clear, measurable,and explicit criteria for worker performance in the field

-- The development of field-tested worker performance evaluation instruments to complement the training approach

-- Use of an information system, discussed below, which directs the supervisory report flow to aid in early detection of poor performance

-- Teaching of the supervisory process to the mid-level health workers during training to facilitate their supervision of the CHWs, and promotion of selected mid-level workers of high quality to mid-level supervisory roles by the District Health Officer.

5) Strengthening the Health Information System:

The major problem in the current information system is that information is not gathered for the purpose of helping operating managers to make decisions. Little information is needed, since no detailed operational objectives exist. The minimal information collected flows upwards through the system, is collated, and then sometimes turned into statistical reports that are not very useful.

The new system will provide detailed job descriptions for the primary care workers based on achieving certain health objectives. From these, a detailed information system can be designed.

This project will strengthen the information system in the following ways:

-- The competency-based training approach, adapted to Pakistan, will establish system objectives, as will the operations management training of the District Health Officer's and their involvement with technical advisors

-- Standard operating procedures which follow the general guidelines of a model primary care information system will be adapted to fit the Pakistan case

-- The primary care workers will be trained in information gathering during their training program which will aid in implementation of the information system

-- Information collected by primary health workers will be collated by supervisors who are part of the information system as well as the supervisory system

6) Strengthening the Communications System

There is presently no articulated federal or provincial mass communications or personal communications strategy to support health workers in the field.

This project will strengthen health communications with the following:

-- Detailed job descriptions and objectives that elucidate communications gaps

-- Mid-level and community level health worker training that stresses personnel communications for specific preventive problems such as nutrition and family planning as well as improved family knowledge about sickness

-- A National Basic Health Services Cell Communications Division that acts as catalyst for mass communications effort, and develops radio spots, posters, and other audio-visual aids to improve primary health services

7) Strengthening Budget and Financial Control:

Available data shows wide variation in unit cost/primary health care service rendered in the present system. Budget clerks do exist at the district level now and expenditures are recorded. But as the system rapidly expands, financial control to maximize efficiency will become exceedingly critical. The principles of performance budgeting, budget projections with variances, and budget auditing by independent auditors do not seem to be implemented in the present health system.

The project will act to strengthen financial and budget control by:

-- Conducting in Phase I of the project a cost analysis study of all aspects of primary health systems and, from this study, designing a better financial information system to aid in projections of recurrent costs under various levels of utilization (both demand utilization and planned intervention utilization).

-- Training budget specialists at both provincial and district levels.

C. Logical Framework Narrative*

1. Project Goal

The ultimate goal of any health program is to improve the health status of the people it serves. This can be done by achieving a favorable change in the natural course of disease in the population through disease prevention, early case finding,and treatment for overt disease. Measuring changes in the course of disease in a population is difficult because most of the changes do not have a rapid aggregate impact and because it is difficult to attribute favorable changes to the health program itself (as health status changes are also sensitive to changes in income among other things). Certain goal indicators are sensitive measures of the impact of health care programs. The best ones are two indicators of mortality in early childhood: the infant mortality rate and the age 1-4 mortality rate. This project will use those two indicators to assess long-term change in health status in the population. They cannot be expected to change significantly by the end of Phase I.

GOAL INDICATOR	BASELINE Program year 1**	PHASE II Program year 7
Infant mortality rate	138	70
Age-specific dealth rate (1-4 age groups)	Over 20	14

* The log frame appears at the end of this narrative.

** All program year 1 data are estimates and will be measured in the baseline survey.

Other goal indicators which measure health status include disease-specific morbidity rates. The following disease-specific indicators will be used:

GOAL INDICATOR	BASELINE Prog. year 1 Morbidity	PHASE II Prog year 7 Morbidity
Age 0-4 % with Malnutrition	50%	35%
Age 0-4 % having had Diarrhea/Dysentary in the last year with Dehydration	75%	10%

One of the primary responsibilities of the community health worker is to distribute oral contraceptives and condoms during home visits. The project expects to have a positive effect on fertility. The following will be used as fertility goal indicators:

GOAL INDICATOR	BASELINE Prog year 1	PHASE II Prog year 7
Contraceptive Users % women age 15-45	6	25
Continuous Users of Contraceptives at parity of two (%)	2	10

NOTE: These indicators are specifically chosen to be the same as the AID-funded "Basic Health Services Project - Afghanistan" to have cross national comparative data.

2. Project Purpose

The project purpose is the development of a functioning system of Integrated Rural Health Complexes. End of project status indicators fall into three areas : Coverage, quality of care, and management of IRHCs.

a. Coverage

One purpose of this project is to increase the coverage of the population with basic health services. Once the Government is successful in deploying workers to rural areas and keeping them there, the Integrated Rural Health Complexes can become operational. For progress measurement purposes, an operational complex is defined as 'a basic health delivery unit composed of at least one RHC and 4 BHUs having 80% of authorized doctors and mid-level workers in place and working and 90% of required drugs on hand and equipment in operational condition'. The following will be used as a measure of coverage:

	BASELINE Prog year 1	PHASE I Prog year 3	PHASE II Prog year 8
OPERATIONAL IRHCs	0	12	300

Medical care studies in developing countries have shown that visits to facilities drop exponentially with distance from the facility. For this reason, facilities must be close to rural people who can often only travel on foot. A second measure of coverage therefore is population coverage by distance. For purposes of this project (and in conformance with other international health studies), desirable population coverage is defined as "10 Km (6.2 miles) or less from a Basic Health Unit or Rural Health Center".

In this project, we expect the following:

	BASELINE Prog year 1	PHASE I Prog year 3	PHASE II Prog year 8
Population covered (millions)	2.5 (estimate)	4.0	28

Another and perhaps best measure of coverage is utilization rates of the IRHC system. This may be measured in terms of visits/persons/year to the IRHC. We expect the following:

	BASELINE Prog year 1	PHASE I Prog year 3	PHASE II Prog year 8
Utilization of IRHC's visits/person/year	0.5 (estimate)	1.0	2.5

b. Quality of Care

It is not enough for this project to increase coverage. An equally important purpose of this project is to achieve a significant increase in the quality of care offered. The evaluative process to be used is to measureworker performance for a sampe of activities against national standards set by the National Basic Health Services Cell.

We expect the following:

	BASELINE Prog year 1	PHASE I Prog year 3	PHASE II Prog year 8
% of IRHC's where 90% of curative care activities are above national standard	Less Than 10% (Estimate)	80%	95%
% of IRHC's where 90% of preventive care activities are above national standard	Less Than 10% (estimate)	60%	80%

c. Management of IRHCs

The management infrastructure development program has the purpose of training managers for the entire system. Three critical end-of-project status indicators will assess whether this purpose

was accomplished for IRHCs: drugs on hand, equipment present and in operating condition, and supervision being carried out in adequate quantity. We expect the following:

	BASELINE Prog year 1	PHASE I Prog year 3	PHASE II Prog year 8
% of IRHCs with 90% of required standard drugs on hand at any given time	Less Than 10% (estimate)	80%	95%
% of IRHCs with 90% of required standard equipment on-hand and operational at any given time	Less Than 10% (estimate)	70%	90%
% of IRHCs with one or more supervisory visit/ worker/month	Less Than 10% (estimate)	80%	95%

3. Project Outputs

Outputs for this project are of four types: training capacity, trained workers, a management infrastructure and physical infrastructure.

a. Training Capacity

This project will increase the training capacity in Pakistan by establishing a Training Division within the National Basic Health Services Cell and by establishing Training Units for mid-level primary health workers under Provincial Ministries of Health. The outputs are as follows:

PERSONS

OUTPUTS	01	02	03	Phase I Total	04	05	06	07	08	Phase I & II Total
Trained mid-level tutors	36	[illegible]	36	108	36					144
Trained mid-level workers	0	270	540	810	1080	1620	1890	2160	2160	9720
Trained community health workers	0	0	1350	1350	4050	6750	9450	10800	10800	43200
Trained Executive Managers		24		24						24
Trained District and Assistant District Health Officers - Basic Course		24	24	48	24	24				96
Trained District and Assistant District Health Officers - Advanced Course			24	24	24	24	24			96
Trained Personnel Managers			65	65						65
Trained Drug & Supply Managers		65		65						65
Trained Budget and Financial Planners		65		65						65
Trained Information Systems Supervisors		36	24	60	24	24				108

c. Management Infrastructure

Outputs for this project in the area of management infrastructure development are dependent on a functioning National Center for Basic Health Services which will produce the following outputs:

TRAINING MATERIALS	01	02	03	PHASE I Total	04-08	PHASE L & II Total
1. Pakistan-adapted competency-based training curriculum for mid-level workers with all necessary component problem - oriented modules.		1	0	1	0	1
2. Pakistan-adapted simplified competency-based curriculum for community health workers including all necessary component problem-oriented modules.			1	1	0	1

(✓ draft) (✓ final)

FIELD OPERATIONS MANUALS	01	02	03
Preventive medicine program operation at the Rural Health Complex		(✓)	✓
Handbook of curative medical care for mid-level health workers		(✓)	✓
Management of the Rural Health Complex		(✓)	✓
Inventory and Supply Manual		(✓)	✓
Personnel management manual		(✓)	✓

OPERATIONAL RESEARCH AND DEVELOPMENT	01	02	03
National performance standards for mid-level workers		✓	
On-going health manpower inventory		✓	
Research study on determinents of primary care utilization			✓
Cost analysis study of primary care expenditures and revenues			✓
Information System design study for primary care			✓

COMMUNICATIONS SUPPORT	01	02	03	PHASE I Total
Minutes of radio bradcasts on rural health topics	150	300	600	945
Pictorial pamphlets on rural health produced		50000	50000	100000
Posters on rural health produced	1000	1000	2000	4000
Seminars given	12	50	75	137

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LOGICAL FRAMEWORK FOR SUMMARIZING PROJECT DESIGN

Est. Project Completion Date _____

Date of this Summary April 30, 1976

Project Title: BASIC HEALTH SERVICES

DEVELOPMENT HYPOTHESES — If Purpose, Then Goal; If Outputs, Then Purpose; MANAGEABLE INTEREST — If Inputs, Then Outputs

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program Goal The broader objective to which this project contributes: Improved health status of the rural population.	Measures of Goal Achievement: — Phase II (07) 1.0 GENERAL MORTALITY 1.1 infant mortality rate — 100 1.2 age-specific death rate (1-4 age group) — 14 2.0 DISEASE-SPECIFIC MORBIDITY INDICATORS 2.1 Malnutrition — 12% 2.2 Diarrhea/dysentary with dehydration — 10% 3.0 FERTILITY 3.1 % users — 25% *3.2 continuous users of contraceptives at parity of 2 — 10%	Baseline survey in year one, repeat in year 7.	Concerning long term value of program/project: The basic assumption for the program goal is that improved health contributes directly to increased welfare and living standards, which is a basic development goal. Economic benefits adequate to justify this program are of a consumption nature and do not rely on demonstrating resulting increases in productivity.
Project Purpose: A functioning system of operational Integrated Rural Health Complexes established.	Conditions that will indicate purpose has been achieved: End of project status. See expanded purpose page.	1. and 2. Regularly scheduled field checks and record checks, and independent evaluation in years 03 and 07. 3. Independent management evaluation years 03 and 07.	Affecting purpose-to-goal link: 1. Persons who use the system respond to the treatment given. 2. No epidemics or severe drop in disposable income. 3. Nutrition education and local resources will be sufficient to overcome most of the malnutrition identified by the system.
Outputs: 1. Training capacity 2. Trained Health manpower 3. Management system 4. Physical infrastructure	Magnitude of Outputs necessary and sufficient to achieve purpose. See expanded outputs page following this logical framework.	Project records, project manager certification, field surveys and evaluation.	Affecting output-to-purpose link: 1. Personnel trained to serve in rural areas remain there with adequate support.
Inputs: Activities and Types of Resources	Level of Effort/Expenditure for each activity. *	Project records/audit tracking.	Affecting input-to-output link: 1. Recruitment of expatriot and Pakistani personnel proves feasible on a timely basis. 2. Plan of action and financing through government budgets and USAID proceeds on a timely basis.

Inputs	Yr. 1	2	3	4	5	6	7	8
1. Technical Assistance								
a. long term (work years: 4 USAID, 2-WHO)	6	6	6					
b. short term (person weeks)	43	57	30	6				
2. Pakistani trainers (number)	36	72	108	144	144	144	144	144
3. RHA recruits (number)	300	900	1500	2100	2400	2400	2400	2400
4. CHV recruits (number)		1350		8100	8100	9450	10800	10800
5. Modular competency based curriculum								
6. Contracting services and materials.								
7. Management personnel.								

* For expenditure for each activity, see Part III.D. Financial Analysis (Table III.2.)

Expanded Purpose Page

	PHASE I (03)	PHASE II (07)
1.0 COVERAGE		
1.1 Operational RHC's	12	300
1.2 Population covered (millions)	3.4	28
1.3 Utilization(visits/person/year) to RHC's	1.0	2.5
2.0 Quality of Care		
2.1 % of RHC's where 90% of curative care activities are above standard	80%	95%
2.2 % of RHC's where 90% of preventive care activities are above standard	60%	80%
3.0 Management of RHC's		
3.1 % of RHC's with 90% of standard drugs on hand	80%	95%
3.2 % of RHC's with 90% of standard equipment on hand and in operational condition	70%	90%
3.3 % of RHC's with more than one supervisory visit/worker/month	80%	95%

TRAINING CAPACITY OUTPUTS	PHASE I				PHASE II					
	01	02	03	Phase I Total	04	05	06	07	08	Phase I & II Total
Operational Training Division within Federal Ministry of Health Cell	1			1						1
Operational Training Units for mid-level workers within Provincial Ministries of Health	12	12	12	36						48

b. Trained Workers

The training outputs for this project include the following number of graduates from formal courses:

4. Project Inputs

(What follows is a brief narrative discussion of the classes of proposed project inputs. All inputs are quantified in both the logical framework matrix and in the Financial Analysis.)

There are a number of project inputs which involve personnel. During Phase I there is a substantial component of technical assistance, both long and short-term, proposed. These consultants will assist in both the training and management aspects of the program. Very little technical assistance is projected for Phase II.

In addition, Pakistani trainers and candidates for mid-level and community health worker slots must be recruited. Increasing numbers of candidates for these positions are needed throughout the life of the project.

In the first year of the project, training units with adequate materials and equipment must be identified. It is proposed that existing health facilities will be upgraded and then utilized for this purpose. By the begining of Phase II, forty-eight of these units will be needed. Also during the first project year, an essential input is a modular competency-based curriculum suitable for adaptation and translation.

Finally, there is a substantial financial input needed throughout the life of the project. Financing is needed, among other things, for both the construction and recurrent budgets of the RHCs and BHUs, as well as for the Cell and for evaluation.

It is proposed that AID's input be for general project support. The AID loan will finance all technical assistance with the exception of the two long-term advisors provided by the World Health Organization. The remainder of the loan will cover a percentage of all other project costs. Overall, AID will finance approximately sixty percent of total Phase I costs.

PART III

PROJECT ANALYSIS

A. Technical Feasibility

A number of technical feasibility issues have been considered in designing the project. These include:

-- the viability of the overall basic health services strategy

-- the use of physician extenders (non-physician primary care providers) for expanding basic health services

-- potential problems of physician extender programs

-- general feasibility issues raised in the PRP

-- the effect of the project on other variables of Pakistan's socio-economic structure (e.g., employment effects, environmental impact)

1. Basic Health Services Strategy

This project is based on the Government's rural health strategy outlined in the 5th five-year Plan. The strategy is aimed at providing integrated basic health services to 50% of the rural population by the end of the project period through the physician extender approach. The project supports this strategy by offering curative and preventive services through a three-tiered system that can greatly increase the accessibility, outreach and quality of rural health care at reasonable cost. Health status is a function of a variety of socio-economic variables. Simply providing curative services will not significantly alter morbidity and mortality patterns. Because the project emphasizes preventive and promotive care with maximum outreach, however, a major public health impact can be achieved on maternal mortality, prenatal and infant mortality, and mortality of children under 5. It is fundamentally for this reason, combined with the evidence of Government support for the strategy, that the basic health services approach can be viewed as a feasible and justifiable means of improving the health status of Pakistan's rural poor. Although very ambitious, the project targets are technically achievable, and in fact are lower than those projected in the 5th Five Year Plan.

2. The Physician Extender Approach

Evidence from a wide variety of countries in both the developed and developing world has clearly established that the use of physician extenders is an effective means of providing good quality health care.

The experience with Medex, physician's assistants, and nurse practitioners in the United States indicates that these workers can significantly increase the productivity of the physician and thus reduce the cost per unit of service. The dramatic achievements of the Chinese "barefoot doctors" is evidence of the effectiveness of deploying large cadres of health workers within a well defined operating system. Many countries throughout the developing world have used non-physician health providers with considerable success. (See Part II Background for experience in Pakistan). When used in the Pakistani context, health auxiliary workers have achieved good social acceptance when logistically supported. When these programs failed it was largely because of inadequate planning and preparations in advance or because of administrative and financial problems which have been addressed in the current project design.

One conclusion of recent health policy discussions in Pakistan has been that the use of medical auxiliaries is necessary if there is to be any hope of achieving desired coverage targets for the rural population. Pakistan has always had extreme difficulty recruiting doctors to serve in rural areas. At present fewer than 10,000 doctors are practicing in Pakistan and the vast majority of these are in urban areas. Over 50% of the posts for doctors in rural areas are vacant. Bonding of medical students to serve in rural areas was not successful in the past, and there is no reason to believe that this situation will change. Pakistan has markedly increased medical school enrollments over the past three years. This will provide more doctors, but most of these will undoubtedly move to the more socially satisfying and financially rewarding urban environment. The difficult living conditions and work environment in rural areas will continue to make it hard to recruit more than the small numbers of doctors required for referral and supervisory roles.

The Government's decision to train cadres of mid-level and village level health workers is appropriate, given the magnitude of its health problems and the present health manpower configuration.

3. Potential Problems of the Physician Extender Programs

a. Assuring a Broad Base of Support

Long term viability of physician extender programs is only possible if all major interest groups in the health area are involved in planning and implementing the program. The Federal Ministry of Health, the Planning Commission and Provincial Ministries of Health all solidly support the concept of the physician extender. Provincial differences lie in the determination of the specific role of the third tier worker (the community health worker). To take into account these differences, the project design allows for the demonstration and development of different roles and functions for these workers during Phase I.

Professional medical groups within Pakistan recognize the need to use physician extenders in rural areas, but are concerned about maintaining quality standards. They will not pose a major threat to the program if continuing attention is paid to their specific concerns about clear definition of the roles of each worker, quality of care, and safeguards to prevent leakage of health workers outside of the system to practice independently as "quacks".

Indigenous practitioners are another vested interest group involved in the health sector. The roles of the various elements in this group are described in the Social Analysis, Part III. C. The majority of traditional practitioners are apprentice-trained, and the quality of their treatment for organic disease is poor. They do, however, serve a useful function in treating certain types of illness, and have considerable community support. The role of these workers in future health services has not been entirely resolved. A Government commission was charged with resolving the issues related to the future position of these workers, but it's recommendations are not yet available. It is widely assumed that the two systems (allopathic and indigenous) will continue to coexist in the near future. Many of the traditional practitioners undoubtedly will prefer this arrangement. The project's intent is not to disrupt their practices. Some of the indigenous workers (especially dais) will be recruited as Community Health Workers and many may want to enter the system as Mid-Level Workers if they pass a standard mid-level health worker examination. Others may seek to enter the training program.

It is assumed that the report of the Commission on Indigenous Practitioners will be issued prior to Phase II, and that the intentions of the Government regarding this large body of health workers can then be incorporated into the Phase II project design.

b. Receptive Framework

Lack of desired success in physician extender programs can frequently be traced to inadequate preparation of the graduate, the health services system, and the community for this new approach to health care. This project outlines clearcut job descriptions, proposed salaries, and a career ladder that will be established in Phase I of the project. Careful attention will be given to imparting to each trainee ethical concern for his/her work and for public health in general. The community will help to select their village health worker, ensuring greater community support. An active communication strategy will be developed during Phase I to orient community residents and leaders to the function of their health workers. The training which doctors receive will prepare them to work in a team relationship with the new workers as consultants, supervisors, and team leaders.

Community involvement in selecting CHWs, financially supporting these workers, monitoring preventive activities of CHWs, and participating in any community action program related to health will hopefully be facilitated by the recent steps to restore local government in Pakistan. Promotion of community involvement will receive special attention during Phase I of the Project by the Communications Division of the National Cell.

c. Training the MLHW

The Government has elected to use a competency-based, problem-oriented modular curriculum which they will adapt from standard models prepared for developing countries. This adaptation process will reduce the time required for module preparation from approximately 60 man-months to 12-15 man-months and allow training to begin earlier.

Most of the problems the mid-level and village level health workers will be facing can be treated without extensive knowledge of body systems and specific disease processes. Training health workers to deal with health problems rather than disease processes is therefore appropriate. Competency based training material emphasizes the development of skills and knowledge to meet set levels of performance that can easily be standardized at the national level. The protocols in the modules are used as field manuals for preventive and curative care.

The adaptation of presently available curricular materials is technically sound from the standpoint of ultimate training material quality, time expended in curriculum design, and cost for curriculum development.

d. Recruitment and Deployment

Lack of effective recruitment and deployment systems is a common cause of program failure. This problem is particularly complex in Pakistan because of the need to have female providers for village women and children, and is compounded by the restrictions on the role of women as providers. (See Social Analysis, Section III C.)

This will remain a problem until the overall role of women in the socio-cultural setting in Pakistan changes. Evidence of change has been noted in increased applications for female family planning positions and in the Mission's anthropologic enquiry (See Social Analysis). To minimize this problem the project proposes to:

-- Limit candidates as far as possible to females from rural areas.

-- Select mature village women as village health workers to enhance travel capability.

-- Provide adequate accommodations at rural health facilities.

-- Deploy mid-level workers to sites close to their homes.

-- Reduce where necessary entrance requirements for females to enhance rural recruitment.

These measures will be easy to enforce in Phase I when the required number of candidates in small, but increasing difficulties will occur during the latter stages of Phase II when recruitment escalates. The problem of female health workers will require further research throughout Phase I of the project, and should be addressed again in the Phase II project paper. Such research will be carried out by the Operational Research Division of the National Cell.

e. Community Health Worker Development Program

1) Candidates for Training

The Government has proposed that CHWs be matriculates. They are aware, however, that not all villages will have matriculates available or even literate women who are willing to serve. Therefore, the Training Division of the National Basic Health Services Cell will design and field test modular material which is predominantly pictoral, with associated simple auditory instructions.

2) Relationship of CHWs to Existing Dais (Traditional Birth Attendants)

Each village has existing indigenous midwives (dais), who are potential competitors for the CHW's. To prevent any hostility that could arise in such a situation, every effort will be made to recruit these village dais. This recruitment effort should be successful because the new role should bring prestige and income for the village women and cause little social disruption.

3) Payment of the Community Health Workers

To avoid an additional burden on its health budget, the Government wants to develop a community support scheme for the CHW. This is discussed in detail in the Financial Analysis section of the paper. The testing of various financing models should pose no technical constraint to success of the project, and will be closely monitored.

4) Other Feasibility Issues Raised in the PRP

a. Hospital and Medical School Expansion:

Concern was expressed in the PRP about possible conflict between the new doctors being graduated from expanded medical schools and the non-physician primary care providers. As noted at that time, medical school enrollment had increased threefold over the past five years, placing considerable strain on financial resources (see Financial Analysis). The Planning Commission has suggested that no new medical schools be commissioned, and that serious consideration be given to reducing enrollment in the over-crowded medical colleges. The output of doctors should thus not continue to expand. Those who are graduated in the next few years are expected to establish urban private practices for the most part and therefore not compete with the new mid-level health worker. Pending a change in policy, the present medical school enrollment poses no technical problem to the present project or its basic concepts.

b. Development of Management Infrastructure:

The PRP pointed out that there is a need for improved management of the Health Service System. A detailed strategy for improving health services administration, particularly at the district level, is spelled out in the project description. With careful monitoring this approach should be successful in establishing a sound health services system.

c. Coordination of Health Sector Development

The proposed National Basic Health Services Cell will set standards and coordinate activities related to the training programs for health workers and implementation of the strategy for strengthening the support system. This Cell with its associated advisory council will issue national policy directives. It will not function autonomously, but will operate within the general context of the Ministry of Health. The alternative of a semi-autonomous body at the Federal level poses almost insurmountable problems in charter and organization, particularly because health care implementation takes place at the provincial level (see Part IV Implementation Plan).

d. Technical Assistance

The Government was concerned about the amount of technical assistance proposed in the PRP (39 man-years). It is now proposed that 6 technical advisors (18 man-years) assist counterparts in developing training programs, operations manuals for delivery and management of primary care, an operational health information system, a supply management system, and a personnel and supervisory system. The technicians will serve as advisors to health worker training program directors on issues related to curriculum, training and preceptorship. They will advise the Provincial Directors of Health Services, District Health Officers, and Assistant District Health Officers in implementing the strategies developed for supply management, personnel management, health information system, supervision of quality control for mid-level and community health workers, communications, and health education.

Two of these six long-term advisors will be provided and funded by the WHO. Short term technical advisors will be used for the management training seminars (see Part II. B. 1. c. Support System Development) and consultation related to health information systems, supply management and evaluation. The number of advisors, although a financial burden to the Government, is appropriate in view of complexities of the project.

e. National Health Laboratories

The National Health Laboratories (NHL) are Pakistan's major producer of vaccines and other biologicals. The PRP expressed concern about the Laboratory's ability to meet national needs for these essential items in view of staffing deficiencies. The PRP recommended that employees of the Laboratories be sent abroad for participant training. A review of the Laboratory staffing revealed a 50% vacancy rate among santioned doctor's positions. Laboratory assistant positions have a present vacancy rate of 35% (30 vacancies for 80). To remedy this deficiency among laboratory assistants, an on-the-job training program was established which is currently training 25 students. This new training capacity will quickly eliminate shortages of technicians. These technicians are not being granted required Government permissions to leave the country. The difficulties in recruiting doctors at the National Health Laboratories are less readily resolved. Shortages seriously hamper research and development efforts. The Laboratories director feels, however, that laboratory

production has not been impaired. The participant training suggestion was rejected by both the Laboratory Director and the Federal Ministry of Health because they feel training abroad is frequently not appropriate to the requirement of Pakistan and leads to a high risk of emigration.

At present the Laboratories produce typhoid, cholera and rabies vaccines, antivenom, antidiphtheria, and a variety of other vaccines and antisera. The major deficiencies are in measles and polio vaccines. The Laboratories expect to initiate the development of virus culture technology for measles and polio vaccine production within a year. Pertussis vaccine is produced in small quantities, but with inadequate standardization. BCG vaccine is not produced in Pakistan because a higher quality vaccine can be purchased less expensively from abroad.

Because the WHO and UNICEF give continuing assistance to National Health Laboratories in improving quality control and technical expertise and because health officials in Pakistan prefer to concentrate on health manpower and system infrastructure development, the National Laboratories is not of direct concern in Phase I of this project.

f. Health and Vital Statistics

Both of these areas of health data were identified as deficient by the Country Health Programming participants and the PRP development team. During development of this Project Paper, a consultant from the National Center for Health Statistics helped evolve the Health Information System guidelines for the project. Phase I calls for the development of a Health Information System with the help of both long and short term technical advisors. Standards for a well established Health Statistics System will be developed during this period.

The Government is in the process of negotiating a project proposal for improving the system of collecting, analyzing and reporting vital statistics in Pakistan. This proposal is for a PL 480-supported, WHO assisted effort in collaboration with the National Center for Health Statistics of the U.S. Department of Health, Education & Welfare. Although this is a small project, an additional effort in vital statistics need not be considered during Phase I of a primary care type health project. This issue will be reconsidered in development of the Phase II Project Paper.

g. Generic Drug Quality

In late 1975 it was estimated that 25% of medications on the market in Pakistan were below standard (did not contain prescribed amounts of biologically available active ingredients). Over the past four months the Government has carried out an intensive survey of generic drug quality and of production of medications. As a result of this effort, new legislation has been enacted that strengthens production standards and introduces new penalties for the production and sale of inferior products. To help enforce this new law the Government will establish new drug testing laboratories and train more drug inspectors. Although these actions may not eliminate the problem of substandard drugs, they will go a long way toward reducing abuses.

5) Other Technical Feasibility Considerations

a. Integration of Vertical Programs

The Government plans to integrate fully all vertical health programs when the basic health services infrastructure is fully established. Since the proposed system calls for a minimum of one community health worker/village, it should have sufficient manpower to carry out the functions of the existing vertical programs. Because the CHW will be in place in the village, and his/her performance already closely monitored, travel and administrative costs would be lower when all programs are integrated. The additional training necessary for MCHWs and CHWs to perform the tasks of vertical program workers will be given through the continuing education program.

Integration should not begin until sufficient members of mid-level health workers are trained and deployed and CHWs are increasingly in place in the rural areas. It is expected that early in Phase II, integration will begin in on a carefully phased basis. Integration of the malaria program, for example, should begin in year 1 of Phase II in keeping with the current plans of the malaria control program. Details of integration plans will be developed and described in the Project Paper for Phase II.

b. Employment Effects

The project propose to train and deploy over 800 mid-level health workers and 1,350 CHWs by the end of year 3. Virtually all of CHWs positions will be filled by rural poor, and, in keeping with

project design, at least 50% should be women. In addition to these health workers, support personnel will be required for the Integrated Rural Health Complexes. Positions will open up in administrative areas at federal, provincial and district levels. Existing health workers in government employment will not be disadvantaged by the project as many will receive upgrading of job skills in the new system. Although the employment impact of the project in Phase I will not be substantial, it will escalate in Phase II as more workers enter the system, and it does focus on a target group of major concern--the rural poor.

Indigenous workers may be adversely affected by this program as their clients begin to use the improved government health services. However with an active recruitment program, it is anticipated that many indigenous practitioners will enter the formal health services system. Those who remain outside of the system will continue to treat some simple problems, particularly minor emotional disorders.

c. Replication/Diffusion Effects

The use of intermediate levels of technology as demonstrated by MLHW's can be transferred to other development sectors within the country (i.e. agriculture) and thus serve as a model for a variety of nation building programs. In addition, the introduction of modern management principles into government health sector should have a beneficial diffusion effect into other areas of federal and provincial government.

The technology being developed in this project for training health workers and delivering integrated health services to the rural population is a flexible and adaptable method which can be applied to other developing countries. A successful program in a country as large as Pakistan with such a complex socio-cultural setting will encourage other countries to adopt the Pakistan experience in meeting their own rural health needs.

d. Program Operation and Maintenance

The technology required in this project imposes no unusual operation and maintenance constraints on the Government. The major constraints to initiation of the training program at this time are lack of appropriate educational materials and teaching methodology, both of which will be overcome early in Phase I of the project. Maintaining the expanded rural health system will pose initial management problems, but these are clearly addressed in the system support strategy as described in the Detailed Project Description. The other area of concern relates to recurrent costs, which is addressed in the Financial Analysis section.

e. Environment Assessment

This project has no significant detrimental effects on the environment. A number of rural health facilities will be constructed in villages. These are of quite modest size and of local construction materials. In phase I of the project and throughout phase II a health education compaign will be mounted which will foster environmental sanitation and personal hygience and should yield positive local environment effects.

6) Technical Cost/Design Analysis

A Detailed Financial Plan and Financial Analysis are presented in the following section of this paper. Detailed project-related research was done during the WHO-assisted Country Health Programming exercise and subsequently by the Health Section of the Planning Commission. Consultants have over a period of months reviewed Pakistan's health needs, manpower requirements, and training needs. Technical discussions were held with a government committee set up to work with the Mission in developing this Project Paper. These efforts have all led to the conclusion that the project design is a technically sound one suited to the problems, needs and wishes of the government.

7) Summary Conclusions

The project as designed is technically and economically sound and cost estimates are reasonable. The project meets the requirements of FAA Section 611(a) and (b).

B. Financial Analysis and Plans

1. Project Costs*

The total cost of the project over the first 3 years (phase I) is $25.3 million (see Table III-1), of which the loan of $15 million would cover roughly 60% (see Table III-2). Construction costs for Rural Health Centers (RHCs) and Basic Health Units (BHUs) are clearly the largest item in the budget, taking 80% of total expenditures in Phase I. Costs are not spread evenly over the period, but increase rapidly each year -- only 5% of the total will be spent in year 1, compared with 65% in year 3.

Over 8 years (phase I and Phase II), the total cost of the project will be $262 million. The mix of costs changes somewhat for the eight year period -- construction costs account for 65% of the total, recurrent costs for the RHCs and BHUs for 25%, and training costs for 10%. Again, costs are not evenly spread over the second 5 years, but increase at an annual rate of about 20% to reach nearly $60 million per year.

a. Technical Assistance:

Technical assistance over the first 3 years of the project will cost $1.8 million, about 7% of the total project costs. The project calls for 18 work-years of long-term technical assistance in Phase I. Costs per work year for long-term technical advisors are estimated at $80,000. In addition, $15,000/year has been budgeted for a coordinator based in the U.S., and $32,000/year for overhead (20% of the actual salary payment ($40,000/year) of each of the four USAID financed technical advisors). Total long-term technical assistance costs (both USAID and WHO) will be $1.6 million; short-term technical assistance of $ .2 million brings the total to $1.8 million.

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* In developing the financial plan it was determined that financial projections should show the real rate of project expansion. Therefore all costs are shown in 1975/76 prices with no allowance for inflation.

EXPANDED OUTPUTS PAGE

	PHASE I 03	PHASE II 07
1.0 Training Capacity		
1.1 Operational Training Division in MOH	1	1
1.2 Operation Training Units in Provinces	36	48
2.0 Training Outputs		
2.1 Trained tutors	108	144
2.2 Trained mid-level workers	810	9720
2.3 Trained CHW's	1350	43200
2.4 Trained Executive Managers	24	24
2.5 Trained DHO's, ADHO's	48	96
2.6 Trained Personnel Managers	65	65
2.7 Trained Drug and Supply Managers	65	65
2.8 Trained Budget and Financial Planners	65	65
2.9 Trained Information System Supervisors	60	108
3.0 Management Infrastructure		
3.1 Training Material		
1) Pakistan-adapted competancy-based curriculum for mid-level workers	1	1
2) Pakistan-adapted simplified competancy based curriculum for CHW's	1	1
3.2 Operations Manuals		
1) Preventive medicine operations at the RHC	1	1
2) Handbook of curative care for mid-level workers	1	1
3) Management of the RHC	1	1
4) Inventory and Supply Manual	1	1
5) Personnel Management Manual	1	1
3.3 Operational Research and Development		
1) Performance standards set	✓	
2) On-going manpower inventory	✓	✓
3) Utilization research study	✓	
4) Cost analysis study	✓	
5) Information System Design Study	✓	
3.4 Communications Support		Not yet quantified
1) Minutes of radio time	945	
2) Pamphlets produced	100,000	
3) Posters produced	40,000	
4.0 Physical Outputs		
4.1 BHU's completed	329	2758
4.2 RHC's completed	36	363

TABLE III-1 : SUMMARY OF PROJECT COSTS

U.S. $ 000s

	Phase I					Phase II							
	01	02	03	01 - 03	% Total	04	05	01 - 05	06	07	08	Total	% Total
I. Technical Assistance	587.3	607.7	571.9	1766.9	7.0	12.2		1779.1				1779.1	.7
Long term: USAID	320.0	320.0	320.0	960.0				960.0				960.0	
WHO	160.0	160.0	160.0	480.0				480.0				480.0	
Overhead	32.0	32.0	32.0	96.0				96.0				96.0	
Coordinator	15.0	15.0	15.0	45.0				45.0				45.0	
Short term	60.3	80.7	44.9	185.9		12.2		198.1				198.1	
I. National Center	123.3	111.6	110.6	345.7	1.4	97.8	87.1	530.6	78.6	140.7	71.2	820.5	.3
Start-up Costs	69.5	-	-	69.5		-	-	69.5	-	69.5		139.0	
Salaries	26.2	31.3	32.1	89.7		29.6	29.6	148.9	29.5	29.5	29.5	237.4	
Rent	3.9	7.8	7.8	19.5		7.8	7.8	35.1	7.8	7.8	7.8	58.5	
Office Supplies	1.5	3.0	3.0	7.5		3.0	3.0	13.5	3.0	3.0	3.0	22.5	
Transportation	5.8	11.6	11.6	29.1		11.6	11.6	52.3	11.6	11.6	11.6	87.1	
Communications	1.1	11.4	12.8	25.3		12.8	12.8	50.9	12.8	12.8	12.8	89.3	
Training	10.4	33.3	33.2	79.9		24.1	14.4	118.4	6.2	-	-	124.6	
Contingencies (10% total)	4.9	10.2	10.1	25.2		8.9	7.9	42.0	7.1	6.5	6.5	62.1	
I. Recurrent Costs	-	-	975.0	975.0	3.9	3112.6	6900.0	10987.6	12150.0	17808.8	23572.8	64519.2	25.0
RHCs			292.5	292.5		933.8	2070.6	3296.3	3645.0	5366.3	7020.0	19327.6	
BHUs	-	-	682.5	682.5		2178.8	4830.0	7691.3	8505.0	12442.5	16380.0	45018.8	
Equipment Replacement											172.8	172.8	
I. Total II and III	123.3	111.6	1085.6	1320.7		3210.4	6987.1	11518.2	12228.9	17949.5	23644.0	65339.7	
I. Training of Health Workers	127.0	447.0	1209.5	1783.5	7.1	2407.2	3582.0	7772.7	4626.1	5476.8	6001.0	23876.6	9.0
MLHWs	127.0	447.0	900.0	1474.0		1420.0	1813.0	4707.0	2013.0	2080.0	2080.0	10880.0	
MLHW Continuing Ed.	-	-	39.5	39.5		136.7	301.5	47[illegible]7	532.4	781.6	1027.3	2819.0	
CHWs	-	-	270.0	270.0		810.0	1350.0	2430.0	1890.0	2160.0	2160.0	8640.0	
CHW Cont. Ed.	-	-	-	-		40.5	117.5	158.0	190.7	455.2	733.7	1537.6	
I. Construction	576.0	6268.0	13548.0	20392.0	80.1	23270.0	31402.0	75064.0	33691.0	33296.0	29413.0	171458.0	65.0
RHCs	576.0	2172.0	4569.0	7317.0		7361.0	9355.0	24033.0	10065.0	9664.0	8466.0	52228.0	
BHUs	-	4096.0	8979.0	13075.0		15909.0	22047.0	51031.0	23626.0	23626.0	20947.0	119230.0	
. Total V and VI	703.0	6715.0	14757.5	22175.5		25677.2	34984.0	82836.7	38317.1	38766.8	35414.0	195334.6	
I. Evaluation	11.7			11.7	0.5		5.9	17.6	-	5.9	-	23.5	-
. Total (I+II+III+V+VI+VIII)	1425.3	7434.4	16415.0	25274.8	100.0	28899.8	41976.9	96151.5	50545.1	56722.2	59059.0	262476.9	100.0

TABLE III-2: FINANCIAL PLAN

$ Thousands

	PHASE I				PHASE II					
	01	02	03	01-03	04	05	06	07	08	01-08
Total Project Costs	1,425	7,432	16,415	25,275	28,900	41,977	50,545	56,722	59,059	262,477
Government of Pakistan	335	2,824	6,635	9,795	18,900	31,977	40,545	46,722	49,059	196,997
% Total	23.5	38.0	40.4	38.8	65.4	76.2	80.2	82.4	83.1	75.1
USAID 1/	930	4,450	9,620	15,000	10,000	10,000	10,000	10,000	10,000	65,000
% Total	65.3	59.8	58.6	59.3	34.6	23.8	19.8	17.6	16.9	29.8
WHO 2/	160	160	160	480	-	-	-	-	-	480
% Total	11.2	2.2	.1	1.9	-	-	-	-	-	.2

1/ Assuming Phase II of the project is funded with USAID providing $10 million/year.

2/ At present the level of WHO assistance in Phase II is unknown.

To supplement the long-term T.A., specialized short-term T.A. will be used in the National Basic Health Services Cell. The total cost for 130 person-weeks is $186,000 based on the following charges:

$125/day salary
$40/day per diem
$2000/trip air fare

Of this total, $89,000 will be local costs. In year 4 (phase II) an additional $12,000 will be required for short-term T.A., of which $7,500 is local costs.

b. National Basic Health Services Cell (see Table B-1)

The National Basic Health Services Cell will coordinate Pakistan's basic health services program, and provide necessary management and tutor training. During phase I, it will cost about $346,000 to run (1.5% of total costs). Of this total, $70,000 (20%) will be spent in year 1 for start up costs. Salaries will be $90,000 and take up the largest portion of the 3 year budget, 26%. Training costs of $80,000 are also a large item. For Pakistani trainees, including tutors for the training units, there is a per diem of $2.50 - 5.00/day and a travel allowance of $.10 per mile. Over 3 years, $820,000 will be required to finance the center, less than 1% of total project costs.

c. Training Costs for MLHWs and CHWs

Table B-2 outlines the training plan for mid-level and community health workers, showing when each of the groups of training schools will open, how many students will graduate and when. Tables B-3 and B-4 translate the training plan into annual outputs. During phase I of the project about 810 mid-level and 1350 community workers will be trained. The costs of training a mid-level worker range from $950 to $1,410, depending on how many classes are being trained at a training unit at one time (see B-5). Since some of the training costs will not increase with a greater student load, the per student cost is lower when the

training units are running three classes simultaneously. Toward the end of phase II of the project, training costs should decrease further as mid-level workers, who are at a lower salary scale, replace doctors as tutors.

When the training units are operating at full capacity, the largest item in the budget will be student allowances, at 42% of the total. Travel allowances will account for another 20%, and salaries 17%. The total cost of running a training unit for 18 months (the training period) will be $64,000, and will produce 68 mid-level health workers .

Continuing education costs for mid-level workers are estimated at $300/year for two 2-week sessions. It is assumed that each worker will take the first continuing education course within 6 months after his/her initial training. Thus continuing education costs are calculated in 6 month intervals, based on the number of mid-level workers in the system during the previous 6 months (see Table B-6).

The costs of training a community health worker are estimated at $200 for a 3 month period. This includes an allowances of $15/month/trainee, and an initial supply of equipment and drugs. The cost of continuing education for community workers is estimated at $30/year for two one-week sessions. Continuing education costs are based on the number of community workers in the system the previous year (see Tables 1 and B-4).

Over the first 3 years of the project, initial training costs account for 98% of the total training budget of $1.8 billion. As more mid-level and community workers enter the system, however, continuing education costs take on greater importance. By year 8, 30% of training costs go for continuing education.

Total training costs over the 8 years of the project will be $24 million, less than 10% of the total.

d. Construction Costs

The construction schedule for RHCs and BHUs is keyed

to the output of mid-level workers (see Table B-7). Each integrated Rural Health Complex, costing $448,000, has an average staff of 22 mid-level workers. Thus,for example, in year 3, 270 mid-level workers will enter the system, and therefore 12 Rural Health Complexes (270/22=12.2, say 12) are required.

Costs for 1 RHC are $133,000 and for a BHU, $45,000 (based on Planning Division estimates). These costs include residences for employees, and equipment. (see Table B-8). It is assumed that each RHC takes 18 months to build, and each BHU 12 months. Construction costs are apportioned evenly over the construction period.

Construction costs grow rapidly in phase I to reach a total of $20 million, 80% of total project costs. During phase II, construction costs peak at $34 million in year 6, and decline slightly thereafter. Over the eight year period, construction costs account for 65% of the total.

The construction schedule does not take into account the Rural Health Centers and sub-centers that already exist. It is assumed that for the period of the project, mid-level workers will all staff new facilities.

e. Recurrent Costs

An integrated Rural Health Complex, when fully operational, will cost about $75,000/year to run. The annual cost of operating an RHC is estimated at $22,500 (see Table B-9). The largest portion of the budget (60%) goes for salaries. Medicines are also an important item (18%). The estimate of per capita expenditures for medicines, 4 Rs, is based on the WHO Country Health Programme study.

A BHU, which also will serve an average of 10,000 people, has an estimated annual budget of $7,000, one-third that of the RHC. (see Table B-10). The main reason for the lower costs is the staff at the BHU is much smaller - 2 professionals as compared to 14 in the RHC. Salaries take up only 26% of the total budget. Medicines,

on the other hand, which again are budgeted at 4 Rs/capita, account for over 50% of total costs. An additional saving is realized at the BHU because no vehicles are required.

During phase I of the project, recurrent costs are not a large portion of the total (3.5%) because of the start-up time involved in the training program. Only 12 integrated Rural Health Complexes will be operating during year 3. However, as the program gains momentum and new RHCs come on stream more quickly, recurrent costs escalate. In year 8, they account for 40% of annual costs. Over both phases of the project, recurrent costs are 25% of total project costs.

f. Community Health Worker Financial Support

Financial support for community health workers is not included in non-development project costs because it is assumed they will not be paid out of government revenues. Direct salary payments for the community workers as the project progresses would place considerable additional strain on Pakistan's non-development budget. At a salary of $300/year/worker nearly $10 million would be added to annual provincial budgets by year 8. The government has proposed that these workers not become functionaries of the Health Department. During phase one of the project several models will be developed and field tested to find the most feasible and easily administered method of community support for these workers. Options will include:

1) A small monthly per capita charge to villagers to pay the community workers salaries, with all medications and treatments provided free. A variant of this scheme could be the use of stamps to eliminate transfer of money at the village level.

2) A revolving inventory scheme in which initial medications are provided by the government with the worker selling these at a small profit.

3) A fee-for-service system for curative care and piece work payment from the government for preventive care.

4) A small area of direct government salary support

5) A totally volunteer system with medication and supplies provided by the government.

Each of the above options has several pros and cons, not the least of which is the administration of the schemes. A final judgement be the most effective and efficient scheme can be made with greater confidence on completion of these trials. The most successful scheme will be adapted for phase II of the project.

2. Financial Plan

The ability of the Government of Pakistan to finance an expanded rural health system over the next five years and beyond depends largely upon the strength of the political decision to establish and maintain rural health as a priority item in the budget. Over the plan period a total of $770 million has been budgeted for the health sector (see Table III-3). Government health expenditures as a percentage of GNP should grow from .97 to 1.15. Annual health expenditures will increase from 3.1% to 3.6% of the total budget. A sufficient portion has been allocated to finance both the development and non-development costs of an expanded rural health system as proposed by the project. If these funds are not channeled into other areas, and planners have not been overly generous in their estimates of available revenues for recurrent expenditures, financing should not stand in the way of project implementation.

a. Development Costs

Over the 5th Five Year Plan period (1976-77 - 1980/81) the government has budgeted $480 million for development expenditures in the health sector, 4.8% of its total development budget. Of this, $245 million (54.4%) is earmarked for construction and training programs for rural health. Development expenditures are expected to begin slowly, and escalate in the last 3 years of the plan. Over the first 3 years of the plan (corresponding to Phase I of the Project), about $106 million is budgeted for development expenditures, $83 million for construction and $23 million for training. Phase I of the project calls for corresponding expenditures of $20 million and $1.8 million, only 20% of the plan budget. If we compare the development expenditures required over the full 8 years of the project with the plan budget for 5 years, the plan allocations are still more than sufficient. Total project construction costs are $171 million, 86% of the Plan's $200 million, and training costs are $24 million 53% of the planned $45 million.

The major competitor with rural health for development funds is in the health sector is the medical colleges. (See PRP Annex II). Although the plan calls for no further commissioning of medical colleges, if the 7 new medical schools recently established are to be completed during the plan period, the estimated cost would be $176 million. Only $80 million has been budgeted. If the government's priorities should change to favor medical colleges, the additional $96 million required could come out of funds allocated to rural health. Even though the project calls for $83 million in development expenditures over 5 years against the $245 million allocated in the plan, leaving an excess of $162 million, such a change in priorities would be a severe set-back

TABLE III-3 : GOVERNMENT BUDGETS AND HEALTH SECTOR 1971/72 - 1980/81

Million Rupees

	71/2	72/3	73/4	74/5	75/6	Growth Rate 71/2-74/5	Growth Rate 71/2-75/6	76/77	77/78	78/79	Total 76/7-78/9	79/80	80/81	Total	Growth Rate (76/7-80/81)
I. Total Govt. Expenditure	11,286	15,164	21,296	31,394	35,245	40	33	37,590	40,410	44,520	122,520	48,200	53,390	224,110	9.2
Health	198	268	368	587	1,009	31	50	1,182	1,318	1,545	4,045	1,715	1,940	7,700	13.2
% total	1.8	1.8	1.7	1.9	2.9			3.1	3.8	3.5		3.6	3.6	3.4	
Rural Health	-	-	-	66	112			270	324	754	1,348	866	946	3,160	40.0
% total health	-	-	-	11.2	11.1			22.8	24.9	48.8	33.3	50.5	48.7	41.0	
% health budget of GNP	.40	.44	.46	.50	.92			.97	.98	1.06	-	1.09	1.15		
II. Non-Development	8,836	11,345	14,912	20,556	21,745	24	25	21,590	23,410	26,020	71,020	28,200	30,890	130,110	9.4
Health	141	172	210	278	360	25	26	432	518	620	1,570	740	890	3,200	19.8
% total	1.6	1.5	1.4	1.4	1.7			2.0	2.2	2.4	2.2	2.6	2.9	24.6	
Rural Health	-	-	-	20	38			59	93	134	286	182	242	710	43.0
% total health	-	-	-	7.3	8.4			13.7	18.0	21.6	18.2	24.6	27.2	22.2	
III. Development	2,450	3,819	6,384	10,838	13,500	65	55	16,000	17,000	18,500	51,500	20,000	22,500	94,000	8.9
Health	57	96	158	309	649	75	85	750	800	925	2,475	975	1,050	4,500	8.8
% total	2.3	2.5	2.5	2.8	4.8			4.7	4.7	5.0	4.8	4.9	4.7	4.8	
Rural Health:	-	-	-	46	82			211	231	620	1,062	684	704	2,450	35.0
Construction	-	-	-	-	-			151	151	530	1,832	584	584	2,000	
Training 1/	-	-	-	-	-			60	80	90	230	100	120	450	
% total health	-	-	-	14.9	12.6			28.1	28.9	67.0	42.9	70.2	67.0	54.4	
Medical Colleges														800	

1/ Phasing of expenditure is estimated, it does not appear in the plan.

SOURCE: PLANNING COMMISSION

to the momentum for rural health services the project hopes to establish. If the suggestions of the Planning Commission are followed, however, enrollments in existing medical colleges will be reduced, which will alleviate the pressure to rapidly expand available facilities.

b. Recurrent Expenditures

Over the plan period the government expects to have available revenues of $320 million for recurrent (non-development) expenditures in the health sector. Of this, $71 million (22%) is for rural health. Recurrent financing capacity is much harder to project because it depends on general revenues which are more subject to short-term economic fluctuations. Therefore, the $320 million should realistically be taken as an upper limit. As a result there is less slack for the rural health program on the recurrent expenditures side of the plan. Of the $71 million allocation, it is assumed that roughly $15 million will be used to maintain current rural health facilities as the new rural health system is developed. Over Phase I of the project, recurrent expenditures will be only $1.3 million, against a budget of $20 million. Over 5 years, the comparable figures are $11.5 million and $56 million. These figures are a bit misleading, however, because during the last 3 years of the project recurrent expenditures rise rapidly, leading to a cumulative total over 8 years of $ 65 million. If recurrent costs for the project should rise more rapidly, and recurrent budget availabilities less rapidly than projected, there could be a short fall in recurrent financing during the later years of Phase II of the project.

Even if planned total non-development expenditures for health are available over the period, the change in priorities reflected in the plan budget may pose a constraint for the rural health system. The plan budget shows non-development expenditures for rural health increasing from 13% to 27% of the total non-development health budget. Such a radical change in budget structure may be difficult to implement. Again, competition from the medical schools can be expected. If new medical schools were made fully operational by the end of the plan period, they would take $36 million/year to run, 40% of the health non-development budget for 1980/81. Clearly this would not leave enough funds for the rural health program and other programs.

The government is very much aware of the potential pressure on the non-development health budget as the sector expands. To alleviate this strain, the plan proposes that a series of charges be levied for health services -- e.g., drugs, x-rays, lab tests -- at all government health facilities. The resulting revenues would be used to help finance all components of the recurrent health budget, including the Integrated

Rural Health Complexes. The Planning Commission estimates that by the end of the plan period an additional $30 million per year could be raised in this way. As the charge system would be politically unpopular and would undoubtedly take a few years to implement, this figure is most likely overstated. However, if the concept of charging for health services provided by the government can be established, there is less cause for concern about the government's ability to finance an expanded rural health system when recurrent costs begin to escalate.

In sum, the government has budgeted more than sufficient funds to finance the expanded rural health system. The main reason for the differing views as to how much such an effort would cost is that the government has suggested a much more rapid rate of expansion than the project. Historical experience and careful analysis of the entire plan indicate that actual expenditures will undoubtedly fall short of the budget. However, with total project costs (excluding T.A.) over the plan period of $94 million, only 43% of the plan budget, there is still a comfortable margin for slippage in available funding. If the government institutes the proposed charge system in the health sector, this margin becomes wider still.

c. Financing After the Project Period

It is extremely difficult to project government budget efforts beyond the project period of 8 years. However, some general statements can be made about the magnitude of resources that will be required to further expand and maintain the rural health system.

Ongoing development costs include training and construction. If it is assumed that training continues at the same rate, i.e., that the 48 training units each continue to produce about 45 med level workers/year who each in turn train 5 community workers, initial training costs will remain stable at about $4.2 million per year (See table B-11). Continuing education costs will rise as more health workers enter the system. Total training costs will grow at an annual rate of about 5% during the 10 years following the project to reach $11.5 million in 1994. This is slightly less than the estimated training budget of $12 million for the last year of the plan (year 5 of the project). In later years training costs should grow more slowly. Thus the training component should not pose an unreasonable burden.

If construction continues to be keyed to outputs of mid level workers, annual construction costs will continue to decline from the peak of $34 million in year 6 of the project to about $10 million 10 years after the end of Phase II. Again this should be a manageable sum.

Annual recurrent expenditures, on the other hand, will continue to rise at an annual rate of about 10% to reach nearly $60 million 10 years

after project completion. In light of the projected annual increase in recurrent health expenditures of 20% for the current plan, this would not appear to be unreasonable, especially if the proposed charge system is functioning by this time. However, it does suggest a continuing priority for rural health. An optimistic projection for GNP growth for the period would probably not exceed half the 10% annual rate for recurrent costs of the rural health system, so rural health would still be taking an increasing share of total resources.

To summarize, to maintain an expanding rural health system as proposed by the project over the next 2 decades would require a continued commitment on the part of the government, but the relative level of budgetary effort would decline as time goes on.

C. Social Analysis

A detailed social analysis is presented in Annex B, Exhibit 3 of this Project Paper. A summary of the findings are listed below.

-- The project will not threaten the social organization of rural Pakistani village life.

-- Because of the complex cultural constraints on female employment and travel, careful attention will be given to posting female mid-level health workers close to their homes and husbands' work.

-- The project has a tremendous potential for spreading throughout Pakistan and to neighboring countries, especially in the Islamic world.

-- The short-term effect of this project should be to slightly increase the rate of population growth because of its effect on the mortality rate. However the project's provision of family planning services should produce a long-term effect on substantially reducing the birth rate.

-- The direct employment benefits of the project will acrue mainly to women and non-professionals.

D. Economic Analysis

A review of the literature of health economics readily establishes that empirical investigations of the economic returns to improved health services yield tenuous and contradictory conclusions. 1/ Because the relationship between efforts to improve health status and socio-economic development are not well understood a traditional cost/benefit analysis is not a practical approach to the economic evaluation of this project. However, in Section 1 the potential benefits of the project are discussed qualitatively and placed in the Pakistan context. Section 2 presents data on the cost effectiveness of the project and the economic gain to the society in terms of increased health services per dollar. The economic justification of the project is based on this analysis. Section 3 discusses current health expenditures in the economy. Section 4 reviews Pakistan's economic performance and repayment capacity.

1. Benefits

For this project it is important to divide benefits into welfare and investment categories. If welfare benefits dominate, the project provides a final consumer good and should be evaluated in this light. From an economic viewpoint, there will be no increased output to pay for the project and a consumer choice must be made between

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1/ e.g.

Barlow, Robin, "The Economic Effects of Malaria Eradication", American Economic Review, 57, No. 2, (May 67).

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

Roberts, Jennifer A. "Economic evaluation of health care: a survey" British Journal of Preventive and Social Medicine, No. 28, (1974).

Weisbrod, Burton A. "Disease and Economic Development, The Impact of Parasitic Diseases in St. Lucia," University of Wisconsin Press, 1973.

health and other consumer goods and services. If investment benefits dominate, the project can be treated as an investment program and judged on its potential rate of return.

For this project the most direct set of potential benefits claimed is the increased consumer satisfaction (i.e. welfare) derived from being healthier. Attributing these benefits to the project assumes that the basic health system to be developed under this project is a necessary and sufficient condition to improved health status. The objectively verifiable indicators at the goal level of the logical framework explicitly define the changes in health status that the project proposes to achieve. The delivery system concentrates at lowering fertility and mortality rates and reducing morbidity due to conditions affecting the rural poor.

A second set of benefits arises if improved health status leads to increased output due to more productive workers. However, the strength of the casual link 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 will increase. 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 under-employment may result if more people desire work but can't obtain it. It is generally accepted that there is widespread under-employment in rural Pakistan with labor scarcity only during short periods of the year. As a result, there is no evidence to indicate that a reduction in morbidity of the type targeted by this project is likely to increase output through increased effort or an increa in work days at the micro-economic level. However, in the long run, the decline in population growth rates as predicted in the population impact statement (Section III C) will contribute to higher per capita income at future points of time. The resulting macro-economic effects on savings levels, dependency ratios, and other variables should improve Pakistan's long-run growth potential.

A third set of benefits arise if an improved health system serves as a nation building program that raises development potential by improving the motivation and attitudes of the society at large. 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. 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 service is 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. Also, direct involvement by the Government may yield increased stability in the rural sector.

2. Cost Analysis

About 5% of the rural population are covered by the present Government system of Rural Health Centers. However, data gathered in preparing this project suggest that the rural health system is not run in the most efficient possible way. For example, vacancy rates for supervisory personnel are over 30%. Specialized personnel such as those providing mother-child health care and family planning services are often underutilized. This suggests cost reductions can be obtained by reorganizing the staffing patterns of the Rural Health System.

Cost per patient served tends to decline with the size of patient load. Data indicate that costs range from $1.50 per patient for RHC's with per year loads below 6,000 patients to less than $.40 for RHC's with patient loads above 25,000. To some extent these declining costs may represent economies of scale, but they also represent ineffective budgeting and inadequate organization of resources. Money is budgeted by health unit as opposed to patient load. For example, the per patient expenditure on medicine is above $.50 for RHC's with lowest patient loads as compared to $.50 for RHC's with the highest patient loads. These relationships are strong enough to suggest that medicines are rationed out on a unit basis (the RHC) as opposed to patient need.

The low costs discussed above result from inadequate maintenance and logistic support rather than efficiency. This is complicated by a staffing pattern that results in less than optimum use of the

personnel and capital structure already in place. The Government of Pakistan's search for alternative ways to improve and expand the system has led to the proposed multi-tiered system of health care. A comparative analysis of the cost of the present system and of the Basic Health Servicessystem has been made and is outlined in this paper. The data are summarized in Table III-4.

Estimates of costs and coverage for the present system are derived from data collected in the Punjab. They are adjusted to create an equivalent cost comparison with an IRHC planned to serve 30,000 pepple in the proposed system. The project costs are derived from tables in the financial analysis section. Costs are compared on a person served basis and not on patient visits. No attempt to amortize capital costs has been made.

Development costs are $13.70 per person served for the present system, and $6.30 per person served for the proposed system. This capital saving results from a different pattern in the use of manpower and physical structures. In effect, Community Health Workers (CHWs) operating in villages from their own homes are substituted for a portion of the present capital requirements.

Recurrent costs are $1.13 per person served for the present system and $1.41 for the proposed system, with medicine costing approximately $.15 and $.40 per person served respectively. If medicines are not counted, the cost of the two systems is virtually the same -- $1.03 per person served in the present system and $1.01 in the proposed system. For the proposed system these costs include costs of the CHWs which may well be borne by the communities themselves. If this happens, the cost to the Government per person served will be even lower than in the present system. This would give the Government flexibility in financing an on-going training program that will continually upgrade efficiency without a major increase in the total Government health budget.

In summary however, the possibility of improved services at equal or lower costs results from the shift from a relatively capital intensive to a more labor intensive health system. In a country where wages are extremely low, this represents an improved use of resources on a cost effective basis.

Table III-4. Cost Comparison for Coverage of 80,000 People: Present System and BHS Project ($ 000)

	Present System	Costs	BHS Project	Costs
I. Development Costs				
Construction:		1,080,000		448,000
	RHCs (6)	432,000	RHCs (1)	133,000
	BHUs (18)	648,000	BHUs (7)	315,000
Training		15,000		46,000
	Health Inspectors (24)	4,800	MLHWs (22)	22,000
	LHVs (6)	3,000	CHWs (80)	24,000
	Dais (24	4,800		
	Dispensers (12)	2,400		
TOTAL Development Cost (Cost per person served)		1,095,00 ($13.70)		494,000 ($6.80)
II. Recurrent Costs				
	RHC (6)	72,000	RHC (1)	22,500
	BHUs (18)	21,600	BHUs (7)	52,500
	Other Workers	-	CHWs (80)	24,000*
Sub-total		93,600		99,000
Retraining	10% of 15,000	1,500	10% of $46,000	4,600
Continuing Education		-		9,000
Sub-total		1,500		13,600
TOTAL Recurrent Costs (Cost per person served)		95,100 ($1.18)		112,600 ($1.41)

*Payment for CHWs is not included recurrent costs in project costs table in Financial Analysis section.

Notes for Table III-4

1/ Available data indicate that in the present system an RHC and its 3 subcenters serve 13,000 - 14,000/year. For the purposes of this comparison, it is assumed that 6 RHCs and 18 subcenters cover roughly 80,000 people.

2/ Construction cost estimates for the present system are based on 1975/76 budget data.

3/ The following staffing pattern is assumed for the current system:

RHC:
- 1 male doctor
- 1 lady doctor
- 1 health inspector
- 1 LHV
- 1 dai
- 2 dispensers

BHU:
- 1 health inspector
- 1 dai

The staffing pattern for the project is explained in section II. Training costs for doctors are omitted from both systems.

4/ Present system recurrent expenditure estimates for RHCs and subcenters are based on provincial budget data. For details of project costs for RHCs and BHUs, see tables B-9 and B-10, Annex B.

5/ It is estimated that salary and equipment costs for a CHW will be about $300/year. This is not included in project costs table III-1 in the Financial Analysis section because it is assumed that CHWs will not be paid out of government revenues.

6/ For both systems a 10% annual attrition rate among workers is assumed.

7/ The present system does not provide continuing education. For details of project continuing education costs, see Financial Analysis section.

8/ Available budget data for RHCs show an average per capita drug expenditure of about $0.15 per person served.

3. Current Health Expenditures

Government expenditures for health have grown during the past 5 years from $20 million in 1971/72 to $100 million in 1975/76 (see Table III-1, Financial Analysis Section). Adjusted for inflation, this represents a 25% annual increase in real terms. The portion of the budget spent on health has grown from 1.8% to 2.9%. Most of this increase came in the 1975/76 budget, when the health share rose over 50%. Health development expenditures have doubled their share in the total health budget since 1971/72, and now account for about 60% of total expenditures. The portion of the health budget spent on rural health services has remained stable at about 11% for the past couple of years, although the planned expenditure in 1975/76 is $10 million over the previous year. Health expenditures as a percentage of GNP have more than doubled over the period to reach .92% in 1975/76. Thus the health sector, although not a top priority budget item in recent years, has maintained its position, and in 1975/76 has been given a a relatively large share of total government resources.

Estimated total expenditures for health in the economy outside the Ministry of Health come to $198 million, nearly twice the Ministry's budget. Of this amount, local government medical facilities, Pakistan Railways health care, military health care, water and sewerage, and population planning budgets totalled $88 million in 1975/76. Private sector expenditures are estimated at $110 million for the year. This brings total resources devoted to health to $307 million, roughly 2.5% of GNP. This compares favorably with other developing countries where expenditures on health often amount to less than 1% of GNP.

PART IV

IMPLEMENTATION PLANNING

A. Administrative Arrangements

1. Government Administrative Arrangements

a. Federal Ministry of Health

This project will considerably strengthen the capabilities of the Federal Ministry of Health through the development of the National Basic Health Services Cell. In summary, the activities of this Cell include: mid-level tutor training, primary care management training, curriculum development and adaptation, audio-visual support, setting of national standards, manpower inventory, operational analysis of present system, cost analysis of present system, information system design, development of communications strategy for basic health services using radio, pamphlets, posters and travelling seminars, and production of five field manuals. Also, the Cell has responsibility for project management coordination including the evaluation arrangements.

The Federal Ministry has strong leadership at the top fully supportive of the project, but has an insufficient organizational structure to implement the Basic Health Services Project. For this reason, the establishment of the National Basic Health Services Cell is crucial to project success. Project designers have been told by Health Ministry personnel that a minimum of five full-time professionals are necessary to adequately staff this Cell and a desirable number would be eight to ten professionals. The Health Ministry is well aware that project success will depend importantly on the abilities of persons designated to lead the Cell. Resources to pay for increased personnel, travel within Pakistan, curriculum support, communications support, etc., are built into the project.

b. Provincial Health Departments

In the project, the provincial ministries have an implementing role in the following areas: construction of RHC's and BHC's in groups to form IRHC's; starting and operating training units for mid-level workers; directing formation and setting standards for operational IRHC's;

training of CHWs on a trial basis and exploring different payment mechanisms; providing continuing education for mid-level and CHW graduates; coordinating with and advising the Cell on setting of skill standards for mid-level workers; assisting in manpower inventories; assisting in primary care utilization and cost analysis studies; assisting in information system design; coordinating in setting of standards for management of the Integrated Rural Health Complex for personnel management and for inventory and supply management (including simplified drug and equipment lists); and sending employees to the Federal Cell for training in aspects of primary health system management.

Capabilities of present provincial departments of health are varied. They serve different population groups and also have different levels of resources at their disposal. Provincial health leaders have been increasingly exposed over the last two years to modern planning and educational technologies for health. Each province has participated in the WHO Country Health Programming exercise which helped them to focus on regional health planning and resource allocation issues. Each province has participated in Curriculum Development Workshops for mid-level workers coordinated by WHO and the University of Hawaii MEDEX Organization. Each province has responded favorably to the new expansion in rural basic health services. A nationwide commitment to expanded and improved basic health services exists.

The Secretary of Health for each province will select a Basic Health Services Coordinator. This Coordinator (perhaps the Director of Health Services) will select persons from his staff to fulfill provincial implementation roles. Resources for these administrative tasks are within the capability of the provinces.

The capabilities of the provinces in basic health services administration will be considerably strengthened by the training aspects of the project. Executive Seminars for policy makers, Operations Management for District Health Officers and assistant District Health Officers, plus technical training in personnel, supply, finance, and information systems, should strengthen provincial capabilities.

c. The District Health Officer

A major role in project implementation lies with the District Health Officer. Under policy direction from the province, he will implement the Integrated Rural Health Complexes in his district. He will have responsibility to insure compliance with the criteria for a complex to be operational. The District Health Officer will be responsible for insuring that drugs are on-hand and equipment is functioning; that curative care and preventive care activities are performed to standard; that supervisory visits occur at least once per worker per month; and that information is collected and collated at the RHC and reports sent to the district. He will be responsible for preparing a district operational plan for the guidance and deployment of new complexes.

The District Health Officers are, on the whole, well trained senior public health doctors who suffer from overwork, inadequate technical support such that delegation is difficult, and inadequate budgets. Their present administrative staff is not suitably trained to accommodate an expanded system and in many cases is insufficient in numbers. Often, due to lack of money and support personnel, District Health Officers have become discouraged and cynical about their abilities to offer good rural health services.

This project should strengthen their administrative capabilities and morale in a number of ways. Firstly, by defining the IRHC in an operational way, the District Health Officers can resist local pressures to distribute their workers, supplies, and physical facilities in an inefficient manner. With new funds for rural health, upgraded health workers, upgraded administrative personnel and communications support, and operations management training for themselves, the District Health Officer can do a more effective job.

2. AID Project Administration

The project is complex both technically and in its geographic scope; therefore, a detailed performance oriented monitoring and disbursement procedure is planned. Requirements for disbursement are designed to foster progress by tying disbursements to conditions precedent and targeted performance indicators.

a. Monitoring

Close AID Mission monitoring of the project will be crucial. The Mission will have an experienced public health officer in charge of project monitoring. The officer will observe the project, as it is being implemented by the National Basic Health Services Cell, to see whether the project is unfolding as planned and in accordance Government-AID understandings. In doing so, the individual will:

1. Maintain a continuous liaison with key Pakistanis involved in project implementation.

2. Review material submitted in fulfillment of conditions precedent, advising the Government and AID on adequacy and timeliness of such material and on what steps should be taken to correct deficiencies.

3. Review Pakistan's progress toward performance targets, advising the Government and AID whether progress is adequate and on schedule and what steps should be taken to correct the deficiencies.

4. Review all project reports; conduct personal inspections.

5. Participate in evaluations.

6. Serve as a technical and managerial advisor to Pakistani project implementers on organizational questions, planning, training, communications, and other project-related issues.

7. Maintain liaison with WHO and other donors.

As one aspect of monitoring progress, the Mission will verify completed physical facilities through inspections. During years one and two of Phase I, the Mission direct hire engineering staff will perform this function. However, as Phase II is approached, the Mission may find it necessary to engage the services of a local engineering firm to assist with the monitoring. Mission personnel have had experience in monitoring health facility construction under the 1973 Flood Rehabilitation Grant.

b. Review and Evaluation

Joint reviews will be held semi-annually during years one, two and three of the project to review progress and problems associated with the project. The objective of these reviews will be to review performance targets, the progress made in reaching them and general project management considerations. The agenda for each review will be jointly developed by the Government, AID and WHO. Provincial Health Department representative will participate fully in the reviews.

In addition to the review meetings, there will be a joint evaluation at the beginning of the third year. This evaluation will involve Federal and Provincial health authorities, AID, WHO, and other donors who may have become closely associated with the project by the time the evaluation is to start. The purpose of the evaluation, from AID's point of view, will be to (1) assess project performance vis-a-vis the general project strategy and implementation design (2) recommend needed modifications in the design and (3) recommend the feasibility and desirability for AID to proceed with a follow-on loan project for Phase II. If after the evaluation, AID decides to propose follow-on loans, a Phase II Project Paper will be submitted to Washington for approval.

c. Reporting

To monitor the project for compliance with loan requirements and progress, AID, in an implementation letter, will present a system of progress reporting. The reports will serve as the basis for disbursing loan funds against achievement of performance targets. The Mission project manager will be responsible for monitoring the reporting system and insuring, to the extent possible, report accuracy.

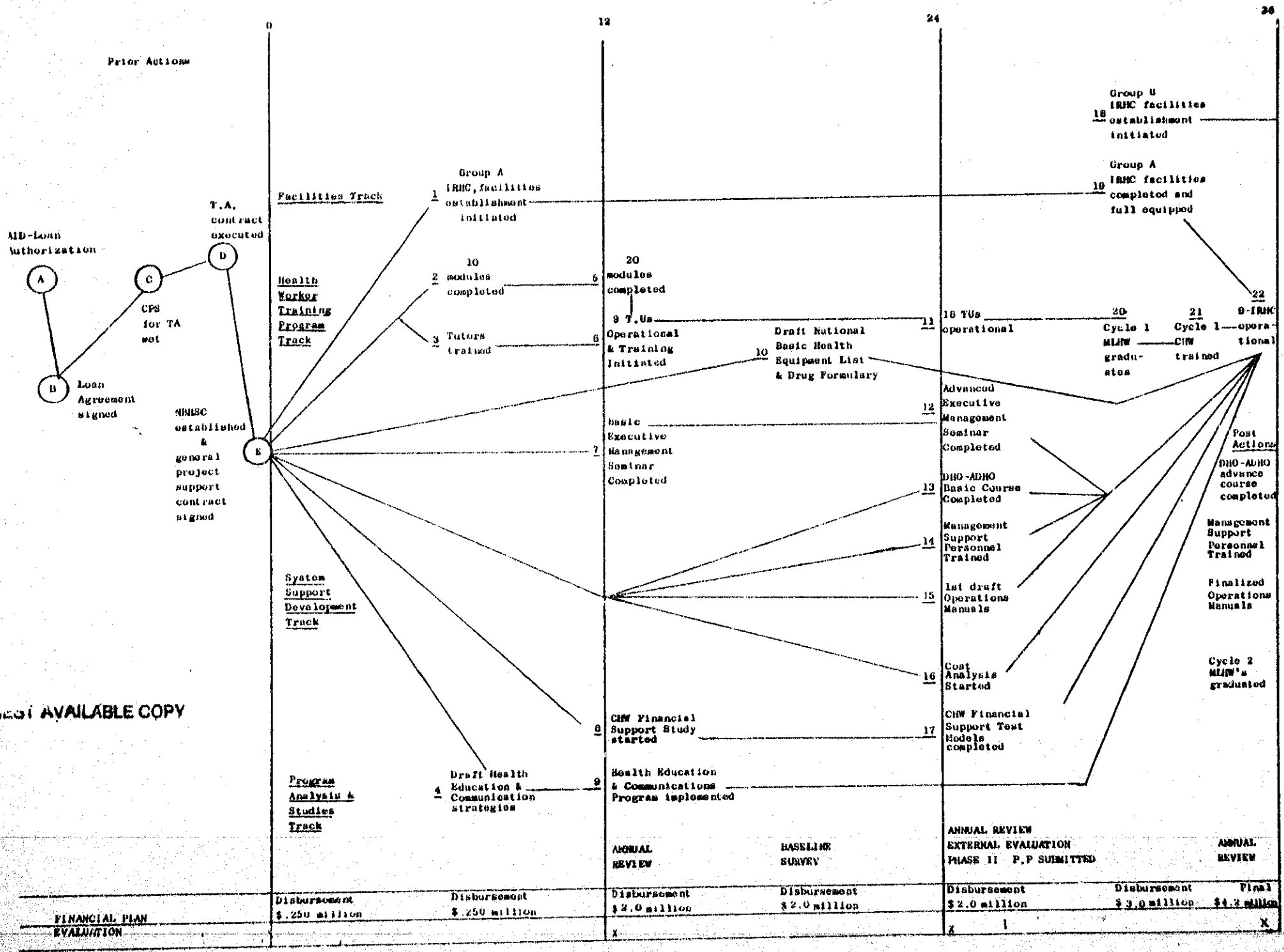
B. Implementation Arrangements

1. Project Performance Tracking Network

The project tracking network (below) covers selected project indicators which relate to important project targets (milestones). Each of the targets has a defined critical time of six months past the initial target date. Each of the quantified targets is defined as "critical" if it falls below 75% of the optimum targeted achievement. It should be noted that placing a critical time for graduation of the 2nd cycle Mid-level Health Worker class, and establishment of the second group of operational

Integrated Rural Health Complexes, moves targets for these events beyond month 36 of the project. It is anticipated, however, that these units will be operational by project month 36. Calendar years cannot be indicated at this time. Project month zero is set at the point in time at which the Government meets conditions precedent for general project support.

Organizations directly involved in implementation of this project include the Federal Ministry of Health, provincial Departments of Health and Public Works, a United States contractor, the World Health Organization and AID. The responsibilities of each in following the implementation plan is indicated in the performance tracking network as spelled out below:



PPT FORM

Country:	Project No:	Project Title:	Date:	/ / Original / / Revision #	Approvd:

CPI DESCRIPTION

	Project Month		Responsibility
1.	6	Group A IRHC facilities establishment initiated	Prov. MOH and MOPW
2.	6	10 MLHW modules adapted translated and printed	NBHSC
3.	6	27 MLHW tutors trained	NBHSC
4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
23.	36	Evaluation completed	NBHSC/USAID

2. National Basic Health Services Cell

As a Condition Precedent for the first disbursement for general project support, the Federal Ministry of Health will establish the National Basic Health Services Cell headed by a Deputy Director General of Health. For a detailed description of the function of this Cell see the Project Description and the Administrative Analysis sections. When established, this unit will contain three divisions: 1) Training Division, 2) Operation Research Division, and 3) Health Education and Communications Division. This Cell will have an advisory council made up of the Federal Secretary of Health, the Director General of Health, and Provincial Secretaries of Health. The advisory council will coordinate policy formulation for national basic health services. The Cell will have the responsibility of carrying out essentially all of the activities for which the Federal Ministry of Health is responsible under this project.

3. Health Worker Training Program

a. Curriculum Development

The Cell will coordinate and ensure completion of the adaptation translation and printing of the modular curriculum. This activity will be initiated early in year one phased to stay ahead of training requirements. It will be completed by month 12. The Cell will coordinate and carry out tutor training for the tutors of mid level health workers. Prior to the opening of each new cycle of mid level health worker training units, this tutor training will be repeated.

b. Training Units

Twelve training units will be established by month 6, an additional twelve by month 18, and a third group of twelve by month 30. Selection of the district and the particular facility at which the training unit will be established will be done by the provincial departments of health. Appropriate renovation of these facilities, addition of necessary staff, and procurement of necessary equipment will take place under the direction of the provinces. Monitoring of these training units for operational problems will be a function of the health departments, with assistance from the Training Division of the National Cell. This division will set national performance standards for mid-level health workers and participate in evaluation and certification of graduates.

c. Community Health Worker Training

Community Health Worker training will be initiated at approximately project month 24 when the first class of mid-level workers graduates. This training will be carried out by the mid-level health worker under the policy direction of the provincial departments of health.

Target outputs for each type of health worker are spelled out in the Training Plan below.

4. Basic Health Services System Support Development

The activities in this track (#7, 10, 12, 13, 14 & 15) all relate to the operations management of a basic health services system using non-physician health care providers. The training aspects of this track of activities involve employees of provincial departments of health (District Health Officer, Assistant District Health Officers and a group of their management support personnel). The provincial coordinator for the project will participate in developing guidelines for these training programs and will be responsible for ensuring participation by employees. The overall responsibility for research and analysis, development of course content and teaching materials, and coordination and operation of the training programs will be the responsibility of the Training Division of the National Cell.

Development of the operations manuals (preventive care, curative care, management of rural health complex, inventory & supply, and personnel management manual) will be the responsibility of the Operations Research Division of the Cell but major field inputs, analysis and field testing will be necessary at the District Health Officer and Assistant District Health Officer levels. Deadlines for completion of these activities are outlined in the Project Performance Network. Targeted times at which each of these courses are given and manuals developed are spelled out in the narrative of the logical framework.

5. Program Analysis & Studies Activities

These activities (4, 8, 9, 16 & 17) all are the responsibility of the National Cell but again with assistance from the provincial Basic Health Services Coordinator. The health education and communication strategies and materials will be developed in the early months of the

project and the regional strategy can be implemented within the first months of year 1. This will begin by mounting campaigns for improved sanitation, hygiene and health practices in the first year of the project, even before newly trained health manpower begin to graduate into the system. This will help to build public support for important on-going health-related programs, for example, the importance of child-spacing as a health measure, or the need for the populace to cooperate with malaria control workers who must enter their homes to spray. As mid-level health workers begin to be deployed, health communications will be utilized to gain public acceptance for these new categories of workers and to build the receptive framework which is important to the success of the project. It is expected that the communications component of the project will benefit from another project which AID is currently developing with the Government to establish a Development Communications Centre in Islamabad -- with regional outlets -- to make more effective use of mass media in targeting simple and actionable nation-building messages to village audiences.

Studies will be started early to determine the most appropriate method of developing community financial support for the Community Health Workers. This will be the responsibility of the National Cell with major input and direction from the advisory council (national and provincial health leaders), elected officials, and, where possible, community leaders. The advisory council and provincial authorities will have ultimate responsibility for selecting the test site rural health complexes. These test sites will be selected and test models developed for implementation by project month 24. Implementation will be by the District Health Officers with monitoring by the Cell.

A cost analysis study will start when the first group of new health workers reaches the field. It will be based on data generated in each rural health complex and collated by District Health Officers and provincial directors of health services. These data will be analyzed and published by the National Cell. The data will be used for analyses and taking decisions on recurrent costs for Phase II of the project. This will be an ongoing activity permanently housed in the Cell.

6. Physical Facilities

Coordination of training outputs and available physical infrastructure will be the responsibility of the provincial health departments. They will establish Rural Health Center and Basic Health Unit site selection criteria to maximize access to units and utilization of services by the people.

Early in year 1 (#1, 18, 19) the provincial health departments will begin selection of sites for these health facilities. Most of these facilities will involve new construction. Some, however, will be renovated existing facilities if the site is appropriate. Some may be in rented facilities. The provincial health departments will coordinate with the departments of public works for land procurement, construction and installation of equipment to full specification prior to receiving the graduated mid-level health workers.

7. Operational Integrated Rural Health Complexes

The construction, equipping and staffing of the first rural health complex will be completed at month 24. The first group of Community Workers will be trained by month 27. Allowing a minimum period of 3 months of operation to overcome problems in supply and function of equipment or material, the first Integrated Rural Health Complexes will be operational shortly after month 30. At that time a minimum of 9 complexes will be fully operational (12 will be optimal). At month 36 two additional classes of Mid-Level Workers will graduate to staff the new facilities and the total number of operational complexes shortly after month 36 will be a minimum of 27.

8. Contractor Responsibility

A U.S. contractor with expertise and experience in development of health service systems using non-physician health care providers, and the establishment and operation of training programs using competency based modular educational materials, will be selected to provide technical assistance to the Government. This contractor will provide 4 long term technical advisors. These advisors will consist of 3 public health physicians with experience with physician extender training programs and one education science/curriculum design specialist. The contractor will also provide short term technical advisors for consultation with Government of Pakistan officials on supply management and health information systems. The short term advisors will assist in developing and participate in the conduct of training programs and seminars. This technical assistance contract will be signed and at least two advisors including the curriculum design specialist will be on station shortly before project month zero. (see Part IV.D.2 for a discussion of contractor selection.)

9. World Health Organization

The World Health Organization will provide two technical advisors. One will be a management systems specialist and the other a physician with a background in public health. Both will be in place no later than project month six.

10. Loan Implementation Schedule

	Month	
Loan Authorization	-4	
Loan Agreement Signed	-3	
Initial Conditions Precedent Met	-2	
Technical Assistance Contract Signed	-1	
First Disbursement to T.A.	-1	
Conditions Precedent to Advance Disbursement for General Project Support Met and Disbursement Made	0	(Phase I begins)
Condition to 1st Installment Met and Installment Made	6	
1st Annual Review Meeting	11	
Conditions to 2nd Installment Met and Installment Made	12	
Baseline Study Begins	13	
Conditions to 3rd Installment Met and Made	18	
Conditions to 4th Installment Met and Installment Made	24	
Joint Evaluation	25	
Conditions to 5th Installment Met and Installment Made	30	
Conditions to Final Payment Met and Payment Made	36	(Phase I ends)

11. Support for Technical Advisors

Plans have not yet been developed for logistic support of contract advisors and any special privileges and benefits (e.g. duty free import) they may receive. These topics will be reviewed at the time of contract negotiations.

12. Fund Release Procedure

Disbursements for the technical assistance portion of the loan will be handled through AID's traditional Letter of Commitment procedures after initial conditions precedent are met.

Remaining loan funds will be used to finance the project in general and will not be identified with any particular activity under the project, e.g. facility construction, training, or procurement of drugs and equipment. It should be clear that the objective of AID's support is to reach the project purpose and under this loan to reach the Phase I "End of Project Status". This will require the time phased accomplishment of a complex series of interrelated activities. The loan and the system for administering the loan are therefore directed to overall purpose achievement.

To insure that loan funds are used prudently and for project purpose achievement, a disbursement system with the following components is planned:

1) Local cost financing will be accomplished by an initial advance payment followed by five (5) semi-annual fixed loan installments and a final payment. (a, 60% disbursements?)

not FARs

2) Four sets of conditions precedent for (1) disbursement for technical assistance, (2) disbursement for the initial advance for general projects support, (3) disbursement for fixed installments and (4) final disbursement for the achievement of the Phase I end of project status.

3) Six sets of semi-annual performance targets which specify distinct outputs over the three year loan disbursement period upon which loan installments will be based.

4) Use of a "Special Letter of Credit" for loan disbursement.

5) AID monitoring of physical facilities site selection, design, and construction, by means of post constructor inspections.

Specific interim performance targets will be established in Implementation Letter No. 1 and may, at the Mission's discretion, be amended over the life of the project. The End of Project Status targets will remain fixed. The system of disbursements will proceed as follows:

Conditions precedent for technical assistance will be met first and the technical advisors will enter on duty; conditions to the initial project support are met next and the initial advance is made; conditions to semi-annual installments, including performance targets, are met at not less than six month intervals and disbursements made; conditions to final disbursement including end of project status target as defined in the last set of conditions precedent are met and final disbursement is made.

With the number of targets that must be met, it is very likely some will be more than met, while others may fall short. The potential causes for variations are numerous and may be political, financial, technical or administrative in nature. In determining satisfactory progress for disbursements, the interim targets must be evaluated as a whole. The Mission must have the flexibility to judge, based on the level of accomplishment, whether shortcomings are significant enough to delay or stop disbursement. This will depend on the degree of and reason(s) for inability to meet the target(s), the relative importance of the specific target and the probability that lost ground can be made up. Interim targets represent a point in a progression of activities required to reach the end of project status for Phase I and the end of project status must be met for final disbursement.

It is important to note that although disbursements for all but the technical assistance advance are tied to performance targets, disbursements will not be made faster than at six month intervals. AID may at its discretion make partial disbursements if targets are not entirely met or target standards maintained as specified in implementation letters.

It is expected that the Government will finance more than 25 per cent of the project during Phase I. However, to insure compliance with Section 110(a) of the FAA, the final disbursement of $ 4.2 million will not be made until detailed financial statements for Phase I expenditures have been submitted to AID evidencing compliance with this requirement.

An illustrative disbursement schedule for general project support is presented below:

Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
1.	mo. 0* (advance)	.250	**CP's met:** **(1) National Basic Health Services Cell created, key positions established, Deputy Director General hired and in place.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the first year of the project. (3) Evidence that procedures for semi-annual review meetings are established. (4) Evidence that borrower has requested WHO advisors. (5) Evidence that provinces support project and have established machinery to manage the project. (6) Evidence that provincial annual plans of action being implemented.
2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(2) Evidence of federal and provincial budget allocations for second year of the project. **(3) Evidence of satisfactory performance per targets.** **Performance Targets:** **(1) 10 training modules completed** **(2) 27 tutors trained** **(3) Health education/communication strategies formulated** **(4) WHO technicians in country** **(5) 5 key positions in the Federal Cell filled, and a minimum budget allocation of Rs. 600,000 for its first year of operation.**
3.	**mo. 12 (installment)**	1.650	CP's met: **(1) Evidence that Provincial Annual Plans of Action being implemented.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the second year of the project. (3) Evidence of satisfactory performance per target

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: **(1) 20 training modules completed** **(2) 9 training units are operational** **(3) Financial support study started** **(4) Health education/communications program being implemented** (5) Facilities for 17 Integrated Complexes being constructed/improved according to general criteria agreed upon at the initiation of the project (6) A minimum budget allocation of Rs. 1,000,000 for the second year of operation of the Cell.
4.	**mo. 18 (installment)**	2.250	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented** (2) Evidence of federal and provincial budget allocations for third year of the project. (3) Satisfactory performance per targets.

PPT FORM

Country:	Project No:	Project Title:	Date:	/ / Original / / Revision #	Approvd:

CPI DESCRIPTION

	Project Month		Responsibility
1.	6	Group A IRHC facilities establishment initiated	Prov. MOH and MOPW
2.	6	10 MLHW modules adapted translated and printed	NBHSC
3.	6	27 MLHW tutors trained	NBHSC
4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
23.	36	Evaluation completed	NBHSC/USAID

Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
1.	mo. 0* (advance)	.250	**CP's met:** **(1) National Basic Health Services Cell created, key positions established, Deputy Director General hired and in place.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the first year of the project. (3) Evidence that procedures for semi-annual review meetings are established. (4) Evidence that borrower has requested WHO advisors. (5) Evidence that provinces support project and have established machinery to manage the project. (6) Evidence that provincial annual plans of action being implemented.
2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

PPT FORM

Country:	Project No:	Project Title:	Date:	/ / Original / / Revision #	Approvd:

CPI DESCRIPTION

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4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
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Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
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2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(2) Evidence of federal and provincial budget allocations for second year of the project. **(3) Evidence of satisfactory performance per targets.** **Performance Targets:** **(1) 10 training modules completed** **(2) 27 tutors trained** **(3) Health education/communication strategies formulated** **(4) WHO technicians in country** **(5) 5 key positions in the Federal Cell filled, and a minimum budget allocation of Rs. 600,000 for its first year of operation.**
3.	**mo. 12 (installment)**	1.650	CP's met: **(1) Evidence that Provincial Annual Plans of Action being implemented.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the second year of the project. (3) Evidence of satisfactory performance per target

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: **(1) 20 training modules completed** **(2) 9 training units are operational** **(3) Financial support study started** **(4) Health education/communications program being implemented** (5) Facilities for 17 Integrated Complexes being constructed/improved according to general criteria agreed upon at the initiation of the project (6) A minimum budget allocation of Rs. 1,000,000 for the second year of operation of the Cell.
4.	**mo. 18 (installment)**	2.250	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented** (2) Evidence of federal and provincial budget allocations for third year of the project. (3) Satisfactory performance per targets.

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3.	6	27 MLHW tutors trained	NBHSC
4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
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19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
23.	36	Evaluation completed	NBHSC/USAID

Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
1.	mo. 0* (advance)	.250	**CP's met:** **(1) National Basic Health Services Cell created, key positions established, Deputy Director General hired and in place.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the first year of the project. (3) Evidence that procedures for semi-annual review meetings are established. (4) Evidence that borrower has requested WHO advisors. (5) Evidence that provinces support project and have established machinery to manage the project. (6) Evidence that provincial annual plans of action being implemented.
2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: **(1) 20 training modules completed** **(2) 9 training units are operational** **(3) Financial support study started** **(4) Health education/communications program being implemented** (5) Facilities for 17 Integrated Complexes being constructed/improved according to general criteria agreed upon at the initiation of the project (6) A minimum budget allocation of Rs. 1,000,000 for the second year of operation of the Cell.
4.	**mo. 18 (installment)**	2.250	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented** (2) Evidence of federal and provincial budget allocations for third year of the project. (3) Satisfactory performance per targets.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: (1) Basic health drug formulary and medical equipment list completed (2) 54 tutors trained (3) All positions for the Cell as specified in the plan of operation are established and 50% of them filled (4) Baseline survey started.
5.	mo. 24 (instalment)	2.500	CP's met: (1) Evidence that Provincial Annual Plans of Action being implemented (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the third year of the project. (3) Evidence of satisfactory performance per targets. Performance Targets: (1) 18 training units operational (2) Executive management seminar completed.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(3) Management course for District Health Officers and assistants completed.
			(4) Management support personnel trained.
			(5) First draft of Operations Manual completed.
			(6) Community Worker financial support module completed.
			(7) Plan for external evaluation approved by AID.
			(8) 1 National drug formulary operating
			(9) National standards for curative and preventive care for Integrated Complexes completed.
			(10) Baseline survey completed.
			(11) 75% of the Cell positions filled.
			(12) A minimum budget allocation of Rs. 1,000,000 for the third year of operation of the Cell.
6.	mo. 30 (installment)	2.500	CP's met:
			(1) Evidence that Provincial Annual Plans of Action are being impleted.
			(2) Evidence of federal and provincial budget allocations for the first year of Phase II of the project.

PPT FORM

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CPI DESCRIPTION

	Project Month		Responsibility
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4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
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18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
23.	36	Evaluation completed	NBHSC/USAID

Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
1.	mo. 0* (advance)	.250	**CP's met:** **(1) National Basic Health Services Cell created, key positions established, Deputy Director General hired and in place.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the first year of the project. (3) Evidence that procedures for semi-annual review meetings are established. (4) Evidence that borrower has requested WHO advisors. (5) Evidence that provinces support project and have established machinery to manage the project. (6) Evidence that provincial annual plans of action being implemented.
2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(2) Evidence of federal and provincial budget allocations for second year of the project. **(3) Evidence of satisfactory performance per targets.** **Performance Targets:** **(1) 10 training modules completed** **(2) 27 tutors trained** **(3) Health education/communication strategies formulated** **(4) WHO technicians in country** **(5) 5 key positions in the Federal Cell filled, and a minimum budget allocation of Rs. 600,000 for its first year of operation.**
3.	**mo. 12 (installment)**	1.650	CP's met: **(1) Evidence that Provincial Annual Plans of Action being implemented.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the second year of the project. (3) Evidence of satisfactory performance per target

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: **(1) 20 training modules completed** **(2) 9 training units are operational** **(3) Financial support study started** **(4) Health education/communications program being implemented** (5) Facilities for 17 Integrated Complexes being constructed/improved according to general criteria agreed upon at the initiation of the project (6) A minimum budget allocation of Rs. 1,000,000 for the second year of operation of the Cell.
4.	**mo. 18 (installment)**	2.250	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented** (2) Evidence of federal and provincial budget allocations for third year of the project. (3) Satisfactory performance per targets.

PPT FORM

Country:	Project No:	Project Title:	Date:	/ / Original / / Revision #	Approvd:

CPI DESCRIPTION

	Project Month		Responsibility
1.	6	Group A IRHC facilities establishment initiated	Prov. MOH and MOPW
2.	6	10 MLHW modules adapted translated and printed	NBHSC
3.	6	27 MLHW tutors trained	NBHSC
4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
23.	36	Evaluation completed	NBHSC/USAID

Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
1.	mo. 0* (advance)	.250	**CP's met:** **(1) National Basic Health Services Cell created, key positions established, Deputy Director General hired and in place.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the first year of the project. (3) Evidence that procedures for semi-annual review meetings are established. (4) Evidence that borrower has requested WHO advisors. (5) Evidence that provinces support project and have established machinery to manage the project. (6) Evidence that provincial annual plans of action being implemented.
2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

PPT FORM

Country:	Project No:	Project Title:	Date:	/ / Original / / Revision #	Approvd:

CPI DESCRIPTION

	Project Month		Responsibility
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2.	6	10 MLHW modules adapted translated and printed	NBHSC
3.	6	27 MLHW tutors trained	NBHSC
4.	6	Draft Health Education and Communications Strategies	NBHSC
5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
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Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
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2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(2) Evidence of federal and provincial budget allocations for second year of the project. **(3) Evidence of satisfactory performance per targets.** **Performance Targets:** **(1) 10 training modules completed** **(2) 27 tutors trained** **(3) Health education/communication strategies formulated** **(4) WHO technicians in country** **(5) 5 key positions in the Federal Cell filled, and a minimum budget allocation of Rs. 600,000 for its first year of operation.**
3.	**mo. 12 (installment)**	1.650	CP's met: **(1) Evidence that Provincial Annual Plans of Action being implemented.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the second year of the project. (3) Evidence of satisfactory performance per target

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: **(1) 20 training modules completed** **(2) 9 training units are operational** **(3) Financial support study started** **(4) Health education/communications program being implemented** (5) Facilities for 17 Integrated Complexes being constructed/improved according to general criteria agreed upon at the initiation of the project (6) A minimum budget allocation of Rs. 1,000,000 for the second year of operation of the Cell.
4.	**mo. 18 (installment)**	2.250	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented** (2) Evidence of federal and provincial budget allocations for third year of the project. (3) Satisfactory performance per targets.

PPT FORM

Country:	Project No:	Project Title:	Date:	/ / Original / / Revision #	Approvd:

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5.	12	20 MLHW modules adapted translated and printed	NBHSC
6.	12	9 training units operational	Prov. MOH
7.	12	Basic Executive Management Seminar completed (18 execs)	NBHSC
8.	12	CHW Financial Support Experimental Design Study initiated	NBHSC
9.	12	Health Education and Communication Program implemented	NBHSC
10.	18	Draft National Basic Health Drug Formulary and equipment Lists completed	NBHSC/ Prov. MOH
11.	24	18 MLHW training units operational	Prov. MOH
12.	24	Advanced Executive Management Seminars completed by 24 Execs.	NBHSC
13.	24	DHO-ADHO Basic Operations Management Course completed (18 trainees)	NBHSC
14.	24	48 management support personnel trained (Supply Management, Budget Info System)	NBHSC
15.	24	1st Draft Operations Manuals (Preventive Care, Curative Care, Health Complex Management, Inventory & Supply, Personnel Management)	NBHSC
16.	24	Cost Analysis initiated	NBHSC/Prov. MOH/DOH
17.	24	CHW Financial Support Test models completed	NBHSC
18.	30	Group A IRHC facilities available for occupancy(12)	Prov. MOH/ MOPW
19.	30	Group B IRHC facilities establishment initiated	Prov. MOH/ MOPW
20.	30	Cycle 1 MLHW graduated and deployed (203)	Prov. MOH/ DHO
21.	33	Cycle 1 CHW selected and trained (1,000)	Prov. MOH/ DHO
22.	33	9 IRHC operational	Prov. MOH/ DHO
23.	36	Evaluation completed	NBHSC/USAID

Disbursements for General Project Support

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
1.	mo. 0* (advance)	.250	**CP's met:** **(1) National Basic Health Services Cell created, key positions established, Deputy Director General hired and in place.** (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the first year of the project. (3) Evidence that procedures for semi-annual review meetings are established. (4) Evidence that borrower has requested WHO advisors. (5) Evidence that provinces support project and have established machinery to manage the project. (6) Evidence that provincial annual plans of action being implemented.
2.	mo. 6 (installment)	.350	**CP's met:** **(1) Evidence that Provincial Plans of Action being implemented**

***Month 0 is the point at which, for project purposes, Phase I is considered to begin.**

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(3) Evidence of satisfactory progress per performance targets. Performance Targets: (1) 18 Complexes being constructed/improved and operating. (2) 9 Complexes fully equipped including required vehicles. (3) 203 mid-level health worker graduates.
7.	mo. 36 (Final payment)	4.000	CP's for Final Disbursement: (1) Phase I financial statements acceptable to AID. (2) End of Project Status achieved. End of Project Status (1) Not less than 27 Mid-Level Health Worker training units established. (2) Not less than 600 Mid-Level Health Workers have graduated from the training units. (3) Not less than 1000 Community Health Workers trained by Mid-Level Health Workers.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: (1) Basic health drug formulary and medical equipment list completed (2) 54 tutors trained (3) All positions for the Cell as specified in the plan of operation are established and 50% of them filled (4) Baseline survey started.
5.	mo. 24 (instalment)	2.500	CP's met: (1) Evidence that Provincial Annual Plans of Action being implemented (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the third year of the project. (3) Evidence of satisfactory performance per targets. Performance Targets: (1) 18 training units operational (2) Executive management seminar completed.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(3) Evidence of satisfactory progress per performance targets. Performance Targets: (1) 18 Complexes being constructed/improved and operating. (2) 9 Complexes fully equipped including required vehicles. (3) 203 mid-level health worker graduates.
7.	mo. 36 (Final payment)	4.000	CP's for Final Disbursement: (1) Phase I financial statements acceptable to AID. (2) End of Project Status achieved. End of Project Status (1) Not less than 27 Mid-Level Health Worker training units established. (2) Not less than 600 Mid-Level Health Workers have graduated from the training units. (3) Not less than 1000 Community Health Workers trained by Mid-Level Health Workers.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			Performance Targets: (1) Basic health drug formulary and medical equipment list completed (2) 54 tutors trained (3) All positions for the Cell as specified in the plan of operation are established and 50% of them filled (4) Baseline survey started.
5.	mo. 24 (instalment)	2.500	CP's met: (1) Evidence that Provincial Annual Plans of Action being implemented (2) Evidence of adequate federal and provincial funds have been made available to the implementing departments in accordance with the plan of operation for the third year of the project. (3) Evidence of satisfactory performance per targets. Performance Targets: (1) 18 training units operational (2) Executive management seminar completed.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(3) Management course for District Health Officers and assistants completed.
			(4) Management support personnel trained.
			(5) First draft of Operations Manual completed.
			(6) Community Worker financial support module completed.
			(7) Plan for external evaluation approved by AID.
			(8) 1 National drug formulary operating
			(9) National standards for curative and preventive care for Integrated Complexes completed.
			(10) Baseline survey completed.
			(11) 75% of the Cell positions filled.
			(12) A minimum budget allocation of Rs. 1,000,000 for the third year of operation of the Cell.
6.	mo. 30 (installment)	2.500	CP's met:
			(1) Evidence that Provincial Annual Plans of Action are being impleted.
			(2) Evidence of federal and provincial budget allocations for the first year of Phase II of the project.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(3) Evidence of satisfactory progress per performance targets. Performance Targets: (1) 18 Complexes being constructed/improved and operating. (2) 9 Complexes fully equipped including required vehicles. (3) 203 mid-level health worker graduates.
7.	mo. 36 (Final payment)	4.000	CP's for Final Disbursement: (1) Phase I financial statements acceptable to AID. (2) End of Project Status achieved. End of Project Status (1) Not less than 27 Mid-Level Health Worker training units established. (2) Not less than 600 Mid-Level Health Workers have graduated from the training units. (3) Not less than 1000 Community Health Workers trained by Mid-Level Health Workers.

Disbursement No.	Month of Disbursement	Amount of Disbursement $ Million	Disbursement Requirements
			(4) Not less than 9 Integrated Rural Health Complexes are in operation.
			(5) All management training for project managers and support staff has been completed.
			(6) Operation manuals have been completed in the areas of management and supply, personnel management and management of health complex
			(7) New personnel system is being implemented.

C. Evaluation Arrangements for the Project

1. Government of Pakistan Collaboration

The project evaluation will be conducted by the Operational Research Division of the National Basic Health Services Cell of the Federal Ministry of Health in conjunction with AID. The baseline survey plan and the data collection and analysis plan will be designed by the Cell with short-term consultant help. The reports will be submitted to the Director-General of Health, Government of Pakistan, and the AID Mission.

2. Goal Indicators

a. General

The goal of the public health sector is to improve the health status of the population. This project is focused on the rural population, now poorly served (around 5% coverage by scientific medicine).

Improvements in health status are difficult to demonstrate and require long lead times before measureable change occurs. For this reason, measurement of changes will not be attempted until near the end of Phase II of the project (baseline data will be collected in year 1 of Phase I).

Certain objectively verifiable indicators are sensitive to health care programs that stress preventive care along with curative care. These indicators are mostly changes in mortality of children and mothers. A good integrated health care program should be able to achieve a 10-20% decrease in infant deaths and a 35-50% decrease in mortality in the 1-4 age group. Indicators measured in this project for general mortality assess these goals. These indicators are reductions in infant mortality rate from 130 (estimate) to 100 and reduction in age-specific death rate (1-4 group) from 24/1000 to 14/1000.

Maternal deaths can also be reduced 25-50% but measurement of this will require a more costly baseline survey (over 2200 households) to achieve statistical significance since these deaths are rare (probably one maternal death each year in a village of 1000 people). Reductions in mortality and morbidity from measles, polio, whooping cough, tetanus, and diphtheria by the immunization of children can be expected. At least two factors mitigate against measurement of these reductions, however: (1) the conditions are

sometimes difficult to discriminate (they may occur in non-recognizable forms) and (2) their rates are relatively low, making survey requirements high to achieve statistical significance.

This evaluation will measure two indicators of morbidity (sickness) in children. These are the prevalence of malnutrition in children ages 1-2 years, defined as children with weight-for-age below 70% of the Harvard Standard curve, and the prevalence of diarrhea/dysentary with dehydration.

Research has shown that the malnutrition/infection complex contributes significantly to childhood deaths and sicknesses. This project, building on the work of the Nutrition Cell of the Federal Planning Commission and of other nutrition work carried out through the Federal Ministry of Health, expects to be a major implementor of applied nutrition through the home visiting and child weighing program. Early diagnosis and treatment of infection and nutrition education to high-risk families (plus selective food supplementation) should significantly decrease malnutrition in the target population. The project expects a decrease in malnutrition from around 20% to around 12% for those children below the 70% percentile on the growth chart.

The second morbidity indicator is the percent of children having had diarrhea/dysentary with dehydration. Research has shown that the only practical way to decrease the diarrhea/dysentary rate is by regularly consuming potable water. However, diarrhea/dysentary does not kill children. Dehydration, the loss of body fluids, does. A health care program, through prompt diagnosis and treatment of diarrhea/dysentary, can prevent the dehydration process by oral or intravenous rehydration, thus decreasing dehydration, and hence, decreasing death. This project expects to lower diarrhea/dysentary with accompanying dehydration from 75% (estimate) to 10%.

This project should also have a long term favorable impact on fertility in rural Pakistan. One reason is that the trained Community Health Workers can deliver condoms and oral contraceptives and also provide information on the benefits of child spacing. The second reason is that there is almost always a decrease in fertility following a decrease in child mortality (the child-survival hypothesis).

This project will assess its fertility impact by measuring "percent of contraceptive users" and "percent of continuous users of contraceptives at a parity of two".

Baseline data gathering for the Goal Indicators and Purpose Indicators will be completed before month 18 of the project (6 months prior to the first graduates). The estimated cost of the baseline study is $ 11,700.

b. Study Design for Goal Indicators

Goal indicators will be assessed by a recall survey of village mothers and clinical exams of children (no needles). The baseline survey will be conducted twice, once in the Winter and once in the Summer, to get a true picture of morbidity which has seasonal variation. A true experimental design can be used because some villages will be included in Integrated Rural Health Complexes early in the project and some later in the project. Evaluators can designate villages which will be included later as control group villages and match these with other villages who will be served by Integrated Rural Health Complexes early.

A suggested design is for a 1,000 household survey - 500 controls and 500 treatment groups. This can be stratified by population and province giving a 17% sample of 34 villages (assuming village sizes of around 1,000 people).

POSSIBLE SAMPLING PLAN

	TREATMENT		CONTROL		% households per village
	Villages	Households	Villages	Households	
Punjab	7	206	7	206	17%
Sind	5	147	5	147	17%
N.W.F.P.	3	88	3	88	17%
Baluchistan	2	59	2	59	17%
TOTAL	17	500	17	500	17%

Operational Complexes will gather all of the goal indicators as part of their daily activities. For this reason, only control areas will require periodic resurvey to assess their health status. This is contemplated for years 5 and 7.

It is emphasized that the baseline survey of goal indicators does not aid in evaluation of Phase I of the project. The data collected presumes that Phase II will take place with adequate funding.

c. Data Collection for Goal Indicators - Baseline

To reduce costs and to aid in the field experience of mid-level students, it is proposed to use female and mid-level students as interviewers for the baseline data. To complete the data collection in one week, seven 3-person teams would be needed per school. Interviewers will be trained the week previous to the data collection effort.

d. Data Analysis and Reporting

The Operational Research Division of the National Basic Health Services Cell will design precoded forms which can be computor analyzed at a Government data processing facility. Reports will be generated by month 30 of the project.

3. Baseline Data for Purpose Indicators

a. Coverage

The above mentioned baseline survey will be used to develop benchmarks for two of the three End-of-Project Status indicators. These are 1) Population Coverage - percent of population within 10 Km (6.2 miles) of a basic health unit) and 2) Utilization - visits/person/year to a Government health unit. The sampled households will be asked questions about these indicators.

The number of operational Complexes will be counted after an independent inspection has shown them to meet the criteria for "operational". No baseline data are required.

b. Quality

Quality indicators can be assessed by a two-person team (one from the Federal Ministry of Health and one from the appropriate provincial Department of Health). The Cell will select 5-10 common curative conditions, set diagnostic and treatment standards and

observe existing non-physician workers who deliver primary care. They will also pick 5 preventive program activities, set criteria for these, and observe existing workers. Based on the population, the following numbers of workers might be evaluated:

Province	Number of Workers Evaluated
Punjab	40
Sind	30
N.W.F.P.	10
Baluchistan	7

c. Management

The same team checking quality of care can check the drugs and equipment in each rural unit comparing supplies to existing standard drug and equipment lists. The team can also ask the worker how often he is supervised.

d. Evaluation Philosophy

It will not be the intent of baseline evaluators to embarrass rural health workers or Government institutions. These data will not be publicly used until the repeat survey of year 3 to show improvement of the health system.

4. Output Indicators

Outputs will be counted from project records. No baseline data are required.

D. Conditions Precedent, Covenants and Exceptions

1. Conditions Precedent and Covenants

NOTE: The following are illustrative of the Conditions Precedent and Covenants that the AID Mission proposes to negotiate with the Government of Pakistan. Although the Government is in accord with the purposes of the illustrative CP's, officials have expressed concern about the number of conditions and the specificity indicated. The final text of the CPs and Covenants will, therefore, evolve from loan agreement negotiation talks.

a. Conditions Precedent to Disbursement for Technical Assistance.

Prior to the first disbursement of the AID funds for Technical Assistance, the Borrower/Grantee will furnish:

1) A plan for the expansion of basic health services, outling strategy and objectives, organization, scheduling, costs and financing, and manpower and infrastructure requirements.

2) Evidence that a contract for technical assistance, approved by A. I. D. and the Government of Pakistan, has been entered into with one or more organizations or other entities satisfactory to A. I. D. and the Government of Pakistan for the provision of technical advisors, in fields such as public health physician and educational science/ curriculum specialist.

3) Evidence that funds other than those provided by AID which are necessary for the timely performance of the contract during the initial funding period have been made available to finance the local currency costs of the contract.

b. Conditions Precedent to Initial Disbursement for General Project Support.

Prior to the first disbursement of any AID funds for General Project Support, the Borrower/Grantee will furnish:

1) Evidence that all necessary action has been taken to create the National Center for Basic Health Services Cell (the Cell) in the Federal Ministry of Health, that principal positions in the Cell are established and filled, including that of the official in charge of the Cell.

2) Evidence that the Borrower has provided to the Cell and Provincial Governments, and the Provincial Governments have provided to their own health departments, all necessary resources, in addition to AID funds, for the timely and effective execution of the first year of the Basic Health Services Project.

3) A statement of procedures for semi-annual review meetings of the Basic Health Services Project, such procedures to include the subjects to be regularly covered at each review meeting.

4) Evidence that the Borrower/Grantee has requested from WHO technical experts for Phase I of the project in the fields such as health care management and public health auxiliary training.

5) Evidence that all provincial governments participating in the program support the project strategy, have established an organizational structure within their health departments to manage the project and have budgeted appropriate resources for the support of the first year of the project.

6) Evidence that provincial Plans of Action for the first year of the project have been adopted.

c. Conditions Precedent to Additional Disbursements for General Project Support.

Additional disbursements for general project support will be geared to accomplishment of specific performance targets. It is estimated that five (5) intermediate instalments, roughly six (6) months apart, will be disbursed for general project support in the following approximate amounts:

(1)	$ 350,000
(2)	$1,650,000
(3)	$2,250,000
(4)	$2,500,000
(5)	$2,500,000

Prior to disbursement of each of the intermediate instalments, the Borrower will furnish to A.I.D.:

1) Evidence that the project is being implemented in accordance with approved provincial plans of action.

2) Evidence that adequate federal and provincial budget allocations have been made and that funds are being disbursed in accordance with annual Plans of Action.

3) Evidence that the performance targets required to to justify a particular instalment, as set forth in implementation letters, have been met with respect to:

a) Training capacity
b) Trained manpower
c) Management infrastructure development and operation
d) Establishment of physical facilities
e) Staffing of foreign advisory positions, Federal Cell positions and provincial Basic Health Care staff and supervisory positions.
f) Establishment of Integrated Rural Health Complexes.

d. Conditions Precedent to Final Disbursement for General Project Support.

Prior to the final disbursement of AID funds for general project support, the Borrower /Grantee will furnish to AID:

1) A detailed financial statement showing funds that have been expended during the implementation of Phase I (first three years) of the project.

2) Evidence that the following performance targets (or others agreed upon by AID and the Borrower/Grantee) have been achieved:

a) Not less than 27 Mid-Level Health Worker Training Units have been established.

b) Not less than 600 Mid-Level Health Workers have graduated from the training units.

c) Not less than 1,000 Community Health Worker graduates have been trained by Mid-Level Health Workers.

d) Not less than 9 Integrated Rural Health Complexes are in operation.

e) Full management training has been provided for 72 federal, provincial and district government executives and 190 support staff.

f) Operations manuals have been completed in the areas of logistics management and supply, personnel management and management of health complexes.

g) Personnel system reforms have been developed, accepted and are being implemented.

e. Special Covenants

1. The Basic Health Care Project. The Borrower/Grantee will carry out the Basic Health Care Project with sufficient manpower and funding to meet agreed performance targets for the project.

2. Training. The Borrower/Grantee will undertake that a training program will be executed in a timely and effective manner.

3. Management Support Infrastructure. In order to assist in the achievement of the project objectives, the Borrower/Grantee will assure that an effective management support infrastructure is developed and made operational in a timely manner. The support infrastructure will include the following systems:

a) Operational planning and management.
b) Logistics and supply (including vehicle and equipment maintenance).
c) Personnel.
d) Operations Control and supervision.
e) Health Information (reporting).
f) Communications.
g) Budget and financial control.
h) Operation research.

4. Technical Assistance. The Borrower/Grantee will employ long-term technical advisors and short-term technical advisors as required. The long-term advisors will be in fields such as public health physician and educational science/curriculum specialist.

2. Exceptions

The following exceptions to usual AID procedures are recommended:

a. Source/Origin/Componentry

Technical assistance financed under the loan will be of U.S. source and origin.

It is proposed that only Pakistan "source" requirements should apply to the local cost financing FAR portion of the project, and that origin and componentry requirements will not be applicable. The result of this rule is that as long as the commodities were purchased in Pakistan, the projects into which they are incorporated will be eligible for AID reimbursement. AID will not inquire into the country of manufacture of imported items.

This approach is recommended because of the small amount of imported commodities to be used on the project and the practical impossibility of enforcing origin and componentry requirements for this type of project. No commodities will be specially imported for the project, but are brought into meet a general demand in the country. These items will be purchased for project use from usual sources of local supply.

This means that some of the imported commodities used on the project might be from Communist-bloc countries or contain components from such countries, but this is expected to be minimal.

b. "Non-financed" Bloc Goods and Services

A related question to the above is presented by a provision in the standard loan agreement for capital assistance (M.O. 1262.1.1.). Section 6.04 of the standard agreement requires that all goods and services "procured for the project, but not financed under the loan" shall be of free world source and origin. For the reasons described above, it would not be feasible to use this clause in this project loan agreement.

c. Competative Selection Procedures

The Government has requested that a "MEDEX Consortium" directed by the University of Hawaii, and also including the Universities of Washington and Utah, be engaged to provide foreign technical assistance services during Phase I of the project. The rationale for selection of MEDEX without using competetive selection procedures is that for the last year they have been deeply involved in performing detailed project design, feasibility and analysis work. In conjunction with the Government, MEDEX developed the strategy, project component systems and project implementation plan. The Government feels that use of the MEDEX Consortium will greatly enhance the chances for successful project execution.

Handbook 11, Country Contracting Section 1-b-2 K(I) states that: "A firm should not be employed to perform services when in the judgment of the responsible officer such firm has been, or might be, placed in a position where its judgment may be biased, or where it has achieved an unfair competitive advantage. However, a firm employed to make a feasibility study, or participate in sector assessments, DAP or project design, or perform other technical or engineering services for a single project, may be used if otherwise qualified for detailed design, supervision, and rendering of other subsequent technical advisory services on such subject".

Upon authorization of this project paper (loan) the Government will be notified that it may contract with the MEDEX Consortium for Phase I loan financed technical assistance.

d. Facilities Construction

The AID Mission will verify construction (establishment) of RHC's and BHU's against general criteria agreed to at the initiation of this project before such facilities will be considered to have satisfied project performance targets.

AID does not plan to approve specific facility design or contractor selection or to supervise construction on individual RHC's or BHU's.

If AID were to become deeply involved in approving project construction activities, given the great number of facilities to be constructed, the work load would soon become unmanageable. Additionally construction will be the function of the provinces (most likely the provincial public workers departments) and they each have their ongoing system for contracting and construction and AID does not consider it advisable to become deeply involved in the day-to-day operations of each province.

E. Status of Negotiations

Outlines of the proposed program were developed by AID in consultation with Pakistan Government officials. The plans set forth in this Project Paper have been agreed to in principle by Government of Pakistan officials of the Ministries of Finance and Health. The Government has expressed a desire to see more rapid implementation of the program but in the AID view the schedule outlined is believed more feasible. Government officials have expressed concern about the proposed system of disbursements dependent on fulfillment of a number of conditions precedent prior to each release. This will be the subject of negotiation prior to loan agreement signing.

ANNEXES

Annex A	PRP approval cable*
Annex B	
Exhibit 1	Detailed Project Background*
Exhibit 2	Financial Tables
Exhibit 3	Detailed Social Analysis*
Exhibit 4	Tables on Current Health Status and Resources*
Annex C	Other Donor Assistance*
Annex D	Logical Framework Matrix. See Project Paper page 35
Annex E	Government Loan Application
Annex F	Section 611 (e), Director's Certificate
Annex G	Checklist of Statutory Criteria*
Annex H	Draft Project Authorization.
Annex I	Draft Description for Project Agreement*

* Annexes marked by an asterisk (*) are not included in the Project Paper but are available upon request from Paul O'Farrell ASIA/PD/SA, 620 R.P., 235-8910.

FINANCIAL TABLES

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TABLE B-1

ESTIMATED COSTS OF NATIONAL BASIC HEALTH SERVICES CELL

1. Start-up Costs (years 01 and 07)	Number	Rupees Unit Cost	Total
Typewriters	14	5,000	70,000
Calculators			
- electronic	2	5,000	10,000
- hand	4	500	2,000
Duplicator	2	10,000	20,000
Photocopies	1	20,000	20,000
Executive Desks and Chairs	6	5,000	30,000
Senior Staff Desks and Chairs	10	3,000	30,000
Technical Staff Desks and Chairs	8	2,500	20,000
Secretarial Desks (includes clerks)	15	2,000	30,000
Conference Table and Chairs	1	6,000	6,000
Projectors (35mm)	2	2,500	5,000
Screens (2) (portable)	2	850	1,700
Movie Projector (8mm)	1	5,000	5,000
Shelving	4	1,500	6,000
File cabinets	10	950	9,500
Side Chairs for Auditorium	12	150	1,800
Artists Table	2	1,500	3,000
Camera, Dark Room, and Processing	1	15,000	15,000
Graphic Arts materials	-	50,000	50,000
Books for Library		10,000	10,000
Sub-total: Office Equipment and Furniture			345,000
Vehicles	5	70,000	350,000
TOTAL			695,000

2. Salaries - see Table III-1

3. Space Requirements and Rent

	No. Rooms	Sq. Feet	Total
Executive Offices	6[a]	20 x 30	3600
Reception	1	25 x 60	1500
Senior Staff Offices	9	20 x 30	5400
Technical Staff Offices	2	19 x 15	570
Secretarial Room	1	25 x 60	1500
Conference Room	1	40 x 30	1200
Library	1	70 x 30	2100
Auditorium's Film Room	1	40 x 55	2200
Artists Room	1	19 x 15	285
Dark Room's Processing	1	20 x 15	100
Storage	1	19 x 15	570
Toilets	4	18 x 15	1080
Room for Support Staff	1	40 x 30	1200
Reserve Room	1	20 x 15	300
Total:			21,605

Rent = Rs.3/sq. ft. x 21,605	=	64,815
Utilities @ 20% of rent	=	12,963
TOTAL ANNUAL COST		say Rs.78,000

4. Office Supplies including Film — Rs.30,000

5. Transportation

	No.	Unit Cost	Total Cost
Vehicle repair	5	3,500	17,500
POL: 25 miles/vehicle/day x 5 day/wk x 52 weeks @ Rs.1.5/mile = 48,750			50,000
Air Transport	54 return fares	350	18,900
Per Diem	600 days	50	30,000
TOTAL:			116,400

6. Communications (see Table III-1)

Unit Costs:

radio broadcasts	Rs.14/minute
posters	Rs.10/poster
pamphlets	Rs.0.5/page

7. Student Training Costs

	Weeks	No. students/ course	Per Diem	Travel 3/	Total Cost per course
Tutor training 1/	6	36	75,600	21,600	97,200
Exec. Management 1/	1	24	8,400	14,400	23,200
DHO, ADHO Course 1/	2	24	16,800	14,400	31,200
Personnel Management 2/	4	65	45,500	39,000	84,500
Drug supply Management 2/	4	65	45,500	39,000	84,500
Budget/Financial Planning 2/	4	65	45,500	39,000	84,500
Information Systems/ Supervision 2/	1	36	6,300	21,600	27,900

1/ per diem calculated at Rs.50.

2/ per diem calculated at Rs.25.

3/ each student is allowed 600 miles of travel @ Re. 1/mile.

TABLE B-7 TRAINING PLAN

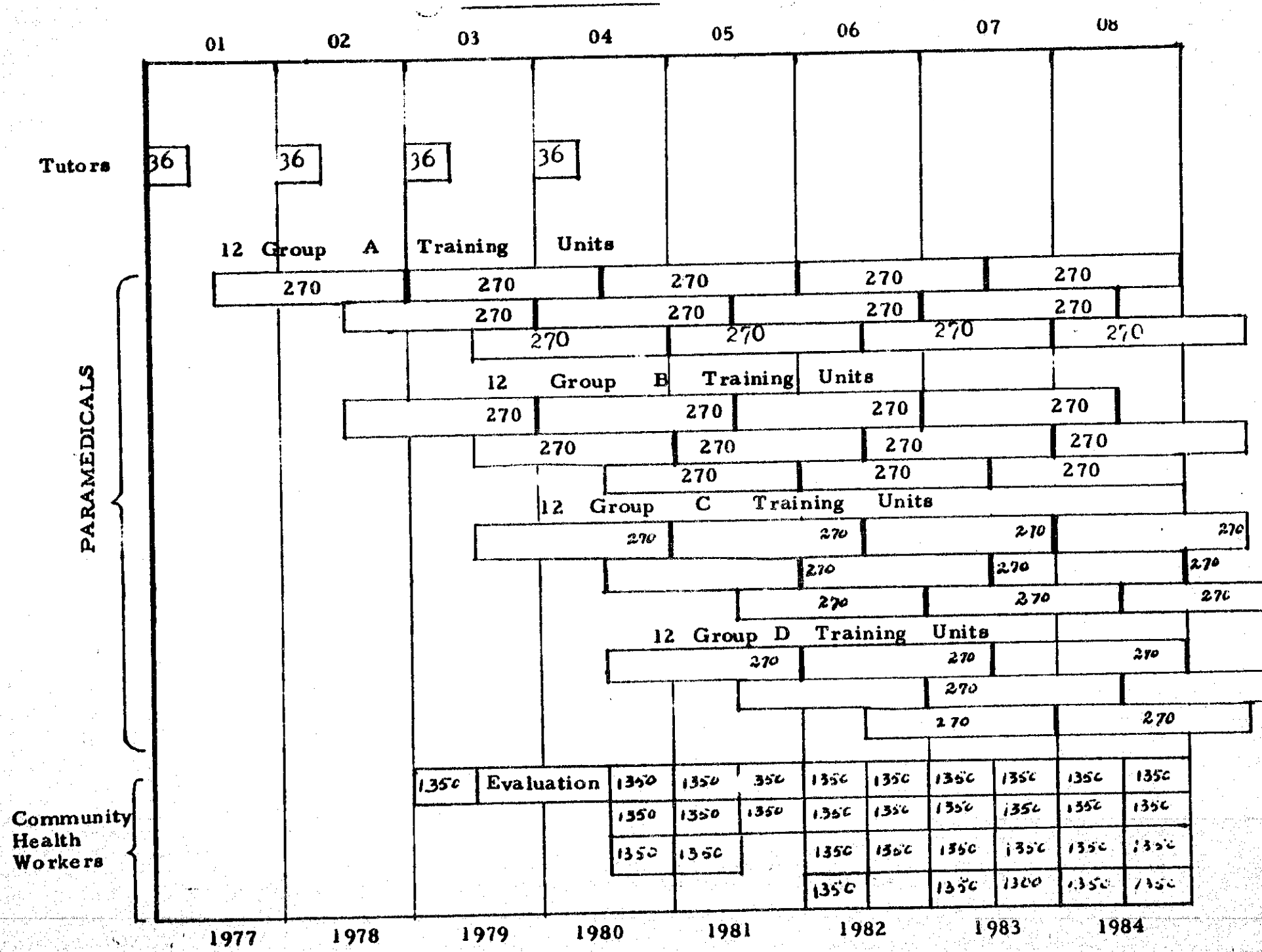

Table B-4. COMMUNITY HEALTH WORKERS : ESTIMATED WORKER OUTPUT AND COVERAGE *

	Year	CHW Grades	Loss From System**	CHW's in System	Rural Pop.	Pop. CHW	% Coverage
01	1977	0	0	0	52.24	-	0
02	1978	0	0	0	53.39	-	0
03	1979	1,350	0	1,350	54.56	40,415	2.47
04	1980	4,050	135	3,915	55.76	14,243	7.02
05	1981	6,750	392	6,358	56.99	8,964	11.16
06	1982	9,450	636	15,172	58.16	3,883	26.09
07	1983	10,800	1,517	24,455	59.35	2,427	41.20
08	1984	10,800	2,446	32,809	60.57	1,846	54.17

* CHW Coverage is defined as One CHW/ 1,000 people.

** 10% loss from previous year's stock of workers.

Table B 3. MID-LEVEL HEALTH WORKERS : ESTIMATED WORKER OUTPUT AND COVERAGE 1/

	Year	Grade	Loss From 2/ System	MLHW's in System End Year	Rural 3/ Population (Millions)	Population/ MLHW	No. Integrated Rural 4/ Health Complexes Staffed	% Coverage of rural 5/ Population
C1	1977	0	0	0	52.24	-	-	0
C2	1978	270	0	270	53.39	197,741	12	1.79
C3	1979	548	27	783	54.50	69,604	35	5.14
C4	1980	1080	78	1785	55.76	31,238	81	11.62
C5	1981	1620	179	3226	56.99	17,666	146	20.49
C6	1982	1890	323	4793	58.16	12,134	217	29.84
C7	1983	2160	479	6474	59.35	9,167	294	39.63
C8	1984	2160	647	7987	60.57	7,584	363	47.94

1/ Rural Health Complex covers an average of 80,000 people.

2/ 10% loss from previous year's workers.

3/ Rural population based on 1972 census with a growth rate of 2.2% through 1981, and 2.05% through 1984.

4/ One Integrated Rural Health Complex has an average of 22 MLHW's on its staff.

5/ By newly trained workers in IRHC's.

Table B-5. TRAINING COSTS FOR MLHWs FOR 18 MONTH COURSE

(Rupees)

	1 class/unit	2 classes/unit	3 classes/unit
1. Personnel 1/	106,608	106,608	106,606
2. Student Training Equipment	24,700	49,400	74,100
3. Office Supplies 1/	38,688	38,688	38,688
4. Training Supplies	5,370	10,740	16,110
5. Student Allowances	90,000	180,000	270,000
6. Travel	43,000	86,000	129,000
7. Miscellaneous 1/	8,100	8,100	8,100
8. Total	316,466	479,536	642,606
9. Graduates/session 2/	.90x25=22.5	.9x50=45	.9x75=67.5
10. Per Student Cost (8/9)	14,065	10,656	9,520

1/ It is assumed that these costs do not very with the number of students at the training unit.

2/ Each class has 25 students. It is assumed that only 90% of the students complete the course. Per student costs are based on the number of graduates.

Table B-6. SEMI-ANNUAL OUTPUT OF MID-LEVEL HEALTH WORKERS

Month	MLHW Grades	Attrition 1/	MLHWs in System End Month 2/
6			
12			
18			
24	270	-	270
30	-	14	256
36	570	13	783
42	270	39	1,014
48	810	39	1,785
54	540	90	2,235
60	1,080	90	3,225
66	810	162	3,873
72	1,080	162	4,791
78	1,080	240	5,631
84	1,080	240	6,471
90	1,080	324	7,227
96	1,080	324	7,983

1/ Annual attrition of 10% divided evenly over the year.

2/ This column shows the number of MLHW's scheduled for a continuing education course in the succeeding 6 months.

Table B-7. CONSTRUCTION SCHEDULE TO FIT MLHW TRAINING SCHEDULE 1/

Project Month	RHCs to be Completed	RHCs to be financed during previous 18 months	BHUs to be completed	BHUs to be financed during previous 12 months.
24	13	13	91	91
30	13	-	91	-
36	36	23	329	161
42	47	11	574	77
48	82	35	714	245
54	102	20	1,029	140
60	147	45	1,239	315
66	177	30	1,526	210
72	218	41	1,792	287
78	256	38	2,065	266
84	295	39	2,303	273
90	329	34	2,541	238
96	363	34	2,758	238

1/ Construction schedule does not conform to 5th Plan. It is assumed that new Integrated Rural Health Complex (1 RHC and 7 BHUs) must be ready for each 22 MLHW graduates at the same time they complete the course. (See table B-6)

Table B-8. CONSTRUCTION COSTS

		(U.S. $)
I.	RHC:	
	14,630 Sq. ft @ $7.5/Sq. Ft.	109,725
	2 jeeps @ $8,200	16,400
	2 scooters @ $800	1,600
	Equipment (furniture, etc.)	5,250
	Total	132,975
	Say	133,000
II.	BHU:	
	5715 Sq. Ft @ $7.5/Sq. Ft.	42,863
	Equipment	1,150
	Total	44,013
	Say	45,000

Table B-8. ANNUAL RECURRENT COSTS - RHC

				(Rupees)
I.	Salaries:			
	2 doctors	@	22,900/year	45,800
	8 MLHW's	@	6,000/year	48,000
	4 Nurse Aids	@	4,000/year	16,000
	1 driver	@	4,800/year	4,800
	2 peons	@	3,600/year	7,200
	1 chaukidar	@	3,600/year	3,600
	1 tubewell operator	@	4,000/year	4,000
	2 sweepers	@	3,600/year	7,200
	Total			136,600
II.	Medicines:			
	10,000 persons @ 4 Rs/person *			40,000
III	Utilities			3,400
IV.	Vehicle Maintenance			6,600
V.	Disposable equipment			5,000
VI.	Building Maintenance @ 2% capital cost			27,000
VII.	Miscellaneous			4,000
TOTAL				222,600
			Say	225,000

* Includes cost of medicines prescribed by doctors at the RHC for referred cases.

Table B-10. ANNUAL RECURRENT COSTS - BHU

				(Rupees)
I.	Salaries:			
	2 MLHWs	@	6,000/year	12,000
	1 peon/ chaukidar	@	4,000/year	4,000
	1 Water Carrier	@	3,000/year	3,600
	Total			19,600
II.	Drugs:			
	10,000 person x 4 Rs/person *			40,000
III.	Utilities			2,000
IV.	Disposable Equipments			2,000
V.	Building Maintenance at 2% capital cost			9,000
VI.	Miscellaneous			1,000
TOTAL				73,600
			Say	75,000

* Includes cost of medicines prescribed by doctors at RHC for referred cases.

Table B-11. PROJECTED PROJECT COSTS
YEARS 08 - 24

$ Millions

Year	Development			Recurrent Costs	Total
	Training[1]	Construction	Total		
08	6.0	29.4	35.4	24.0	59.4
09	7.6	27.3	34.9	27.0	61.9
10	8.2	25.5	33.7	32.0	65.7
11	8.8	22.4	31.2	36.0	67.2
12	9.3	20.2	29.5	40.0	69.5
13	9.8	18.4	28.2	43.0	71.2
14	10.2	16.1	26.3	46.0	72.3
15	10.5	14.8	25.3	49.0	74.3
16	10.9	13.4	24.3	51.0	75.3
17	11.2	11.6	22.8	54.0	76.8
18	11.5	10.3	21.8	56.0	77.8
Growth Rate, 08-18	5.4%	-		8.8%	2.7%
19	11.7	10.3	22.0	57.0	79.0
20	11.9	9.0	20.9	59.0	79.9
21	12.1	7.6	19.7	61.0	80.7
22	12.3	6.7	19.0	62.0	81.0
23	12.4	6.6	19.0	63.0	82.0
24	12.6	5.4	18.0	64.0	82.0
Growth rate 08-24	4 %	-	-	6.3%	2.0%

1/ Includes initial training costs of $4.2 million/year and continuing education costs.

GOVERNMENT'S LOAN APPLICATION

In continuation of a long cooperative relationship in the field of Public Health, and with particular reference to fruitful discussions and negotiations during the past year between Government Health Authorities and Representatives of USAID and the MEDEX organization, the Government of Pakistan would like to obtain funds from the U.S. Government for a comprehensive new program to strengthen basic health services in rural areas.

The new program emphasizes the Governments goal of improving the quality of rural health care. The key to improved quality is a new approahc to Paramedical training and deployment which involves a competency-based curriculum stressing the practical application of medical knowledge for both preventive and curative needs, including family planning and nutrition. Regular physician supervision and a more efficient management system are also integral parts of the program.

Development and implementation of the system is conceived in two phases -- an initial three-year phase involving careful preparation and systematic implementation, followed by five-year phase of rapid acceleration. For the first phase, it is requested that the U.S. Government assist by funding 15 million, with 7.5 million to be provided in project year one and 7.5 million in project year two. The Government of Pakistan will insure that all other costs of the first phase of the program are funded. The Government strongly hopes to accelerate the total eight-year and, to the extent this proves possible, it is requested that the U.S. Government consider an accelerated schedule of funding authorizations.

Financial assistance from the U.S. Government is sought for all aspects of the program, including training of health workers and managers, construction of rural centers and basic health units, the recurring costs of these rural facilities and services, and technical advisory services.

The Government of Pakistan recognizes that most development funds available from the U.S. Government are in the form of loans. However, particularly in the context of a considerable amount of technical assistance costs associated with this program, we request that a portion of U.S. funding -- about 10 percent -- be on a grant basis. We also request that these technical advisory services be arranged by AID through the MEDEX organization, whose experts would work with advisors also to be provided through WHO.

We would be grateful for your earliest favorable consideration of this request.

ANNEX F

PAKISTAN - BASIC HEALTH SERVICES
CERTIFICATION PURSUANT TO SECTION 611(e) OF THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, Joseph C. Wheeler, principal officer of the Agency for International Development in Pakistan, having taken into account among other things the maintenance and utilization of projects in Pakistan previously financed or assisted by the U.S. and the commitment of the Government of Pakistan to carry out an effective Basic Health Services Project, do hereby certify that in my judgement Pakistan has the financial and human resources capability to implement, maintain and utilize effectively the subject capital assistance project for Basic Health Services.

Joseph C. Wheeler

Joseph C. Wheeler, Director
USAID / Pakistan

11 August 1976
Date

A. I. D. Loan No. _____

CAPITAL ASSISTANCE LOAN AUTHORIZATION

Provided from: Population/Health
(Pakistan: Basic Health Services)

Pursuant to the authority vested in me as Assistant Administrator, Bureau for Asia, Agency for International Development ("A. I. D."), by the Foreign Assistance Act of 1961, as amended, (the "Act") and the Delegations of Authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter I, Section 104 and Chapter 2, Title I, the Development Loan Fund, of said Act, to the Government of Pakistan ("Borrower") of not to exceed Thirteen and one-half million ($13,500,000). The proceeds of this loan will be used to assist in financing the local currency costs associated with the development and implementation of a comprehensive system for rural health delivery in Pakistan.

1. Interest Rate and Terms of Repayment

The Borrower shall repay the loan to A. I. D. in United States dollars within forty (40) years after the date of first disbursement under the loan, including a grace period of not to exceed ten (10) years. The Borrower shall pay to A. I. D. in United Stated dollars interest from the date of first disbursement at the rate of (a) two percent (2%) per annum during the grace period, and (b) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the loan and on any due and unpaid interest accrued thereon.

2. Other Terms and Conditions

A. Unless A. I. D. otherwise agrees in writing,

(a) Goods and services financed under the loan shall have their source in countries included in A. I. D. Geographic Code 941 and Pakistan.

(b) The loan agreement shall include appropriate

language to provide that,

(1) Prior to the initial disbursement of loan proceeds the Borrower shall submit or cause to be submitted in form and substance satisfactory to A. I. D., documentation covering assurances of adequate planning, organizational arrangements, budget, staffing, arrangements for technical assistance and procedures for periodic project review.

(2) Prior to each additional disbursement, the Borrower shall submit or cause to be submitted in form and substance satisfactory to AID documentation to assure that the project is being implemented and funds are being disbursed in accordance with approved plans, and that performance targets as set forth in implementation letters have been met with respect to training capacity, trained manpower, management infrastructure development, physical facilities establishment and adequacy of staffing.

(c) The loan agreement will include appropriate covenants requiring the Borrower to employ required technical advisors, provide adequate manpower and funding, assure that an effective management support infrastructure is in place and execute training programs in a timely manner.

B. The loan agreement shall contain such other terms and conditions as A. I. D. may deem advisable.

_____

Administrator

_____

Date

ANNEX I

DRAFT PROJECT DESCRIPTION FOR LOAN AGREEMENT

The project is the three year first phase of an eight year program to develop a functioning system of Integrated Rural Health Center Complexes, to provide improved preventive and curative health care in rural areas. Each Integrated Rural Health Center Complex will be comprised of Rural Health Centers, staffed with trained physicians and other health workers; Basic Health Units, staffed with health workers trained to a middle-level degree of competency; and locally-posted Community Health Workers, operating individually under the supervision of senior health personnel.

To support the Integrated Health Complexes, the Project will finance the development and operation of required management and operations systems: training, personnel, planning, budgeting and accounting, communications, supply, and logistics.

A. I. D. Loan No. _____

CAPITAL ASSISTANCE LOAN AUTHORIZATION

Provided from: Population/Health
(Pakistan: Basic Health Services)

Pursuant to the authority vested in me as Assistant Administrator, Bureau for Asia, Agency for International Development ("A. I. D."), by the Foreign Assistance Act of 1961, as amended, (the "Act") and the Delegations of Authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter I, Section 104 and Chapter 2, Title I, the Development Loan Fund, of said Act, to the Government of Pakistan ("Borrower") of not to exceed six Million Dollars ($6,000,000). The proceeds of this loan will be used to assist in financing the local currency costs associated with the development and implementation of a comprehensive system for rural health delivery in Pakistan.

1. Interest Rate and Terms of Repayment

The Borrower shall repay the loan to A. I. D. in United States dollars within forty (40) years after the date of first disbursement under the loan, including a grace period of not to exceed ten (10) years. The Borrower shall pay to A. I. D. in United Stated dollars interest from the date of first disbursement at the rate of (a) two percent (2%) per annum during the grace period, and (b) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the loan and on any due and unpaid interest accrued thereon.

2. Other Terms and Conditions

A. Unless A. I. D. otherwise agrees in writing,

(a) Goods and services financed under the loan shall have their source in countries included in A. I. D. Geographic Code 941 and Pakistan.

(b) The loan agreement shall include appropriate

language to provide that,

(1) Prior to the initial disbursement of loan proceeds the Borrower shall submit or cause to be submitted in form and substance satisfactory to A. I. D., documentation covering assurances of adequate planning, organizational arrangements, budget, staffing, arrangements for technical assistance and procedures for periodic project review.

(2) Prior to each additional disbursement, the Borrower shall submit or cause to be submitted in form and substance satisfactory to AID documentation to assure that the project is being implemented and funds are being disbursed in accordance with approved plans, and that performance targets as set forth in implementation letters have been met with respect to training capacity, trained manpower, management infrastructure development, physical facilities establishment and adequacy of staffing.

(c) The loan agreement will include appropriate covenants requiring the Borrower to employ required technical advisors, provide adequate manpower and funding, assure that an effective management support infrastructure is in place and execute training programs in a timely manner.

B. The loan agreement shall contain such other terms and conditions as A. I. D. may deem advisable.

Assistant Administrator, Bureau for Asia

a. Conditions Precedent to Disbursement for Technical Assistance.

Prior to the first disbursement of the AID funds for Technical Assistance, the Borrower/Grantee will furnish:

1) A plan for the expansion of basic health services, outling strategy and objectives, organization, scheduling, costs and financing, and manpower and infrastructure requirements.

2) Evidence that a contract for technical assistance, approved by A. I. D. and the Government of Pakistan, has been entered into with one or more organizations or other entities satisfactory to A. I. D. and the Government of Pakistan for the provision of technical advisors, in fields such as public health physician and educational science/ curriculum specialist.

3) Evidence that funds other than those provided by AID which are necessary for the timely performance of the contract during the initial funding period have been made available to finance the local currency costs of the contract.

b. Conditions Precedent to Initial Disbursement for General Project Support.

Prior to the first disbursement of any AID funds for General Project Support, the Borrower/Grantee will furnish:

1) Evidence that all necessary action has been taken to create the National Center for Basic Health Services Cell (the Cell) in the Federal Ministry of Health, that principal positions in the Cell are established and filled, including that of the official in charge of the Cell.

2) Evidence that the Borrower will provide to the Cell and Provincial Governments, and the Provincial Governments will provide to their own health departments, all necessary resources, in addition to AID funds, for the timely and effective execution of the first year of the Basic Health Services Project.

3) A statement of procedures for semi-annual review meetings of the Basic Health Services Project, such procedures to include the subjects to be regularly covered at each review meeting.

4) Evidence that the Borrower/Grantee has requested from WHO technical experts for Phase I of the project in the fields such as health care management and public health auxiliary training.

5) Evidence that all provincial governments participating in the program support the project strategy, have established an organizational structure within their health departments to manage the project and have budgeted appropriate resources for the support of the first year of the project.

6) Evidence that provincial Plans of Action for the first year of the project have been adopted.

c. Conditions Precedent to Additional Disbursements for General Project Support.

Additional disbursements for general project support will be geared to accomplishment of specific performance targets. It is estimated that five (5) intermediate instalments, roughly six (6) months apart, will be disbursed for general project support in the following approximate amounts:

(1)	$ 250,000
(2)	$2,000,000
(3)	$2,000,000
(4)	$2,000,000
(5)	$3,000,000

Prior to disbursement of each of the intermediate instalments, the Borrower will furnish to A.I.D.:

1) Evidence that the project is being implemented in accordance with approved provincial plans of action.

2) Evidence that adequate federal and provincial budget allocations have been made and that funds are being disbursed in accordance with annual Plans of Action.

3) Evidence that the performance targets required to to justify a particular instalment, as set forth in implementation letters, have been met with respect to:

a) Training capacity
b) Trained manpower
c) Management infrastructure development and operation
d) Establishment of physical facilities
e) Staffing of foreign advisory positions, Federal Cell positions and provincial Basic Health Care staff and supervisory positions.
f) Establishment of Integrated Rural Health Complexes.

d. Conditions Precedent to Final Disbursement for General Project Support.

Prior to the final disbursement of AID funds for general project support, the Borrower /Grantee will furnish to AID:

1) A detailed financial statement showing funds that have been expended during the implementation of Phase I (first three years) of the project.

2) Evidence that the following performance targets (or others agreed upon by AID and the Borrower/Grantee) have been achieved:

a) Not less than 27 Mid-Level Health Worker Training Units have been established.

b) Not less than 600 Mid-Level Health Workers have graduated from the training units.

c) Not less than 1,000 Community Health Worker graduates have been trained by Mid-Level Health Workers.

d) Not less than 9 Integrated Rural Health Complexes are in operation.

e) Full management training has been provided for 72 federal, provincial and district government executives and 190 support staff.

f) Operations manuals have been completed in the areas of logistics management and supply, personnel management and management of health complexes.

g) Personnel system reforms have been developed, accepted and are being implemented.

e. Special Covenants

1. The Basic Health Care Project. The Borrower/Grantee will carry out the Basic Health Care Project with sufficient manpower and funding to meet agreed performance targets for the project.

2. Training. The Borrower/Grantee will undertake that a training program will be executed in a timely and effective manner.

3. Management Support Infrastructure. In order to assist in the achievement of the project objectives, the Borrower/Grantee will assure that an effective management support infrastructure is developed and made operational in a timely manner. The support infrastructure will include the following systems:

a) Operational planning and management.
b) Logistics and supply (including vehicle and equipment maintenance).
c) Personnel.
d) Operations Control and supervision.
e) Health Information (reporting).
f) Communications.
g) Budget and financial control.
h) Operation research.

4. Technical Assistance. The Borrower/Grantee will employ long-term technical advisors and short-term technical advisors as required. The long-term advisors will be in fields such as public health physician and educational science/curriculum specialist.

2. Exceptions

The following exceptions to usual AID procedures are recommended:

a. Source/Origin/Componentry

Technical assistance financed under the loan will be of U.S. source and origin.

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Issues Paper

1. Grant Portion of Funding

Although the project was originally proposed to be totally loan funded, the Mission has requested that 10 percent of the total AID contribution for the first three years ($1.5 million) be a grant for reasons stated in the Addendum to the Project Paper. The Mission feels that Title X funds would be appropriate because (1) the project has a strong family planning component at the village level and (2) the Basic Health System will eventually absorb or replace the present separate family planning function. Family planning costs are not specifically listed in the budget because that would defeat the purpose of a truly integrated effort.

2. Evaluation Plan

The evaluation plan for the project as it appears on pp. 125-129 provides for only a small baseline survey of goal and purpose indicators to be completed during the year 2 of the project, and resurveys of the control half of the sample in years 5 and 7. The survey is to be done by mid-level health worker trainees with the help of a short term consultant. Total cost is $23,500, less than 1 per cent of total project costs. The evaluation plan has been questioned on technical grounds such as the choice of indicators, sample size, type of survey. It has also been suggested that an outside and presumably more objective evaluation be made in year 3 of the project. It is important to note that ongoing data collection and evaluation is part of the project design, particularly for the training program. In addition, the evaluation plan was deliberately kept simple so that it could be done in large part by the Pakistanis themselves. The issue is whether minor technical changes in the current evaluation plan would be sufficient or whether we need to budget for an outside evaluation.

3. Choice of Contractor

The GOP and Mission have requested that the Medex Consortium including the Universities of Hawaii, Washington and Utah be selected to provide required technical services without using competative selection procedures. The rational for this exemption is that Medex over the last year has done most of the project development design and feasibility work on the project.

4. Performance Targets for Reimbursement of Loan Funds

The Project Paper (pages 118-124) discusses the disbursement procedure for the loan funds with disbursements made against accomplishments of objective outputs. It has been suggested that this portion of the PP be expanded to provide examples of how disbursements would be handled if targets are only partially met, eg., partial payment, postponement of payment.