

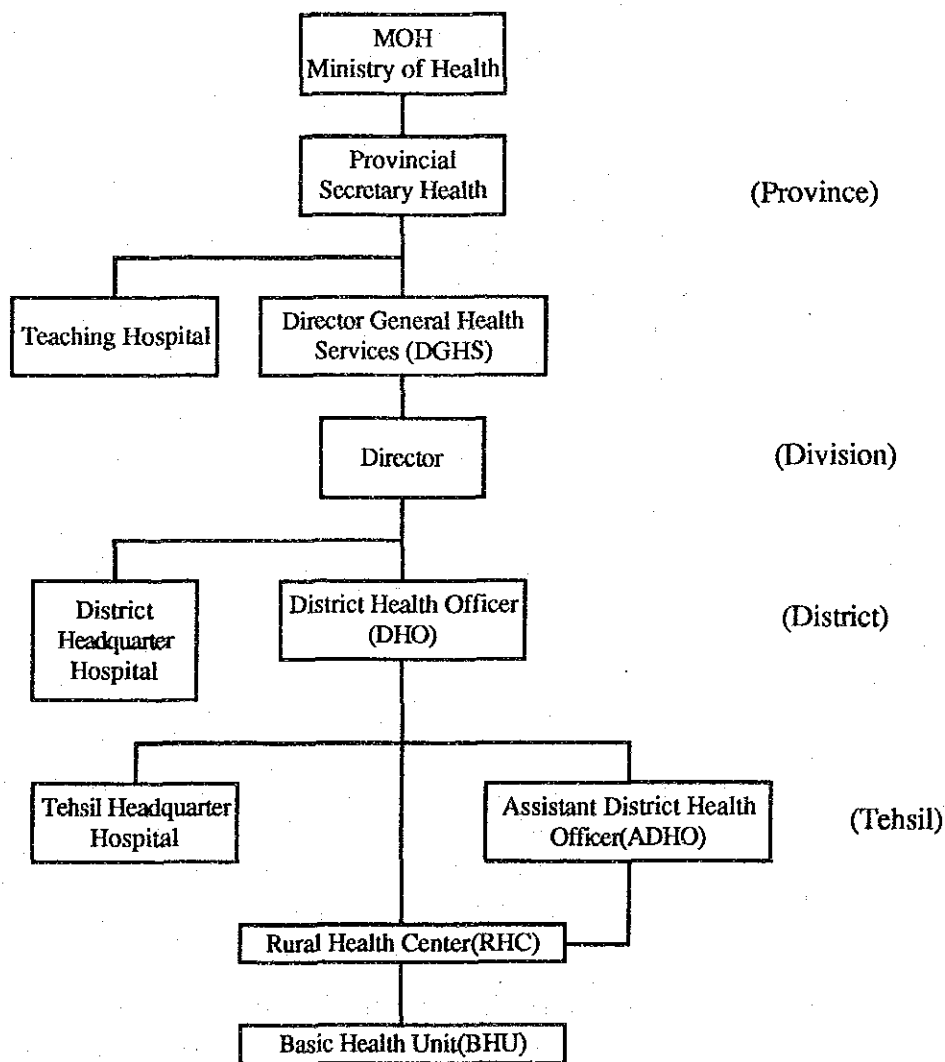
### 4.1.3 Organization of Health Administration

#### (1) Administrative organization

With the exception of Federally Administered Tribal Areas (FATA), provincial health and medical administration is under responsibility of each provincial government. On the other hand, the federal government is responsible for the formulation and enactment of nationwide health and medical policies and the health and medical control and management in Islamabad Capital Territory (ICT), northern areas such as Kashmir, and FATA, but not for provincial health and medical administration. In addition, some nation-wide organizations such as the military and self-governing organizations (railway companies, etc.) have their own health and medical facilities.

An administrative organization is shown below.

Figure 6. Organizational Chart of Health Administration



### 1) Ministry of Health, Special Education and Social Welfare (MOH)

The functions of MOH for the health and medical service are as follows.

- a. Coordinating each health and medical organization
- b. Planning of national health and medical services
- c. Negotiating with foreign countries on health and medical issues (bilateral and multilateral international aid)
- d. Maintaining required levels of postgraduate and special education
- e. Managing medical supplies
- f. Controlling infectious diseases

### 2) Provincial Department of Health (DOH)

In provincial government, a Secretary of Health (provincial government) is in charge of supervising health services. Under Secretary of Health, the Director of Health Services (DHS) in Sindh and the North West Frontier Province (NWFP) and the Director General (DG) in Punjab and Balochistan are responsible to control and supervise the operation.

The main functions of the DOH are as follows.

- a. Providing direct control of hospitals and special organizations
- b. EPI (Expanded Program on Immunization)
- c. Managing of federal programs such as CDD (Control of Diarrhea Diseases), and MCP (Malaria Control Program)
- d. Planning and managing human and material resources
- e. Distributing equipment, medical supplies, consumables, etc. to the health and medical facilities in the area in cooperation with the Ministry of Finance and the Ministry of Planning and Development
- f. Giving direct guidance to hospitals and special organizations
- g. Human development in health and medical areas

### 3) Local levels (division, district, tehsil)

A person responsible for health services at a divisional level is called the Divisional Director (DD) in Sindh, NWFP, and Balochistan, respectively, and the Director of Health Services (DHS) in Punjab. Their main job (Punjab excluded) is to manage health services of District Headquarter Hospitals (DHQs) directly and to supervise those of other medical facilities through DHQs indirectly. In Punjab, even the tehsil headquarter hospitals are directly supervised by the DHS.

District health services are supervised by the District Health Officer (DHO), under which there are many staff. The composition of staff varies from one province to another, however, the Assistant District Health Officer (ADHO)

under DHO is usually in charge of health services having their head offices at district and tehsil levels. As an exceptional case, the Taluka Health Officer (THO) stationed in Sindh only, is in charge of health services at a taluka level.

The main functions of the DHO are as follows.

- a. Supervising district health and medical facilities, excluding district headquarter hospitals (tehsil hospitals in Punjab)
- b. Allocating budget for medical supplies and consumables for use within health and medical facilities
- c. Preparing lists of medical supplies for health and medical facilities

For the EPI, the following three types of officers have been assigned.

- a. Field Supervisory Medical officers (FSMOs)
- b. District Supervisory Medical Vaccinators (DSVs)
- c. Tehsil/Taluka Supervisory Vaccinators (TSVs)

There are some medical officers (MDs) in charge of schools and inspectors of medical supplies at a district level. In some provinces, there are also administrative officers (Punjab and NWFP), CDC officers (Punjab and NWFP), and Assistant Inspectors of Health Services (AIHS)(NWFP).

For health services at a district level (including tehsil and taluka), independent control functions are not usually established. An ADHO or a person in charge of taluka health services is dispatched upon order of a DHO and usually supervises all the health and medical facilities (excluding hospitals) at a division level.

## (2) Health Facilities

In 1991, there were 810 hospitals, 4,244 dispensaries, 3,786 BHU, 1,090 MCH centers, 483 RHCs, 260 TB centers and their total number of beds amounted to 75,852. These figures indicates that number of these health facilities and beds more than doubled compared with the state in 1970. However, the present numbers are still not sufficient for the needs at a national level and uneven distribution of beds is a serious problems in particular. Table 43 shows the numbers of hospitals, other health facilities and number of beds.

Table 43. Number of Hospitals and Beds by Province

Province	Hospitals	Beds	MCH Centers RHC/BHU	Population (thousands)	Population per bed	Under Five Mortality (per 1,000 infants)
Islamabad	5	1,099	42	340	309	—
Punjab	281	27,139	4,170	47,292	1,743	132.8
Sindh	276	21,444	2,365	19,029	887	105.3
NWFP	154	10,173	1,473	11,061	1,087	97.7
Balochistan	58	3,056	932	4,332	1,418	101.1
NA	24	667	105	2,198	3,295	—
AJK	12	1,012	336	—	—	—
Total	810	64,590	9,603	84,252	1,304	—

Source: Statistical Yearbook 1992

In terms of functions of these health facilities, they can be classified into two groups, that is, primary care facilities and referral level medical facilities.

#### 1) Primary Health Care (PHC) Facilities

The primary health care (PHC) that has been enhanced as part of Pakistan's Seventh Five-Year Plan is provided by the outpatients departments of hospitals, urban dispensaries, BHUs, RHCs, and MCH Centers in urban areas, and mainly by BHUs, RHCs, and MCH Centers in rural areas. In some cases, it is also provided by specialized medical facilities, such as tuberculosis centers and leprosy centers. Most of those facilities are under control of provincial or municipal administrative organs and supposed to perform the following functions.

- Treatment of minor diseases and referral to higher-order hospitals for treatment of serious diseases
- Provision of disease-preventive measures for the risk group (e.g. under-five children, women in child-bearing period, and pregnant women)
- Supervision of normal pregnancy and referral to higher-order hospitals for complicated cases of pregnancy
- Observation of progress of patients suffering from chronic diseases
- Medical aid to local communities
- Management of medical resources (personnel, material, medicines, consumables, information, etc.)

The family planning activity, which had been conducted by Family Welfare Centers (FWCs), has recently been included in PHC activities. The federal government plans to add the family planning to PHC facilities in the future.

a. BHU (Basic Health Unit) and RHC (Rural Health Center)

PHC in rural areas was started in 1961. Until 1975, however, the development of PHC had remained insignificant in terms of both quantity and quality. Since 1976, one PHC facility per 10,000 of population has been realized. It was not until the time when BHUs became the same in number as union councils--the former basic administrative unit--that BHUs were recognized as the principal facilities responsible for PHC in rural areas.

BHUs are PHC facilities in local areas, especially rural ones. Each BHU covers 5,000 to 15,000 people. A typical BHU is staffed with one relatively young doctor who has finished the medical school and four to five paramedics. Primarily, each BHU is supposed to provide the local community with vitally important health care services with emphasis on preventive medicine. Actually, however, many BHUs are short of basic equipments (weight meter, inspection devices, etc.), medicines, and female staff in charge of maternal and child health. Because of this, the utilization rate of BHUs in rural areas, which are considered to require a BHU more than urban areas, is very low.

During the period between 1976 and 1983, 1,224 BHUs were newly constructed. The number of RHCs too increased by 23 during the same period. After that, during the Sixth Five-Year Plan, construction of BHUs and RHCs was spurred. 380 BHUs and 50 RHCs were added annually on average.

The federal government aims at establishing at least one PHC facility in each union council in local areas. As a PHC facility above the BHU, the RHC covers 60,000 to 100,000 people and three to five BHUs. A typical RHC is staffed with one male doctor, one female doctor, several paramedics (includes LHV, medical assistant, and pharmacist), and some assistants. In addition to ordinary PHC services, each RHC can provide dental treatment and treatment of inpatients suffering from minor diseases (20 to 30 beds). Some RHCs are developing into small local hospitals. As a rule, however, RHCs are supposed to provide only PHC services.

b. Dispensary, MCH Center, and sub-health center

Unlike BHUs, these facilities are not staffed with any resident doctors. At present, they are usually staffed with one paramedic. However, many of them are being gradually developed into BHUs through construction of supplementary facilities and expansion of the existing staff.

Several MCH centers are established in rural areas. Even so, in local areas, priority is given to establishing and developing BHUs which provide all kinds of PHC services.

The Seventh Five-Year Plan has expanded the quantity or physical scale of the RHC and BHU systems. Nevertheless, what is needed in the future is

improving the quality of services. In this respect, it is considered important to improve the quality and uplift the morale of the staff of RHCs and BHUs.

\* Present condition of BHUs and RHCs the study team visited

Tarlai Khan Rural Health Center, ICT

Sihara Rural Health Center, ICT

Rewat Basic Health Unit and MCH Center, Rawarpindi

Chirha Basic Health Unit, ICT

Pirpil Rural Health Center, Peshawar

According to the organizational principle, every BHU (RHC) is required to have a staff in charge of EPI, MCH, and FP (Family Planning) under one male doctor and one female doctor. Nevertheless, none of the BHUs and RHCs were completely staffed. Even so, thanks at least partly to efforts of the existing staff, the BHUs and RHCs were offering appreciable levels of EPI, MCH, and FP counseling services.

The existing X-ray equipment, dental examination equipment, etc. were almost left unused because of inadequate power distribution/generating equipment or water supply and personnel.

With respect to medicines, the BHUs and RHCs maintained several types of essential drugs, but those drugs were not controlled properly in terms of quantity and quality. Most of the BHUs and RHCs had microscopes for examination, though they were seldom used. The RHC facilities for hospitalization did not seem to be fully utilized. This is considered ascribable to the short working hours (8:00 to 14:00) of the staff. For the same reason, the BHUs and RHCs had no referral connection with the secondary care facilities.

The average number of patients was 20 to 30 persons per day, though it differs from one facility to another. Since patients suffering from a serious disease go directly to a secondary or tertiary care facilities, it does not seem that the BHUs and RHCs are regarded as effective treatment facilities.

The total number of visitors to the 17 PHC facilities in the Islamabad Capital Territories (3 RHCs since 1988 and 14 BHUs at present) peaked at 181,617 in 1989, the average being 130,000 to 150,000 per year.

#### c. Outpatients departments of hospitals

In urban areas, PHC is usually provided by doctors of the outpatients departments of hospitals. At hospitals, however, most outpatients ask for treatment by specialized doctors even when they do not actually need one. Because of this, some hospitals have the problem that their specialized doctors are so busy with primary care that they cannot spare sufficient time to treat serious diseases.

The fact that BHUs, private dispensaries, and other PHC facilities in urban areas are not fully utilized is based on the misunderstanding of urbanites that they have no specialists in medicine, while hospitals have doctors who have received training in treating patients. In order to implement effective PHC in urban areas, it is necessary to expand the existing PHC facilities. Nevertheless, it is an undeniable fact that the services provided by those PHC facilities are limited in types and coverage, hence, few urbanites call for such facilities. For example, MCH centers offer only maternal and child health services, and ophthalmic clinics, tuberculosis centers, and leprosy centers provide only their specialized services. Because of this and transportation problem, urbanites may well go directly to multifunction hospitals even though they are congested.

## 2) Secondary Medical Care Facilities (Referral System)

From the organizational standpoint, the referral system has been established as shown in Figure 7, whereby each secondary medical care facility is linked to appropriate primary medical care facilities. Actually, however, the referral system is almost inactive.

In rural areas, some of the RHCs which have modest facilities for hospitalization play the role of secondary medical facilities which are referred to by BHUs. Usually, however, district- or tehsil-level public hospitals or private medical facilities in the locality receive patients from BHUs. The functions performed by these hospitals are as follows.

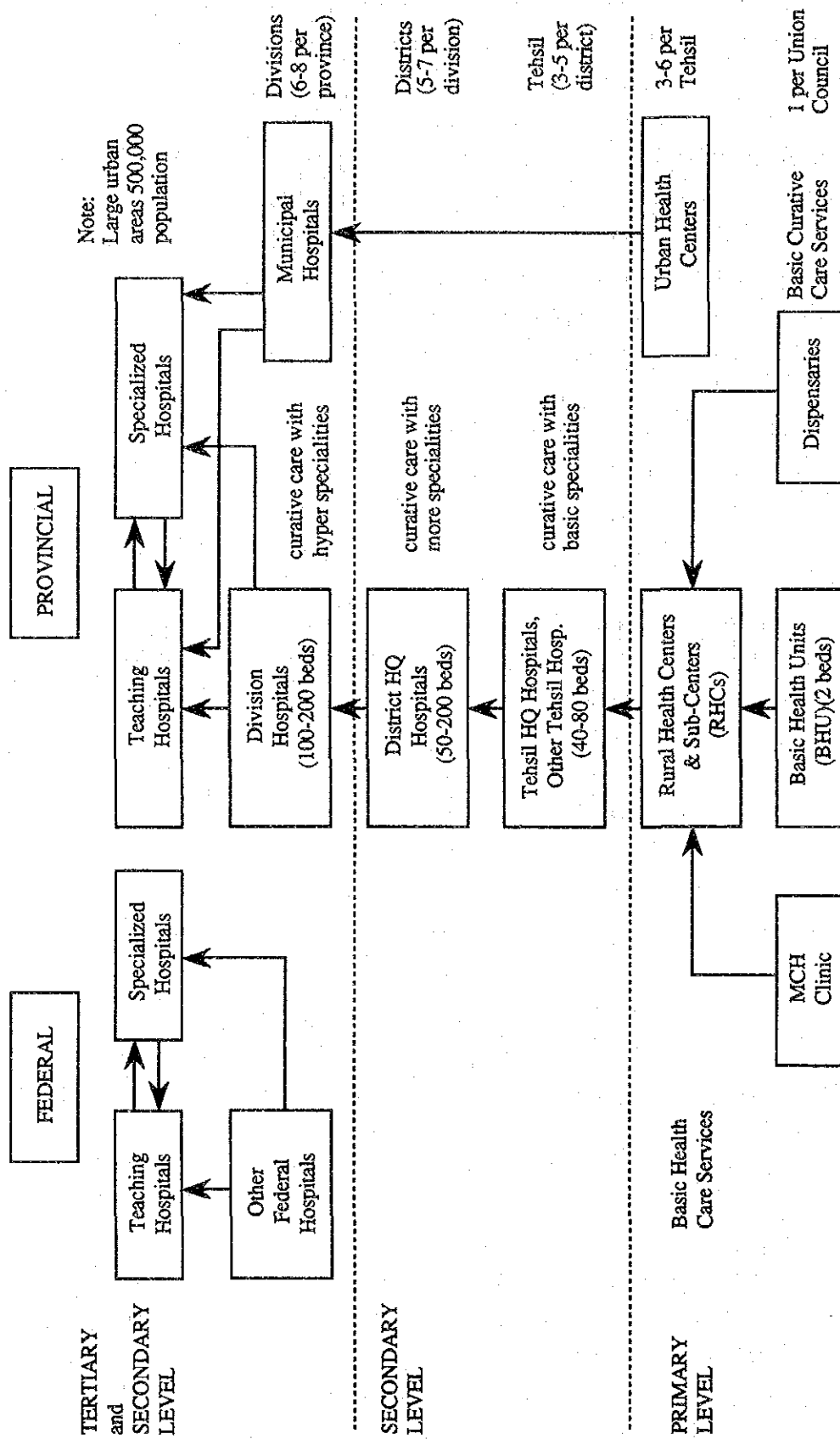
- Various kinds of emergency medical care
- Emergency surgical and obstetric operations
- Diagnosis by X-ray and clinical examinations
- Treatment of hospitalized patients

Those hospitals generally have specialized departments of surgery, obstetrics, gynecology, pediatrics, ophthalmology, otorhinology, dentistry, etc. However, compared with hospitals in Japan and other developed countries, Pakistani hospitals at this level are not so minutely specialized. Besides, the scope of treatment provided by the departments of ophthalmology and otorhinology are often limited.

As somewhat higher medical facilities in Pakistan, there are public district hospitals and more specialized private hospitals. They have, for example, departments of laryngology, orthopedics, dermatology, and gastroenterology, as well as the departments mentioned above.

Even though these hospitals have medical specialists, the quality of medical care they provide is not so high because of a marked shortage of nurses, especially skilled nurses in specialize fields.

Figure 7. Structure of Referral System of Curative Services in Pakistan



Legend: —→ patient flow from one facility to another  
 Source: Ministry of Health, Islamabad Health Sector Study, World Bank



On the other hand, due to lack of appropriate information, those who do not fully understand the purposes of PHC facilities and who have fragmentary knowledge of modern health care techniques tend to consider that the quality of medical care services offered by PHC facilities is poor and go directly to their local hospitals or a secondary or tertiary medical facilities in an urban area. This situation not only makes difficult the development of the PHC facilities but also prevent proper use of medical equipment and devices, causes a shortage of consumables and medicines, and exhausts personnel at higher medical facilities. As a result, it impedes the improvement in quality of medical care services on both sides. Furthermore, in tradition-bound rural areas, where fundamental rights of females and children are not fully recognized, females and children are deprived of opportunities to receive proper health are services, including PHC, and hence have to depend on private doctors or traditional curers (Hakeems).

On the other hand, tertiary medical facilities in urban areas are congested with many patients who suffer from only minor diseases, hence they cannot make the most effective use of their medical techniques.

Another reason why the referral system is inactive is that there is no feedback process between PHC facilities and higher medical facilities. Namely, since patients data is not exchanged between them, there is no way for the PHC facilities to follow up their patients who have been directed to the referral hospitals. In many developing countries, the exchange of patients' information is seldom done even between higher medical facilities. In this viewpoint, it does not seem that the present situation will be corrected in the near future.

In some areas, a PHC facility is far away from a higher medical facility. In this case too, the referral system can aridly function because of lack of transportation.

Reportedly, the federal government is considering the following measures to activate the referral system.

- a. All Primary Care Level Facilities should be better equipped in terms of staff(skills) and equipment.
- b. RHCs should have the capability to handle obstetric emergencies, stabilize trauma cases and take care of critically sick children.
- c. A communication link should be established between different levels of health care facilities. Communication would include telephone/wireless and properly equipped ambulances.
- d. In order to facilitate the availability of optimal services for the patients and reasonable motivation of the medical officers, specific number of geographically linkable peripheral facilities i.e.(RHCs/BHUs) be attached with a near by secondary health care facility.

- e. It will be preferable if the major institutions have a formal arrangements not only to receive referrals from a particular drainage area, but also give support to these peripheral facilities in terms of regular visits by the senior/mid level and junior postgraduate staff members.
- f. Medical officers serving in the peripheral units may be allowed to rotate at the tertiary care institution.
- g. To discourage self referrals any patient by-passing the system should be asked to pay for all services.

### 3) Tertiary Medical Care Facilities (Teaching Hospitals)

In Pakistan, there are 17 medical colleges which are directly managed by the federal government, including Aga Khan Medical University (Karachi)-- the only one private medical college in the country. In addition, there are 20 teaching hospitals in major cities of the provinces. They are responsible for tertiary medical care and clinical training of doctors, nurses, and other medical specialists. Primarily, these hospitals should be positioned as the ultimate referral facilities. Actually, however, their functions are in disarray, some responding to a large number of patients who require only primary care and others offering extremely specialized and advanced medical care.

\* Present condition of tertiary medical facilities the study team visited  
 Pakistan Institute of Medical Science (PIMS), Islamabad  
 Islamabad Children's Hospital, Islamabad  
 Hayatt Shaheed Teaching Hospital, Peshawar  
 Aga Khan Medical University, Karachi

These facilities have more or less specialized medical care functions and world-class doctors. They are superior to ordinary public facilities in equipment, health consciousness, and management. Every day, they receive hundreds or more than one thousand outpatients, take care of inpatients who occupy all beds, perform surgical operations (several thousand cases a year), and provide obstetric treatment. They have a considerable amount of equipment which they purchased by their own money and are visited by wealthy patients who hope to get higher level services, from various parts of the country. Some of these facilities have special wards charging as much as those in developed countries.

It is not that such facilities limit the entry of the poor. Basically, receiving examinations is free of charge. Nevertheless, expensive medical supplies, such as X-ray films and antibiotics, special consumables for intravenous dripping, peritoneal circulation, electro-dialysis, and even disposable syringes are provided at the expense of the patients. Therefore, the poor can hardly receive the services. Some of those facilities send an outreach team to the slums in cities and rural areas in frontier provinces as part of their involvement in local communities.

#### 4.1.4 Health Manpower

According to a plan in March 1990, increase of the health manpower for public health facilities from 165,000 to 300,000 by the year 2000, to 429,000 by 2010 is pointed out to be essential. Table 44 shows the change of population of health staff.

Table 44. Change of Population of Health Staff

Year	Doctor	Dentist	Nurse	TBA	LHV	Population per bed	Population per doctor	Population per dentist
1970	3,913	384	—	—	—	2,061	15,256	155,468
1980	10,777	928	5,336	4,200	547	1,716	7,549	87,672
1985	30,044	1,416	10,529	8,133	1,574	1,695	3,153	66,900
1986	34,034	1,558	12,014	10,315	2,144	1,692	2,870	62,689
1987	38,580	1,636	13,002	11,505	2,384	1,678	2,610	61,552
1988	42,862	1,772	14,015	12,866	2,697	1,610	2,422	58,589
1989	47,289	1,918	15,861	13,779	2,917	1,636	2,263	55,808
1990	51,883	2,077	16,948	15,009	3,106	1,535	2,127	53,134
1991	55,572	2,193	18,150	16,299	3,463	1,506	2,008	51,789

—: not available

Source: Economic Survey 1991-92, Ministry of Economy

Presently, there are 55,572 registered doctors (1 doctor per 2,165 population), 2,077 dentists (1 dentist per 51,789 population) and 18,150 nurses (1 nurse per 6,617), which clearly indicates the shortage of medical staff. However, shortage of nurses, in particular, is a serious problem.

As shown in the table below, shortage of nurses is striking even if comparing the number of doctors and nurses per population with other Asian countries at the same level of economic development. Especially, shortage of nurses at rural small-scale public facilities such as BHU and RHC and small-scale hospitals needing the contact with residents most is serious because most of them work for urban large-scale medical facilities. Table 45 shows the comparison of doctors and nurses with other countries.

Table 45. Population per Doctor and Nurse (1984)

Country	Population per Doctor	Population per Nurse	GNP (in US dollars)
Pakistan	2,900	4,890	380
Bangladesh	5,500	12,000	200
Laos	1,360	530	200
India	2,520	1,700	350
China	1,010	1,610	370
Sri Lanka	5,520	1,290	470
Indonesia	9,410	—	570

Source: World Bank, World Development Report 1992

### 1) Doctors

As for qualification to receive medical education, ten years basic education and two years intermediate education is required. Medical education is consisted of five-year period of study at 17 medical colleges nationwide and its successive clinical training for one year at 20 teaching hospitals. Then, a person who completed the clinical training is registered as a doctor since there is no national medical examination system. Although there is no clear post-graduate educational system, most of leading doctors have experiences of training or education in English and the U.S.A.

In 1988/89, the actual number of total medical college students was 16,184, in which male students were 12,302 and female students were 3,882 (31% of the male) while the proportion of female students is high as 40% in Sindh and 25% in Punjab and 35% in Balochistan, only low as 4.7% in NWFP. Some female students from NWFP may study at medical colleges in other provinces. However, it also suggests the several difficulties of educational attainment for women in this province. From the fact that most of students who drop out of college are women, it is estimated that female students who become doctors every year will be a third of the above-mentioned number.

As in Table 44, the number of doctors shows a relatively smooth increase. Therefore, the improvement of distribution and quality of the doctors has to be dealt with as a future significant issue. Activation of private sectors, in which about 15% of the doctors work, is currently expected, though almost no benefit to the poor will be produced because of concentration in urban areas and economic efficiency.

## 2) Nurses (male nurses)

In rural areas, there are still not many experienced leading female medical and health staffs (doctors are excluded), especially nurse, while the situation is improving by the effort of federal and provincial governments and international organization. As a reason for it, traditional, religious and cultural restraints against female education and work. In addition, as previously mentioned, there are various limitations for women. For example, their activity is limited within the area where they can go and return in one day because difficulties of social surroundings prevent women work beyond their residential areas. Transfer to other areas, marriage and delivery also tend to make women quit their work.

Thus, the actual number of nurses working in rural areas remains unchanged even though the total number of nurses tripled in ten years from 5,336 in 1980 to 18,150 in 1991.

There is also little opportunity for male nurses to operate in rural areas, where women do not tend to contact men, in which health services to female patients cannot be expected.

Regardless, there exist institutional problems such as insufficient educational facilities and accommodations, no significant increase of aspirants for nurses can be seen (see the following table) and shortage of nurses is still expected.

Table 46. Number of Aspirants for Nurses (1985 - 1990)

Year	Total	Punjab	Sindh	NWFP	Balochistan
1985	875	500	311	64	—
1986	771	431	225	71	44
1987	893	529	245	54	75
1988	710	535	305	100	70
1989	953	524	267	102	60
1990	1,137				

Source: Women and Men in Pakistan 1992, Statistics Bureau

## 3) LHV (Lady Health Visitor)

LHVs, as public health nurses, have been trained and responsible for medical and health activities within their residential areas to improve the above situations. However, the total number of LHVs in 1991 is still 3,463, indicating the continuing shortage.

However, training women within the residential areas, along with the training of TBA (Traditional Birth Attendant) which started in the middle 1980s, is expected to be fairly effective to improve the medical and health knowledge and services in rural areas. Table 47 shows the number of trained LHVs and LHV training institutes.

Table 47. Numbers of Trained LHVs and LHV Training Institutes (1988-1989)

	Trained LHVs		Number of institutes	
	1988	1989	1988	1989
Pakistan	338	373	8	4
Punjab	207	180	2	2
Sindh	14	101	2	2
NWFP	69	69	3	—
Balochistan	48	23	1	—

Source: Women and Men in Pakistan 1992, Federal Bureau of Statistics

LHVs, women with primary or middle school level educations, chosen in the residential areas, are usually trained for a year and get involved in health activities at RHC, BHU, MCH Centers, etc. in the areas with cooperation and supervision of upper medical and health facilities or doctors and nurses. As for cooperation with secondary and third medical facilities, its function has not still worked because of unclear possibilities of cooperation, limitations to contact cases and limited number of LHVs.

\* LHV training schools that the study team visited.

(1) School of Public Health, Peshawar

Founded in 1952. At present, four nurses serve as lecturers. There are two one-year courses-obstetrics and public health. Each course has 10 classes of 10 students, that is, a total of 200 students attend the school. On-the-job training is provided in hospitals and clinics in the suburbs of Peshawar. About 180 students live in a dormitory. Text samples obtained from the school contain a lot of illustrations. All the students are supported by the scholarship from the government (620 rupees a month). The students bear the dormitory expenses (200 rupees a month).

As an auxiliary facility of the school, Maternity & Child Welfare Center is located on the same compound. Founded in 1946, the Center offers MCH services (mainly for pregnant women, and infants of under 5 years old). Presently, 20 TBAs are receiving training.

(2) The Public Health Nursing School, Lahore

Established in 1922, the school has a principal and three female doctors as teachers, 36 staff members, including 18 LHVs, and four outside lecturers at present.

Approximately 120 selected students come from districts mostly in Punjab and North Areas and AJK. A dormitory for students is located on the school compound. A commuter bus is also available. The curriculum of the two-year LHV course is as follows.

First Session (10 weeks)

- Basic Sciences (Anatomy, Physiology, Microbiology, Materia Medica, etc.)
- Principles of Nursing and Nursing procedures in Hospitals, Health Centers and Home
- First Aid

Second Session (42 weeks)

- Theory and Practice of Midwifery and Gynaecology, Nutrition, etc.

Third Session (50 weeks)

- Maternal and Child Health and Family Planning, Paediatric Nursing and Common Diseases of infancy and childhood
- Environmental sanitation, hygiene Epidemiology and Communicable Diseases
- Public health Practice Administration and Statistics, Food and
- Nutrition, Public health Nursing, Health Education,
- Statistics and Record

4) Other medical and health staff

Paramedics such as medical technologists, radiological technicians, dental technicians, etc. cannot function nationwide except for a limited area because of both shortage in quantity and improper system.

In case of delivery, most cases receive assistance from TBAs (Dais), which plays a significant role in MCH. According to PDHS, 68% deliveries (or more than 90% according to UNICEF survey results) are assisted by TBAs. Thus, it started to be recognized that training of proper knowledge and treatment to TBAs is an important matter. Accelerated Health Programme (AHP) in 1982, as the first national action in training TBAs, has been started, though it has not still shown effective results by lack of LHVs as trainers.

## 4.2 Health Policy

New fiscal year and the 8th Five Year Plan in Pakistan will start from July, 1993. In June 1993 when the study team visited there, the 8th Plan has been drafted, the summary of the 8th plan will be described below.

### 4.2.1 Strategy of the 8th Five Year Plan

In the 8th Plan they give priority to the improvement of quality of services/care by balancing the promotive, preventive and curative care. Imbalances in the health manpower will be reduced and management weaknesses of the health system addressed. The public health sector will be decentralized. Villages which still remain unserved will be provided with reasonable outreach services. An area of importance for the 8th Plan will be provision of adequate maternal and child health (MCH) services.

Primary health care in the rural/urban areas and MCH in primary health care during the 8th Plan will be described below.

#### (1) Primary health care in rural areas

Diarrhoea, respiratory infections, malnutrition and contagious diseases are among the most serious health problems in Pakistan. They result in high rate of infant, child and maternal mortality and morbidity, particularly in rural and suburban areas, where organized health services are scarce.

If the primary health care services such as immunizations, oral rehydration, health education etc. could be extended to the target groups of women and children who need primary health care services, these problems would be dramatically reduced.

Policies for "Health for all by the year 2000" envisage primary health care as the crucial strategy to attain health improvement goals that are linked to socioeconomic development. Within PHC, the use of community health workers (CHWs) is seen as one of the major ways to implement primary health care. Community health workers are viewed as the key to attaining the acceptability, affordability, and accessibility of primary health care.

In addition to the existing system of providing PHC at RHCs and BHUs a programme of CHWs will be introduced to disseminate PHC to the community. The CHWs, selected by the communities will be trained and supervised by the



professional staff of BHUs/RHCs who will be adequately trained and equipped for this function.

The communities will be involved from the very inception of the programme with the intent of making the programme community based and community owned.

The main purposes of introducing CHWs are 1) to spread minimum medical services by CHWs relatively rapidly compared with highly trained health personnel providing mass and rapid training, 2) to make the services more acceptable to the people in the area. They will regard CHWs as "the same kind of people as we are".

Several CHW demonstration projects have already been operated in Pakistan based on the CHWs activity. These projects with a wide geographical dispersal have helped in identifying that the urgency for disseminating PHC is acute. During Eighth Plan, CHWs will be introduced to all villages with over 2000 population.

## (2) PHC in urban areas

The ultimate objective of any national health policy should be to provide comprehensive health coverage to the entire people, both in urban and rural.

In Pakistan, planning has been making a distinction between the urban and rural sectors so far. An integrated approach to health care has been lacking. While a network of basic health units has been created in the rural areas there has been practically little development of secondary and tertiary facilities.

While secondary and tertiary facilities have been developed in the urban areas (within the limit of the available resources), little has been done to create a viable primary health care system.

In order to make the health care system in the urban areas comprehensive and effective, the communities, the Local Councils and the Non-Government Organizations need to be organized.

The present data indicates that 50% of the wards (with approximately 40,000 population) already have PHC facilities in the form of a MCH Centers/Dispensary. The 8th plan objective aims at 100% coverage i.e. at least one PHC facility for each ward.

The allocation of Urban Health Centers is not limited to construction work. It should be utilized for provision of services. A rented building can answer the purpose as well. The focus of delivery of health care should be MCH care. The designation of the "centers" can well be MCH center/Dispensaries. Supportive

services should be provided by regular visits of senior staff including lady doctors.

Each ward health center should extend its outreach by involving the Community intimately i.e. it should explore the possibility of training of female CHWs. This would be particularly useful for family planning activities where inter personnel relationship may be a major factor for increasing FP activities.

PHC in all major urban areas will also be provided by Urban Health Centers which will be staffed and maintained by local bodies.

### (3) MCH in primary health care

In many developing countries, children under five years old and females in their childbearing period account for approximately 20% of the total population and 40% of women respectively. This means that nearly 40% of the total population has to be provided with maternal and child health service(MCH).

Therefore, it is extremely important to provide MCH at primary medical care facilities such as BHUs and RHCs, or at secondary medical care facilities such as tehsil hospital, both of which are readily accessible to many females and children and to establish a close relationship between those facilities and patients.

However, as already mentioned in the section under "Health Facilities," because of various problems, such as the inadequate facilities and medical equipment, the limited supply of medicines and consumables, the shortage of experienced personnel, and the weak referral system, many of the above health facilities are not functioning sufficiently to meet the needs of the communities, though located physically close to them.

In order to solve such problems, the following policies are mentioned by the Government of Pakistan;

- a. Posting experienced personnel, especially female persons in charge of MCH, at BHUs and RHCs, and reinforcing their support system.
- b. Providing necessary medical equipment and consumables.
- c. Providing measures to manage pregnancy with complications and delivery.
- d. Establishing a guidance system of family planning.
- e. As a part of MCH training, providing education in health care for those who need special protection, such as children and pregnant, nursing, and lying-in women. In addition, providing the existing health personnel with education in this particular field, including family planning.
- f. Letting properly trained personnel supervise and monitor the above activities.

- g. Posting female CHWs in villages.
- h. Establishing and maintaining a referral system.

Nevertheless, since the existing BHUs and RHCs as a whole do not play their roles as mentioned above, it is almost impossible to expand specific functions of those facilities.

As for perinatal period, necessary to implement a round-the-clock system to cope with emergencies, it is of prime importance that BHUs, RHCs, MCH centers, or CHWs and LHVs working in rural communities establish a close relationship with the neighboring secondary health facilities.

The MCH which can be covered by PHC is to educate the rural community in terms of general cautions of pregnancy, safe and sanitary delivery, importance of breastfeeding and vaccination, providing with the information about prevention and treatment of complications and the family planning. It also include the education of parents in growth monitoring and diarrheal diseases treatment for their children.

#### (4) Nutrition

As already mentioned, the nutrition problems in Pakistan can be divided into the issue of insufficient intake of trace nutrients, such as iodine and vitamin A, and general dietetic problems ascribable to the lack of knowledge of safe, proper cooking, treatment, and preservation of food. In addition, there are various problems caused by the improper distribution system of food, degree of purchasing power, and feeding customs (nutrition of male children is regarded as the prime importance in feeding children).

In addition to policy measures and programs by the central or provincial government, it is important to provide communities with health education taking every possible opportunity for them to receive health services through a great enlightening effect of "person-to-person communication".

Measures to improve the nutrition were highly considered in the 7th Five Year Plan, however, the programmes formulated at the federal level suffered due to various reasons such as lack of trained and educated manpower, paucity of financial resources and lack of inter sectoral coordination and adequate implementing organizations at the provincial and district level. This has resulted in the utilization of only Rs. 36.863 million as against an allocation of Rs. 211 million during the 7th Plan.

During the 8th Five Year Plan, besides pursuing the ongoing activities and programmes on nutrition, various new initiatives such as control of anamia, development of inter-sectoral linkages for nutrition improvement, and food

quality control network, will be undertaken. Besides this nutrition being an essential component of the Social Action programme will receive a considerable attention during the 8th Five Year Plan. The nutrition component of Social Action programme includes;

- a. Nutrition in PHC
  - establishment of nutrition clinics at BHUs and RHCs
  - monitoring of children's growth and establishment of nutrition surveillance system
- food demonstration and nutrition education
- b. School feeding Programme for Girls Students at Primary Schools
- c. Nutrition Intervention Programmes to Combat Diseases of Nutrition Disorders
- d. Support of Nutrition Programme provided by NGOs

#### 4.2.2 SAP (Social Action Programme)

With the recognition that the development plans implemented through the 1980s have not been very successful, the federal government has formulated a Social Action Plan (SAP) under cooperation of the World Bank. The SAP is aimed at achieving national development in various areas by unifying various functions, and is to be built in the 8th Five-Year Plan.

In August, 1991, the federal SAP committee, which consists of and NGOs, and representatives of donors (WB etc.), federal and provincial governments, was formed for preparation of the SAP. The Multi-donor Support Unit (MSU) has been installed within the Pakistan office of the World Bank to make adjustments on funds and policies on donors from international organization, and other donor-countries and activities of NGOs. Through the donors have decided to provide technical support they have not yet reached final agreement on the proportion of financial support.

The purpose of the SAP is to cope with the following three major factors which are regarded as having prevented the social sector from obtaining tangible results. They are:(1) insufficient allocations of, human and material resource to the social sector, (2) rapid population growth, and (3) limitations preventing effective operation.

The SAP is to integrate basic services so as to attain various objectives as outlined below.

##### (1) Promotion of female primary education

Promotion of female primary education is regarded as the key factor in improving various fields such as Family Planning.

- Introduction of coeducation System at the level of primary education
- Increasing female teaching staff
- Expanding facilities for primary education
- Encouraging the private sector to participate in education (e.g., expansion of private colleges)

##### (2) Improvement of rural health service

- Establishing effective planning system
- Reorganizing PHC service and reallocating its budget
- Decentralization of personnel management
- Correcting imbalance of male-to-female ratio in medical staff
- Participation in family planning programs
- Improving immunization rate

- Expanding education in Traditional Birth Attendants (TBAs)
  - Establishing community Health Worker (LHW) system
- (3) Population and Family Planning
- Securing budget and personnel for the 8th Five-Year Plan
  - Increasing the involvement of the provincial governments
  - Supplying sufficient amounts of contraceptives
  - Getting NGOs and private sector to participate in family planning
- (4) Rural water supply & sanitation
- Unifying policies of water supply scheme in rural areas
  - Getting the community to manage and control the programs
  - Installing funds collecting system

With respect to rural water supply and sanitation in particular, the availability of safe drinking water supply shall be increased from 44% to 61%. By 1994-1995, the rate of installation of sanitary equipment is also aimed at increasing to 24%, from the present 12%.

The SAP committee has reached an agreement on a set of indexes to be used for checking the progress of these objectives. i.e.;

- Literacy rate
- School enrollment rates of male and female students
- Student and teacher ratio
- Contraceptive prevalence rate (CPR)
- Proportions of female teachers and female health workers
- Proportion of expenditure on primary education and health in GDP
- Ratio of non-salaries to salaries as for the field of health and education in the government's non-development expenditure

In terms of budget of the SAP, increasing budgets of various fields related to the SAP is planned; increase from 0.6% of GDP in 1991/1992 to 1.1% of GDP in 1992/1993. In terms of health expenditure alone, the increase is from the present 0.36% to 0.69%, and is planned to be further increased in the next two years. However, the actual increase will be larger since many activities are related to the Health.

It is planned that funds of the SAP will be collected from overseas donors (50%), federal government (25%), and provincial governments (25%). Nevertheless, final agreement on this plan has not been reached. The final allocation of development (SAP) for 1992-1995 is shown in Table 48.

Table 48. Budget Allocation of Development for SAP (1992-1995)(in PRs million)

	1991/92	1992/93	1993/94	1994/95	1992-1995
Health	1,520	3,426	4,371	4,994	12,791
Education	2,637	6,512	7,145	7,793	21,450
Rural Water Supply	1,362	3,246	3,750	4,158	11,154
Population Welfare	636	813	1,300	1,700	3,813
Rural Sanitation	664	738	1,485	1,488	3,711
SAP Institutional Development	0	75	35	20	130
<b>Total</b>	<b>6,819</b>	<b>14,810</b>	<b>18,086</b>	<b>20,154</b>	<b>53,050</b>

Source: SAP 1992-95 Planning Commission, April 1992

\* SAP classifies rural water supply, rural sanitation and population welfare as health-related.





## 5. Foreign Assistance

In Pakistan, various projects related to its population problems have been and are planned to be carried out with the assistance of foreign donors. This chapter will describe the population-related projects, including health projects, which incorporate maternal and child health and family planning, supported by major donors.

### 5.1 USAID (U.S. Agency for International Development)

#### (1) Population Welfare Planning Project

- a. The Pakistani counterpart is MPW (Ministry of Population Welfare). USAID support to non-government organizations (NGOs) is provided through NGOCC (NGO Coordination Council).
- b. Period 1982-1993
- c. Amount \$73,450,000
- d. Outline
  - Reinforcement of research capabilities of NIPS (National Institute for Population Studies), MPW, and NGOs.
  - Establishment of a system to supply and distribute contraceptives, pills, and related devices (founding a storage for contraceptives and pills in Karachi to supply 881 million condoms, 15 million cycles of pills, and 3.1 million IUDs (intra uterine devices).
  - Reinforcement of biological, medical, and sociomedical studies by providing support to NIRFC (National Institute for Research in Fertility Control).
  - Providing 3,700 government health and medical personnel, 300 MPW field workers, and 170 middle-class managers with training in family planning service.
  - Providing support to NGOs and voluntary surgical contraception programs, staging IEC (Information, Education, and Communication) activity utilizing TV and other media, and supporting feasibility study of domestic production of contraceptives and pills in Pakistan.

In response to the 1985 decision of the National Economic Council, the USAID launched for the first time as a donor a project of incorporating family planning in the health and medical sector (1988-1990). However, the Pakistani government, especially the Ministry of Health (MOH), showed little interest in the family planning and the provincial health departments were not very cooperative. So, the USAID could not carry out any positive activity and the project resulted in a failure. The present problem is which organization will fill the gap after the USAID withdraws in September 1993 (or sometime during

1994 depending on its projects). There is fear that the withdrawal of the USAID should hinder the supply of contraceptives and the activity of NGOs significantly. (The USAID expects that the contraceptives the Pakistani government has in stock will run out in two years.)

(2) Social Marketing of Contraceptive Project

a. The Pakistani counterpart is MPW.

b. Period 1984-1993

c. Amount \$28,000,000

d. Outline

In cooperation with the private sector of Pakistan, the USAID founds a new department for social marketing of contraceptives. It also establishes a distribution network of contraceptives covering 300 municipalities in the country. The USAID has already distributed 200 million condoms ("Sathi") to dealers throughout the nation. It has conducted research on the effect of advertisement, price, and condition of use of Sathi. In addition, the USAID conducted a survey on knowledge, attitude, and pattern of behavior (KAP) concerning pills from the general public. According to a survey, 70% to 75% of condom users now use Sathi. Therefore those users may stop practicing their family planning if the supply of Sathi stops after withdrawal of the USAID.

(3) Child Survival Programme

a. The Pakistani counterparts are the Ministry of Health and the Provincial Health Departments.

b. Period 1988-1993

c. Amount \$1,700,000 (cut from \$6,200,000 by the Pressler Amendment).

d. Outline

- Program administration

Improvement of clinical treatment techniques in the fields of ARI (acute respiratory infections), CDD (control of diarrhea disease), nutrition, and EPI (Expanded Programme on Immunization), and management to improve PHC (primary health care) facilities.

- National health information system

Processing by computer of information about all the PHC components on a nation-wide basis to enable the program administrator and policy-maker to make proper decisions.

- In-service training (integrated training in EPI, CDD, ARI, etc.)

- Health education and communication (use of comprehensive communication strategy and utilization of the private sector)

- Research

- Transportation and procurement of medical supplies (cold chain equipment, syringes and needles, computers, etc.)

In addition, the USAID offers the following services as PHC-related programs:

- Basic health service (training of program managers, building of medical technician training school and training of medical technicians, training of community health workers, and building and staffing of rural health centers (RHCs) and basic health units (BHUs); budget \$9,000,000 (1988-1993).
- Primary health care (management of PHC programs, training of medical technicians and community health workers, investigations and evaluations, and aid to the EPI, such as the supply of equipment for production of DPT vaccine); budget \$30,000,000 (1988-1993).
- Malaria control (program management, training, research, and aid to communities through the supply of insecticides and sprinklers) (This service was canceled eventually because of expensive programming.)

## 5.2 UNFPA (United Nations Population Fund)

### (1) The Integrated Clinical Training Program for Family Planning, Health, and NGO Personnel

- a. The Pakistani counterpart is MPW.
- b. Period 1987-1992
- c. Amount \$2,000,000
- d. Outline

Reinforcement of before-the-job training, refresher training, etc. for MPW personnel; providing of allowances to MPW and NGO trainees; aid in preparing curricula and audio-visual tools to improve training and teaching techniques of the staff in regional training institutes; and dispatch of consultants (four trainers (paramedical staff) were dispatched to a training seminar "Instructions in Counseling and Motivating Techniques" held in Manila in 1992).

### (2) Family Welfare Centers Project (Government Sector)

- a. The Pakistani counterpart is MPW.
- b. Period 1987-1992
- c. Amount \$38,000,000
- d. Outline

This project provides continuous support to a total of 95 family welfare centers (FWCs) throughout the country. It aims chiefly to improve the centers' achievements in quality and quantity through financial support, which includes paying salaries to the staff and a part of the rents for the center facilities.

The centers have a lot of problems in their activities, so their achievements have not yet come up with expectations. Not many patients have visited the centers either. The major problems are as follows.

- Though the FWCs offer a family planning service combined with maternal and child health care, their activity in the field of maternal and child health is quite limited in contents. This is partly due to the conservative environment of rural areas in which many people hesitate to visit the FWC because it often brings the image of family planning to mind.
- A typical FWC now has a staff of five persons--one female family welfare worker (FWW), one female family welfare assistant (FWA), one male FWA, one female assistant, and one janitor. Considering the staff size, however, the FWC achievements have not been very impressive. In particular, the activity of FWAs is quite limited in contents. In the future, the FWCs plan to reduce the staff to two persons (female FWW and female assistant) and cooperate closely with the Village Family Planning Worker (VFPW), who is newly initiated by the Pakistani government, and to reinforce the personnel dispatch and referral services.
- Since members of the FWC staff now participate as master trainees in the worker training of the VFPW, the FWC services are hindered. However, this is considered a passing phenomenon which will disappear when the worker training is finished. It is expected that fostering of VFP workers will promote the progress of the program through cooperation between the FWC staff and VFP workers.
- Reportedly, contraceptives being stored in the central warehouse in Karachi have not been smoothly distributed to districts; therefore causing a shortage of contraceptives at the FWCs. This is considered partly to result in the poor performance of the FWCs.
- The purchase of basic medical supplies for the use of maternal and child health care tends to be behind the schedule.

### (3) The Reproductive Health and Contraceptive Survey Project

- a. The Pakistani counterpart is MPW.
- b. Period 1987-1992
- c. Amount \$4,200,000 (plus \$3,200,000 from UK ODA)
- d. Outline
  - Reconstruction/construction of reproductive health services (RHS) A centers and placing of vehicles for installing devices and equipment (The number of RHS A centers is to be increased from 34 to 79 by the end of 1993.)

- Training of personnel at home and abroad to improve the skills in contraceptive operations.
- Refunding of expenses to the Contraceptive Operation Program of FPAP (Family Planning Association of Pakistan, NGO).
- Support to doctors who perform surgical contraceptions (repair and maintenance of laparoscopes).

The UNFPA manages the above ODA fund, which is used to reconstruct RHS centers, purchase vehicles, and support the activity of traveling dissemination units.

### 5.3 ADB (Asian Development Bank)

#### (1) Health and Population Project II (Sindh)

- a. The Pakistani counterparts are MOH, Health Department of Sindh, and MPW.
- b. Period 1985-1993
- c. Amount \$16,000,000 (loan)
- d. Outline
  - Improvement of health and medical services in Sindh Province.
  - Support to federal-level population welfare programs.
  - Support to health and medical service programs in selected areas of Islamabad.

Health/medical service programs and population programs, which include the above three factors, have been carried out under the same project name. Actually, however, only Item 2 is the program that is directly related to population. Under this program, a regional training institute for the staff of Family Planning Program (MPW) was constructed at five places in the country.

#### (2) Population Welfare Project (Nationwide)

- a. The Pakistani counterpart is MPW.
- b. Period 1993-
- c. Amount \$30,000,000 (loan)
- d. Outline
  - 1) Human resources development and training
    - Construction of two regional training institutes (for clinical training), supply of devices and equipment, and providing of technical assistance in development of curricula and staff abilities.
    - Construction of two population welfare training institutes (for non-clinical training), supply of devices and equipment, etc.

## 2) Providing of family planning services

- Construction of 42 reproductive health service centers or improvement of quality of the existing centers.
- Providing family welfare centers with new devices and equipment to improve the quality of their services.
- Training of a total of 12,000 village family planning workers (VFPWs) in the four provinces in five years. (This training is to be implemented after the VFPW pilot project, now being conducted by the government, is finished and its results are evaluated.)
- IEC activity (Information, Education and Communication for diffusion of family planning)
- Technical cooperation for improvement of capabilities to formulate, operate, and manage family planning programs at federal, provincial, and district levels, and technical cooperation in research conducted by the National Institute for Population Studies (NIPS).

Initially, the ADB had "Health, Medical Service, and Population Project III" in mind. However, in answer to MPW's request, it separated its planned project into "Health Care Development Project" and "Population Welfare Project." Formerly, the stance of the Pakistani government toward population problems was 'we don't mind if the projects are done by grants.' Recently, however, the government has changed its stance: It has come to ask the ADB for a loan to its population projects. Such being the case, the ADB now feels the political commitment of the government.

## 5.4 UK ODA (United Kingdom Overseas Development Administration)

### (1) Population Welfare Project I

- a. The Pakistani counterpart is MPW.
- b. Period 1983-1991
- c. Amount Stg. pound 1,900,000
- d. Outline
  - Provision of vehicles for activities at district level (government and FPAP-NGO).
  - Financial aid (seed money) to FWCs for starting literacy and income-generating programs (within the World Bank Project).
  - Support to seven innovative projects (details are unknown).
  - Financial aid to four monitoring and assessment research projects carried out by the NIPS.
  - Technical cooperation--dispatch of IEC experts to the MPW (one person was dispatched during 1983-1988 and the other 1984-1985).

The literacy and income-generating programs were canceled after one year practice (reasons are unknown).

(2) Population Welfare Project II

a. The Pakistani counterpart is MPW.

b. Period 1984-1993

c. Amount Stg. pound 2,900,000

d. Outline

- Establishment of a Population Research Center at Karachi University and Faisalabad University, respectively.
- Supply of contraceptive foam ("Delfen") and contraceptive injection ("Norigest" together with syringes/needles and "Oestregan" for treatment of side effects).
- Support to the NGOCC for program management and its traveling clinic supervisory team and to small-scale service clinics operated by NGOs.

(3) Population Welfare Project III

a. The Pakistani counterpart is MPW.

b. Period 1994-1999

c. Amount Stg. pound 13,000,000 (total amount of budget request to the ODA Headquarters)

d. Outline

- Supply of contraceptive injection devices (Norigest) and social marketing of contraceptive injection and oral pills.
- Support to the government's VFPW Project (details of the project portion to be supported are unknown).
- Support to the NGOCC.
- Support to the FPAP.
- Support to the World Bank's Family Health Project II (reinforcement of program management ability of health and medical staff).
- Plan to incorporate maternal and child health care and family planning in the Slum Development Project in Faisalabad in Punjab.

The new budget (for the next five years) is to be approved at the ODA general meeting in this September. Since the subsequent negotiations with the Pakistani government and its approval will take six months or so, the project will not get started before the spring of 1994. Therefore, the contents of the project shown above are not final and may be altered. In order to cover the shortage of condoms, which is likely to occur after the USAID withdraws, the UK ODA is also considering to supply them.

## 5.5 UNICEF (United Nations Children's Fund)

### (1) TBA Training

- a. The Pakistani counterpart is MOH (federal and provincial health departments in Punjab, Northwest Frontier Province, Sindh, Balochistan, Azad-Kashmir).
- b. Period 1992-1996
- c. Amount \$832,400 (1992 budget)
- d. Outline
  - TBA training in safe delivery technology
    - \* Implementation of training and refresher training
    - \* Providing of TBA kits, training apparatus and vehicles
    - \* Development of training curriculum
  - Encouraging early detection of "high risk cases" of pregnant women/nursing mothers by TBA

A pilot project aimed to increase the role of TBA, such as involving TBAs in a referral system, shall be carried out.
  - Reinforcement of the role of TBAs involved in maternal and child health care within their community and further reinforcement of program supervision and evaluation.
    - \* Technical cooperation to improve the quality of TBA programs is extended by the Canadian International Development Agency (CIDA).
    - \* Existing curricula are modified into a participating training type with emphasis on acquisition of communication techniques (counseling, motivation, etc.)
    - \* Though the budget allocation at the level of provincial health departments has been appreciably improved, the program coordination capability at the MOH level is still insufficient. Generally speaking, the provincial health departments have insufficient program management capability.
    - \* There is much room for improvement of the quality of TBA training and the follow-up (supervision and support) of TBAs in training.
    - \* Training curricula are being steadily developed with the participation and cooperation of many people, though at a relatively slow pace.
    - \* The development of a program management information system (MIS) for a pilot project is to be started.

### (2) PHC Programme

- a. The Pakistani counterparts are MOH and provincial health departments.
- b. Period 1992-1996 (continuation from the 1988-1991 program)
- c. Amount \$5,090,000 (\$3,700,000 is expected to be allocated from the supplementary fund; 1992 budget \$800,000)



#### d. Outline

This program aims to integrate the existing PHC programs which are independent of one another, increase the utilization rate of health and medical facilities throughout the country, and reinforce community-level PHC activities.

- Selection of community health workers and monitoring of worker training.
- Program supervision and monitoring.
- Promotion of PHC program and operational research.

In Pakistan, health and medical services place too much emphasis on treatment. Under such conditions, various efforts are being made to spread PHC activities. The present project which is intended to integrate the existing programs (EPI, CDD, etc.) being independent of one another, represents a part of those efforts. For example, an attempt is being made to get immunization personnel involved in programs for controlling iodine deficiency disease (IDD) and diarrhea disease (CDD). In addition, basic health units (BHUs) and other local health and medical facilities are being privatized to make them more active.

The current problem is that the present administration has not yet decided any guiding principles for national health and medical care program (as of December 1992). Besides, the local health and medical facilities place excessive emphasis on treatment services and are not fully meeting the needs of the community. Both the quality of their services and the rate of utilization of their services are low. The government and donors still continue to concentrate available resources on independent programs, showing little interest in integrated programs.

### (3) Expanded Programme on Immunization (EPI)

a. The Pakistani counterparts are MOH and provincial health departments. (EPI/CDD manager of the National Institute of Health is responsible for the program.)

b. Period 1992-1996 (continuation from the 1988-1991 program)

c. Amount \$14,455,000 (\$5,300,000 is expected to be allocated from the supplementary fund; 1992 budget \$4,210,000)

#### d. Outline

In reinforcing the EPI program to reduce the deaths of children from six types of infectious diseases, various activities are carried on as below. In particular, emphasis is placed on stamping out the neonatal tetanus by 1995 through the integration of EPI in the PHC service, increasing the immunization rate from the six infectious diseases, and encouraging the communities to participate in the program.

- Training
  - \* Fundamental technologies, program supervision techniques, and interpersonal communication technology
- Supply of vaccines
- Cold chain equipment
- IEC activities
  - \* Current immunization rate (as of 1992)--DPT 78%, polio 78% (infants of one year or below), TT 41% (pregnant women).
  - \* Number of reports on infectious diseases related to EPI (Jan.-Sep. 1992)-- Polio 558, measles 2,048, neonatal tetanus 1,184.
  - \* Though the actual number of patients (cases) is probably greater than reported, it is estimated that the EPI program has reduced the incidence of troubles.
  - \* The present program places emphasis on covering the ever increasing population, including non-permanent residents, maintaining and further increasing the immunization rate, and improving skills of the program staff.
  - \* An interpersonal communication manual for immunization personnel was developed by the Health and Medical Communication Center. This manual is now used in training of immunization personnel.
  - \* A manual for medical officers was also prepared.
  - \* To improve the surveillance system, a curriculum for training in "Disease Surveillance System" was prepared and is now implemented in the training workshop.
  - \* For the purpose of coordination and information exchange, provincial-level EPI meetings were held.
  - \* Since it was decided that the emphasis of EPI be placed on eradication the polio through a public campaign, without scientific discussions and planning and careful adjustments between the organizations concerned, the program has become disordered, causing various problems.
  - \* In calculating vaccination rate, the consumption of vaccine is divided by estimated population, not by the accurate population. Therefore, it is difficult to measure the level of defense against diseases which can be prevented by vaccine.

#### (4) CDD Programme

- a. The Pakistani counterparts are MOH and provincial health departments. (EPI/CDD manager of the National Institute of Health is responsible for this program.)
- b. Period        1992-1996 (continuation from the 1988-1991 program)
- c. Amount        \$2,500,000 (1992 budget: \$540,000)

#### d. Outline

Various activities are carried out to reduce the mortality rate of children under five years from diarrhea disease to 50% and the occurrence rate of diarrhea disease under five years by 25% by the year 1995.

- Training for proper treatment of diarrhea disease cases (paramedical doctors, medical practitioners, pharmacists, etc.)
- Production and supply of oral rehydration salt (ORS) (For the purpose of treatment of diarrhea disease and training, one million packages of ORS shall be made available a year.)
- IEC activity
- Reinforcement of maternal and child health (MCH) services. (The health and medical facilities shall be staffed with personnel having received training of proper treatment of diarrhea disease, and ORT centers/ units shall be established.)
- Investigations (collection of information for effective IEC activity)
  - \* On average, every child under five years suffers from diarrhea two to six times a year, and only 45% of the population have access to safe drinking water. Though 76% of the population know how to prepare ORS, the implementation rate of proper treatment of diarrhea is as low as 40% (persons engaged in medical care? or at home?).
  - \* When a person suffers from diarrhea, it is possible to prevent him from dying of the dehydration caused by acute hydro-soluble diarrhea, by applying proper ORT (oral rehydration treatment). The point of the present program is to disseminate the proper ORT. Important supplementary activities include giving instructions as to nutrition, using a proper antibiotic in case of dysentery, and utilizing an effective IEC (mass media, etc.).
  - \* The possibility of domestic procurement (production and supply) of ORS is considered. At present, however, any of the ORS manufactured by six domestic major plants does not meet the WHO standard. On the other hand, the supply of ORS at home is reported to be sufficient, though the actual ORS is undersupplied.
  - \* Because of weak leadership of the central and local (provincial) governments, any positive activity has not yet been initiated.
  - \* Improper use of anti-diarrhea chemicals (antibiotics) is still a major problem.
  - \* Because of the shift of strategy in fighting diarrhea disease from training of medical personnel (including paramedics) for proper treatment of children and infants suffering from diarrhea to a comprehensive training program (CDD is a part of this program) for existence of children, the program has decreased its effectiveness in promoting CDD on a short-term basis.

(5) ARI Programme

- a. The Pakistani counterparts are MOH and provincial health departments. (Manager of PIMS' National ARI Control Program is responsible for this project.)
- b. Period 1992-1996 (continuation from the 1988-1991 program)
- c. Amount \$2,500,000 (1992 budget: \$400,000)
- d. Outline

This project aims at reducing the inappropriate use of antibiotics or other medicines in treating children suffering from acute respiratory infections.

- Training

Concerning proper ARI treatment techniques, personnel engaged in health and medical care in the government and private sectors will be trained. Also, community workers shall be made recognize the importance of proper ARI treatment.

- IEC activities

The importance of early discovery of ARI and its proper and prompt medical care at health and medical facilities will be made further recognized.

- Applied research

Alternative approaches for program implementation and basic information for appropriate message and communication will be checked and provided.

- Provision of equipment, training devices, and antibiotic, etc.

\* ARI Programme is relatively new compared with EPI and CDD Programmes. Since ARI is the primary reason for children's death according to hospital based data, a program, focusing on "Proper treatment on ARI cases (by Clinical Standard)" has been implemented.

\* Implementation of training courses on provincial level has started. Researches on effect of antibiotic and resistance are also conducted.

\* Some confusion regarding which training devices should be used was observed.

(6) Health Education Programme

- a. The Pakistani counterpart is MOH and the Provincial Health Departments.
- b. Period 1992-1996 (continuation from the 1988-1991 program)
- c. Amount \$1,450,000 (1992 budget: \$400,000)
- d. Outline

The National Health Education Units shall be reinforced by making them participate in the formulation, execution, and monitoring of the Health Education Program. Health education activity shall be built in the health program. Budget necessary for this purpose shall be secured.

- For the purposes mentioned above, the capabilities of health education units at the federal, provincial, and district levels shall be reinforced. In addition, NGO activities in this field shall be supported.
- Communication techniques shall be included in all curricula for training in disease prevention programs. In addition, health education training shall be provided to primary-school teachers, and audio-visual materials for transmitting knowledge of health and sanitation to the parents of school children shall be prepared.
- Preparation of health education materials (health education units).
- Social mobilization
  - \* At a national level, health education is still a sporadic activity. Though the Federal Communications Advisory Group was organized, a nationwide program has yet to be formulated. Provincial communications advisory groups have also been organized.
  - \* Materials prepared in individual projects differ in contents from one another. In the future, it is necessary to evaluate them on a consistent basis and endeavor to spread truly effective materials.
  - \* Other problems include the lack of national-level strategies, the insufficient utilization of existing materials for health education, and the duplication of similar materials.

#### (7) Sector Support (Health)

- a. The Pakistani counterparts are MOH and provincial health departments.
- b. Period 1992-1996 (continuation from the 1988-1991 program)
- c. Amount \$4,455,000 (1992 budget: \$460,000)
- d. Outline
  - A health information system shall be established in cooperation with the USAID's project for the existence of children (PCSP).
  - Review of the EPI/CDD surveillance system.
  - Support to the Guinea Worm Eradication Program.
  - Training of administration and management.
  - Field training of epidemiology.
  - Research
    - \* Health information system
 

There are many uncertainties about the quality and usefulness of data collected and furnished by local health and medical facilities. With respect to the present movement to establish a health information system, the financial support has yet to be secured since the USAID--the donor of the program--is withdrawing (1993). Such being the case, there is fear that the program might be interrupted.

\* Guinea worm

Though there are still several problems, it is very likely that Guinea worm will be eradicated in a few years.

(8) Nutrition Support Programme

a. The Pakistani counterparts are MOH, provincial health departments, municipalities, and NGOs (Nutrition Section of Ministry of Planning & Development is in charge).

b. Period 1992-1996 (continuation from 1988-1991 program)

c. Amount \$1,790,000 (1992 budget: \$400,000)

d. Outline

In order to reduce the moderate malnutrition of children under five years from the present 43% to 38%, the severe malnutrition from 11% to 7%, the rate of underweight babies from the present 25-30% to 20%, and the iron deficiency-induced anemia from 45% to 35%, the following activities will be carried out.

- Training

In order to reinforce the training capabilities of the health departments, planning departments, and female development departments, materials for nutrition training will be unified.

- Providing of materials and equipment

Selected health and medical facilities will be provided with materials and equipment necessary for observing the growth of patients. In addition, at one-half of health and medical facilities in the districts, their materials and equipment will be properly maintained and improved to implement the growth observation and nutrition surveillance.

- IEC activity

Community representatives and government personnel will receive orientations concerning the current nutrition problems.

- Applied research

Information useful for innovative new approaches to implement community-based nutrition programs will be collected.

- General supports

A support to national- and provincial-level nutrition improvement activities in a limited area.

\* The "MCH Chart" (for recording maternal and child health data, such as results of growth monitoring and vaccination) used in the Project for Existence of Children was prepared in 500,000 copies.

\* Training was given to the health staffs of Punjab, Sindh, and northern provinces.

\* A number of NGO activities were given support.

- \* The nutrition curriculum (for training) for the Project for Existence of Children was completed.
- \* The lack of community-based nutrition programs and the difficulty involved in making necessary access to women are bottlenecks in propelling nutrition-related programs.
- \* In propelling the present program, it is important to better understand the causes of malnutrition of the babies, infants, and mothers.
- \* Local NGOs have inadequate program management ability, which must be improved.
- \* A joint research with the World Bank's Nutrition Project is under planning.

In addition, the UNICEF provides financial aid, though modest in dollar amount, to reinforce the maternal and child health activity and promote enlightenment and educational activities for the protection of maternity.

The Rural Child Survival Project (RCSP) that was started in 1987 with financial aid of the UNICEF and produced some tangible results is outlined below.

The Ministry of Health coordinated the project with cooperation of the UNICEF and Islamabad Capital Territory (ICT).

In this project, emphasis was placed on improving maternal and child health, promoting immunization, improving nutrition, and spreading community health education in six villages which are administered directly by Islamabad. Women selected from each of the villages were trained as CHWs, and TBAs in the villages were re-trained and made cooperate with the CHWs to improve the maternal and child health in their villages.

In executing the program, primary importance was attached to the followings.

- Investigation and reinforcement of existing local medical facilities  
This was applied to all the three RHCs and 12 BHUs in the rural areas of Islamabad.
- Training of medical/paramedical staff engaged in health service in local areas  
Forty-four persons received training at the children's hospital of PIMS.
- Selection and training of CHWs  
A total of 29 CHWs received a six-week paid training in three phases at children's hospitals.
- Selection and training of TBAs  
A total of 29 TBAs received a one-week training in three phases at the children's hospitals of RTI and PIMS in Rawalpindi. After the training, each TBA was given a TBA certificate and TBA kit.

- Management and monitoring of program activities

The program that was carried out in about four years produced a number of good results. What is worthy of special note is that in all the villages (approximately 28 villages) the number of deaths of pregnant woman and nursing mothers during that period was zero. Due to lack of basic reference data about the conditions before the program was executed, such as the mortality of newborn babies, the rates of respiratory infections and diarrhea disease and the mortality from those diseases, and the prevalence rate of vaccination, it is difficult to make an accurate evaluation of the results of the program. Even so, the program is evaluated to have been significant as an attempt to approach the rural areas.

## 5.6 World Bank (WB)

### (1) Family Health Project I (Sindh and NWFP)

a. The Pakistani counterparts are the Health Departments of Sindh and Northwest Frontier Province.

b. Period 1992-1999

c. Amount \$45,000,000 (loan)

#### d. Outline

- Reinforcement of health and medical services

\* Reinforcement of maternal health, including family planning.

\* Control of infectious diseases, mainly in rural areas.

\* Improvement of quality of health and medical care through providing of necessary devices and equipment to selected BHUs and MCH centers.

\* Enhancement of capacity in treating emergency cases.

\* Improvement of diagnostic capabilities.

\* Reinforcement of referral systems.

- Capacity development and training of staff (human resources)

\* Training aimed to increase female health and medical care staff

\* Construction of a nursing school in Sindh and rehabilitation of the three paramedical schools in Northwest Frontier Province

- Program management and organization development

\* Program management units will be set up in provinces and districts, and training will be introduced.

All health and medical facilities have made clear that they will implement family planning services. Since only one year has passed since the project was started, problems in project activities, etc. are not known in detail. It is said, however, that the project has been delayed due to the occurrence of problems at the stage of project staff recruitment. In Northwest Frontier Province, the UK



ODA and Save the Children Fund are extending technical cooperation (\$3,800,000).

(2) Second Family Health Project (Punjab and Balochistan)

- a. The Pakistani counterparts are the Health Departments of Punjab and Balochistan (including aid to Islamabad Capital Territories--MOH).
- b. Period 1994-1999
- c. Amount \$48,000,000 (loan)
- d. Outline

This is a continuation from Family Health Project I, implemented to cover the provinces that are excluded from the first project. The contents of project activities are almost the same as those of the preceding project. The present project is a joint aid of Germany (\$22,000,000) and the United Kingdom (\$12,200,000).

This project aims at shifting emphasis of health care from secondary and tertiary health care to primary health care and from medical treatment to preventive medicine and health promotional service in the provinces of Punjab and Balochistan. Therefore, top priority is given to the field of primary health care. Concretely, they plan to promote the supply of maternal and child health services and reinforce the training of health service staff and the management of health care.

The project consists mainly of the following three parts.

1) Improvement of health services

With the aim of improving the maternal and child health services, including family planning service, and integrating and expanding infectious disease preventive activities, mainly in local areas, they have decided to implement the following four measures.

a) Improving access to health services

- Expanding training of TBAs and introducing community health workers
- Increasing health staff, especially female paramedical staff
- Reinforcing the referral system and emergency treatment capabilities
- Promoting health and population activities of NGOs

b) Improving quality of health services

- Introducing systematic training of field staff
- Upgrading facilities and equipment of BHUs and MCH centers and improving their system for procurement of basic chemicals and medicines
- Expanding nutrition-related activity
- Expanding and reinforcing infectious disease preventive activity, including enhancement of diagnostic capabilities

- Making family planning service available at all health facilities
  - Enhancing health management and supervision capabilities
- c) Facilitating use of health services
- Reinforcing health education
  - Promoting community involvement in health services in local areas
  - Evaluating effect of health services and improving health services based on evaluation results
- d) Expanding primary health care services which are currently offered only in some cities to the slum areas in Lahore, Behawalpur, and Sarghoda (Punjab) and Quetta (Balochistan).

2) Development of health care staff

The project aims at enhancing staff capabilities and improving their work, as well as increasing female paramedical staff. The measures to be implemented include the following.

- a) Extensive and lasting on-the-job training of existing primary health care staff
- b) Increase of female trainees in paramedic, and
- Establishment of additional paramedical schools
  - Improvement of quality of paramedics through expansion of existing training facilities and reinforcement of existing training programs
  - Improvement of recruitment plan and incentive program for trainees

3) Development of health management and organizations

The measures to be implemented to improve health management capabilities are shown below.

- a) Reinforcing systematic management & planning capabilities
- Installation of management development units in provinces and districts
  - Enhancement of provinces' planning capabilities
  - Enhancement of provinces' capabilities to execute plans
- b) Improving management quality and efficiency
- Introduction of systematic management training
  - Promotion of distribution of the right of management down to district level
  - Development of monitoring, information, and financial systems
  - Improvement of supervisory techniques and reinforcement of execution of supervision

Federal Component in ICT (Islamabad Capital Territory) is included in this project, which will become effective from July 1993 for 60 months. This component will be carried out in collaboration with CDA (Capital Development Authority), PMRC (Pakistan Medical Research Council) and other organizations concerned. Project costs for federal component is estimated at US\$5.2 million.

This has three components:

- 1) Health System Research and Development
- 2) Strengthening Health Services in ICT
- 3) Public Health School, Islamabad NGO component

#### 1) Health Systems Research and Development

Health Services have been expanding at a fairly rapid speed since the mid seventies. Efforts are underway to set up the health information system but not health system can afford to generate the variety of detailed data that are often required for scientific decisions by policy makers. Health systems Research will provide to facilitate decision making. Research structure is as follows;

- National level:

National Committee on Health Systems Research  
Project implementation Unit for Federal Components of Second Family Health Project in collaboration with PMRC.

- Provincial Level:

Provincial Health Development Centers

#### 2) Strengthening Health Services in ICT

Strengthening of MCH services in the ICT has been given prime importance by the project as part of health care at all levels. Integrated and comprehensive MCH services to be established by the project, will include antenatal, natal and postnatal care; child spacing through family planning; immunization of children and women, nutrition intervention and health education. Emphasis will be on setting up an effective two way referral system and management of emergencies particularly high risk pregnancies. Rural Health Centers(RHC) will be first referral centers. Emphasis has been placed on in-service training for all cadres of health workers. This project also proposes to train 300 VHWs. They along with the TBAs may eventually form the essential link between the community and the PHC facilities.

Main targets are as follows:

- Training/retraining 150 TBAs and training of 300 female village health workers
- Provide MCH services at 13 BHUs
- To establish a satellite clinic at Shahdara to improve accessibility of services to women and children
- 3 RHCs to function as first referral level center
- All health outlets to provide contraceptives
- Establishment of office of Director Health Services in ICT

### 3) Public Health School, Islamabad NGO component

This lady health visitor school is the only one run by an NGO. It is well-established but operates from inadequate rented buildings with very limited hostel facilities. The project will finance the construction of a school, MCH clinic and hostel for 60 students, furniture, teaching equipment and student transport. 30 LHV will be annually trained in this school.

Cost estimates by component are shown in Table 49.

Table 49. Project Base Cost Components and Categories of Expenditure (US\$ million)  
Second Family Health Project, World Bank

	PROVINCIAL HEALTH SERVICES		STAFF DEVELOPMENT		MANAGEMENT DEVELOPMENT		TOTAL		%	
	Punjab	Baloch. Total	Punjab	Baloch. Total	Punjab	Baloch. Total	Punjab	Baloch. Federal Total		
<b>I. INVESTMENT COSTS</b>										
- CIVIL WORKS	1.9	2.4	4.3	7.0	2.2	9.2	0.0	8.9	4.6	14.1
- EQUIPMENT	13.9	2.2	16.0	1.3	0.5	1.8	0.2	16.9	2.9	20.1
- FURNITURE	0.0	0.1	0.1	1.0	0.2	1.3	0.0	1.1	0.4	1.5
- VEHICLES	5.1	1.7	6.8	0.9	1.1	2.0	0.6	6.6	3.0	9.8
- TRAINING	0.3	0.2	0.5	0.7	0.2	0.8	0.9	1.8	1.2	3.5
- TA	1.5	0.4	1.9	1.2	0.4	1.6	2.6	5.3	2.2	8.1
- STUDIES	0.9	0.5	1.4	0.0	0.0	0.0	0.1	1.0	0.6	3.0
- HEALTH EDUC. MATERIALS	1.1	0.2	1.3	0.0	0.2	0.2	0.3	1.4	0.5	1.8
- CONTRACEPTIVES	5.3	0.1	5.4	0.0	0.0	0.0	0.0	5.3	0.1	5.4
<b>SUBTOTAL INVESTMENT COSTS</b>	<b>29.9</b>	<b>7.9</b>	<b>37.8</b>	<b>12.2</b>	<b>4.8</b>	<b>17.0</b>	<b>6.2</b>	<b>48.3</b>	<b>15.4</b>	<b>67.4</b>
<b>II. INC. OPERATING COSTS</b>										
- SALARIES/ALLOWANCES	2.3	0.4	2.7	4.7	2.6	7.2	0.5	7.5	3.3	11.2
- DRUGS/MATERIALS/SUPPLIES	8.6	2.1	10.7	0.0	0.0	0.0	0.2	8.7	2.1	10.9
-- MEDICINES	6.4	1.8	8.2	0.0	0.0	0.0	0.0	6.4	1.8	8.2
-- NUTRITION	1.4	0.1	1.5	0.0	0.0	0.0	0.0	1.4	0.1	1.5
- OPERATING COSTS	1.3	0.2	1.5	1.2	1.1	2.3	0.9	3.3	1.7	5.2
-- VEHICLES	0.4	0.1	0.5	0.4	0.5	1.0	0.3	1.2	0.7	2.0
-- PROJECT COORDINATION	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3
<b>SUBTOTAL INC. OPERATING COSTS</b>	<b>12.2</b>	<b>2.7</b>	<b>14.9</b>	<b>5.8</b>	<b>3.7</b>	<b>9.5</b>	<b>1.5</b>	<b>19.6</b>	<b>7.1</b>	<b>27.4</b>
<b>TOTAL BASE COSTS</b>	<b>42.1</b>	<b>10.5</b>	<b>52.7</b>	<b>18.0</b>	<b>8.5</b>	<b>26.5</b>	<b>7.7</b>	<b>67.9</b>	<b>22.5</b>	<b>94.8</b>
<b>PHYSICAL CONTINGENCIES</b>	3.6	0.9	4.5	1.2	0.5	1.7	0.6	5.4	1.6	7.3
<b>PRICE CONTINGENCIES</b>	5.8	1.5	7.3	2.1	0.9	3.0	0.8	8.7	2.7	11.9
<b>TOTAL PROJECT COSTS</b>	<b>51.6</b>	<b>12.9</b>	<b>64.5</b>	<b>21.3</b>	<b>9.9</b>	<b>31.2</b>	<b>9.1</b>	<b>82.0</b>	<b>26.8</b>	<b>114.0</b>

Source: Staff Appraisal Report, Pakistan Second Family Health Project January 25, 1993 The World Bank

## 5.7 Canadian International Development Agency (CIDA)

### (1) TBA Training

- a. The Pakistani counterpart is the (then) Population Welfare Section of the Ministry of Health and Social Welfare.
- b. Period 1983-1989
- c. Amount \$3,880,000
- d. Outline
  - Training of TBAs at work and potential TBAs.
  - Establishment of family welfare centers.
  - Implementation of TBA service to remote areas by trained TBAs.

In addition, the CIDA supplies polio vaccine and conducts an assessment of the possibility on domestic production of polio vaccine, as part of its program related to maternal and child health.

Other international organizations, such as the Commission of European Community (CEC), are implementing rural welfare projects and supporting NGOs which carry on activities related to population family planning and maternal and child health. It is said that details of those projects will be decided in the future.

## 5.8 Japan

Of 121 projects (1991) of Japan's grant aid to Pakistan 13 (10.7% of total achievements) are projects related to medical cooperation. By 1993, two of the health care-related technical cooperation projects have been implemented. But any grant aids or technical assistance to the projects on population census or family planning has not been implemented so far.

The followings are the projects related to maternal and child health which were implemented with assistance by Japan.

### (1) Islamabad Children's Hospital

Constructed in 1985 in the compounds of PIMS (Pakistan Institute of Medical Sciences) with the Japan's grant aid amounted to nearly 4.3 billion yen. It consists of wards with 230 beds and another building for out-patients (It was expanded later by the government of Pakistan) The project on technical assistance by JICA stretched over 7 years since July 1986 to June 1993 and

served for the improvement of professional medical services and reinforced the function of the teaching hospital.

### (2) College of Nursing and Paramedical Institute

Set up in 1987 in the compounds of PIMS with grant aid of Japan costed about 1.07 billion yen. They are managed by respective principals appointed by the president of PIMS. There is a nursing school in the same compounds to train nurses but the College of Nursing was established for licensed nurses to provide them with one-year courses for specialized nursing (for pediatrics, surgery, anesthesiology, ICU/CCU, etc.) and two-year courses for ward-management and nursing education. At present about 130 nurses are studying.

The technical assistance projects of JICA were implemented for a period of 5 years from July 1987 to June 1992 to improve the teaching methods at the College of Nursing for aftergraduates and instructions in school management, curriculum and improvement of teaching material have been given.

### (3) Establishment of local medical services in Punjab

Medical equipments (ambulance, binocular microscope, blood pressure apparatus, medical gears, shadowless light, etc.), equivalent to nearly 0.77 billion yen, have been provided on a grant basis to improve RHC/BHU medical services in Punjab based on the government of Pakistan's RHC/BHU establishment programmes.

## 5.9 Amount of Foreign Assistance

The amount by donor at the sixth and the seventh Five-year Plan is shown in the following table 50.

The USAID shared over 50% of the contribution every year and the retreat of the United States from the programme is expected to have a serious effect on the fund.

Table 50. Total Foreign Assistance(Cash and Commodity)

	ASIAN				ODA CO- FINANCING ASIA				Total			
	WORLD DEV. BANK	UNICEF/ CIDA	WHO	USAID	UNITED KINGDOM	OPEC	W/BANK WITH	FOUND- ATION		ICOMP		
<b>A. 6th Five Year Plan</b>												
(1983/84-1987/88)												
1983/84	23.70	17.58	0.60	0.19	0.05	50.95	0.70	5.85	--	0.09	--	99.71
1984/85	15.81	27.86	--	4.99	--	112.46	--	--	--	--	--	161.12
1985/86	26.20	27.24	1.37	9.20	0.02	151.93	2.04	--	13.95	--	--	231.95
1986/87	10.97	33.63	1.02	9.49	0.16	101.34	4.65	--	3.11	--	--	164.37
1987/88	47.28	12.34	--	7.25	0.09	163.17	2.12	--	--	--	1.05	233.30
Sub total	123.96	118.65	2.99	31.12	0.32	579.85	9.51	5.85	17.06	0.09	1.05	890.45
<b>B. 7th Five Year Plan</b>												
(1988/89-92/93)												
1988/89	14.39	12.89	--	0.23	0.62	145.47	7.74	--	--	--	--	181.34
1989/90	28.13	0.10	0.89	4.52	0.07	175.02	2.64	--	--	--	0.49	211.86
1990/91	15.69	--	--	0.17	0.03	284.92	8.78	--	--	--	2.55	312.14
1991/92	22.63	--	3.30	--	0.01	283.37	9.33	--	--	--	--	318.64
1992/93	--	--	--	--	--	--	--	--	--	--	--	--
Sub total	80.84	12.99	4.19	4.92	0.73	888.78	28.49	0.00	0.00	0.00	3.04	1023.98

Source: Foreign Assistance Requirements, 1992, Ministry of Population Welfare







## 6. Maternal and Child Health Problems and Recommendations

### 6.1 Problems of Maternal and Child Health

The present condition of maternal and child health in Pakistan is directly reflected in the following health and medical indexes.

- High under 5 mortality rate (U5MR)	134
- High infant mortality rate (IMR)	94
- Low percentage of births attended by trained health professionals	40%
- Low tetanus immunization coverage to pregnant women	42%
- High maternal mortality rate (MMR)	500
- High percentage of infants with small birth weight	25%
- High percentage of moderately or severely malnourished children	60%

The following three indexes also indicate that there are a large number of women who repeatedly become pregnant, deliver, and suckle babies. Those women are physically exhausted and the babies born from the bodies of exhausted mothers are naturally in poor health, posing a problem of maternal and child health. This suggests the need to curb the present fertility in relation to the population problem.

- Relatively high total fertility rate (TFR)	6.3
- Extremely low contraceptive prevalence	12%
- High population growth rate (PGR)	3.2%

In addition, given the following indexes, it can be seen that educational consideration is essential for spreading knowledge of health and hygiene related to pregnancy and delivery or ensuring proper and effective use of appropriate health and hygienic techniques.

- Low male primary school enrollment rate	49%
- Extremely low female primary school enrollment rate	27%
- Low adult male literacy rate	47%
- Extremely low female literacy rate	21%

Furthermore, the following indices show that the poor conditions of women and children in rural areas are the main causes of many of the maternal and child health problems in Pakistan.

- Difference in percentage of population with access to adequate sanitation	
Urban	55%
Rural	10%
- Difference in percentage of population with access to safe drinking water	
Urban	80%
Rural	45%

(All indices come from UNICEF)

While economy of Pakistan has been growing steadily in these years, its health indices have not shown significant improvement. The individual indices shown above indicate that the females are placed in a less favorable condition than the males. Apparently, this situation causes a negative influence on the maternal and child health.

For example, in Pakistan, the life expectancy at birth of females is the same as that of males, that is, 58 years. In terms of females' life expectancy, Pakistan surpasses only Bhutan, Nepal, and Bangladesh, where the life expectancy of females is shorter than that of males. The female-to-male population ratio of 92% in Pakistan, too, may suggest that the health and medical facilities for females are apparently insufficient compared with those for males and that they have to be improved and reinforced.

In addition, with respect to under 5 mortality rate (U5MR), females show larger figures than males (199 vs. 137), though there is little difference in newborn mortality rate between males and females. In terms of U5MR, Pakistan comes next to the three countries mentioned above. It is assumed, therefore, that in Pakistan the female infants can not receive enough health and medical care as the male infants do.

The female secondary school enrollment is approximately 40% of that of male. Even in the primary school education, the female enrollment is not more than 50% of that of male. Based on the reported adult male literacy rate (45%) and female to male literacy ratio (45%), the adult female literacy rate comes to 20% at the highest, indicating that females have less opportunities for basic study and learning than males.

In most of the countries, whether developed or developing, females are superior in longevity to males, despite the fact that they carry heavier physiological and physical burdens such as pregnancy, delivery, and feeding. In this respect, Pakistan is a rare exception. It may be said that Pakistan's maternal and child health problem originates in its extraordinary demographic situation.

Pakistan has several problems which have something to do with the present maternal and child health problem. For one thing, two central government agencies--the Ministry of Health and the Ministry of Population Welfare--offer their own maternal and child health services separately. For a second, there is no close cooperation between the central and provincial governments and even between related departments within the same provincial government because of complicated administrative systems. For a third, there already exist a number of foreign donor organizations which differ in background and policies. For a fourth, there are controversial traditional, religious, and social customs which place women in a lower position.

## 6.2 Recommendations

In planning Japan's aid to Pakistan in the future, it is necessary to clearly express our own strategy and consider technically feasible cooperation in line with Pakistan's 8th National Five-Year Plan and Social Action Program (SAP).

In the field of maternal and child health in Pakistan, it is of urgent necessity to address causes of the high maternal mortality rate (MMR) and take measures. In recent years, the Expanded Program on Immunization (EPI) has made remarkable achievements in improving children's health. There are still difficulties for Pakistani (male) doctors to meet health care needs of female patients. In order to grasp the actual condition of women's health as accurate as possible and work out effective improvement measures, it is necessary that professional researchers implement a fact-finding survey and status analysis spending a relatively long period of time, at least several months.

If the above study is possible, details of the technical cooperation should be planned based on the its results. As a reference, the views of the present study team are summarized below.

Based on the results of field study and inspections, discussions with Pakistani officials, and review of various data, the plan that is considered feasible is as follows.

- (1) "Technical cooperation on training in management of pregnancy and delivery with complications" which is included in the SAP but not planned by the Pakistani government or other donors
  - Case management of the pregnancy with complications is indispensable to lower the maternal mortality rate. To this end, it is necessary to provide several training courses in 'normal pregnancy', 'pregnancy with complications/pregnancy complications', 'normal delivery', 'abnormal delivery', 'obstetric emergency', and so on. Therefore, curriculums and teaching materials for training doctors (especially female ones), nurses, lady health visitors (LHVs), and community health workers (CHWs) should be prepared with the cooperation of Pakistani counterparts at existing facilities.
  - At the same time, the Pakistani government is advised to establish a practical steering committee which is not confined within the administrative framework and capable of inviting trainees to widen the base of maternal and child health. If this action is impossible, the scope of technical cooperation would be limited.

## (2) National safe-motherhood center

If the establishment of a steering committee is possible, a national center shall be established at a suitable place as a training institute mainly for fostering local medical personnel, especially females, who train LHVs and CHWs. This center should be positioned as a place of on-the-job training in maternal and child health and medical care, rather than an educational organization like a medical college/nursing school.

In view of the present condition of maternal and child health in Pakistan, it is evident that improving maternal and child health services in rural areas is urgently needed. To this end, it is necessary to take every possible measures to reach rural women. If cooperation and participation of rural communities could be obtained, health education activities targeted at pregnant women and their family members are desirable. Successful examples of such educational and promotional activities in Japanese experience include "MCH handbook" and "mothers class".

However, direct intervention at the community level needs caution, for the traditional rural society may identify such MCH activities with "birth control", which challenges the religious and traditional value of the community. Besides, JICA does not have well developed network to reach community level, and many other donors have already been involved in MCH activities at community level.

Teaching hospitals and other large medical facilities in urban areas are already introducing advanced technologies. Planning a project of primary health care (PHC) at those tertiary care facilities also seems unrealistic and inefficient.

In addition, it is not also realistic to dissolve all the above problems at a time because it also makes the target of the project ambiguous.

Thus, it will be more realistic and effective that JICA support to strengthen middle level maternal health care activities and training.

Therefore, it is significant to select a reliable Pakistani counterpart first in terms of sound, medical, and administrative capabilities and then to build mutual understanding on purpose and intentions of the project, and finally to formulate a project with several developing phases based on a complete agreement on the scope of cooperation and methods to be adopted.

## Appendix





Appendix 1 Schedule (1)

Schedule for Dr.Kita, Dr. Hikita and Ms. Kitabayashi

May 21, 1993~June 2, 1993

May 21 Fri	Tokyo to Islamabad
22 Sat	Meeting at JICA Office
23 Sun	Courtesy call on *Economic Affairs Division, Ministry of Finance, Mr.Farhat Hussain, Joint Secretary *Ministry of Interior, Mr.Riaz Ahmed Sipra, Additional Secretary *Ministry of Planning and Development, Mr.Muhammad Shafiquddin, Deputy Chief Meeting at Embassy of Japan
24 Mon	Courtesy call on *Pakistan Institute of Medical Science(PIMS), Dr.Ghayoor H.Ayub, Executive Director Dr.Javed Choudhry, Joint Executive Director *Ministry of Health, Mr.A.R.Siddiqui, Secretary Mr.Faris Rhaman Khan, Joint Secretary Islamabad General Hospital Islamabad Children's Hospital Prof.Mushtaq A.Khan
25 Tue	Chirah Basic Health Unit Tarlai Rural Health Center Sihala Rural Health Center Rewat Basic Health Unit accompanied by Dr.Mohammad Najeeb Durrani, ADHO, Islamabad, Mr.Tanoi, Embassy of Japan, Mr.Sohail, JICA Pakistan Office
26 Wed	UNICEF Dr.Jason Weisfeld, Senior Programme Officer College of Nursing, PIMS Mrs.Rubina, Acting Principal College of Medical Technology Mrs.Azra Javed, Principal World Bank Ms.Ann Duncan, Chief, Ms.Tahseen Sayed, Senior Programme Officer, Multi-Donor Support Unit, Social Action Programme USAID Ms.Anne Arnes, Chief, Health, Population and Nutrition Ms.Barbara J.Spaid, Deputy Chief, HPN Dr.Rashna Ravji, Medical Officer, HPN UNFPA Mr.Bal Gopal K.C., Country Director Dr.Sajid, Medical Officer Mr.Koike, Country Director, Afghanistan Aga Khan Foundation Dr.Inam Kazmi, Project Advisor (Ex-Chief of Health Section, Ministry of Planning and Development)

	Meeting at JICA Office Mr.Iwasaki, Dr.Itoh and Mr.Kodama
27 Thu	Wrap-up Meeting at Ministry of Health Mr.Siddiqui, Secretary of Health Mr.Faris Rhaman Khan, Joint Secretary of Health Mr.Muhammmad Jamil Arshad, Research Officer Dr.Ghayoor Ayub, Executive Director, PIMS Dr.Javed Choudhry, Deputy Executive Director, PIMS Dr.Sameer Siddiqi, Assistant Professor, Quaid-e-Azam Post Graduate Medical College, PIMS Mr.M.Shafiquddin, Deputy Chief, Health Section, Ministry of Planning and Development
	Report to Embassy of Japan
	Report to JICA Office
28 Fri	Islamabad to Peshawar
29 Sat	Japan-Afgan Medical Center  Courtesy call on Department of Health (NWFP) Dr.Mohammad Alam, Acting Director-General, Health Services Jagra Basic Health Unit Pirpli Rural Health Center Azakhel BHU (Afgan Health and Social Assistance Organization)
30 Sun	Department of Health Mr.Sayed Mobashir Shams, Senior Planning Officer Hayat Shaheed Teaching Hospital Civil Quarter MCH Center Maternity Hospital Public Health School for Lady Health Visitor Public Health Center for Women  Peshawar to Karach PK351
31 Mon	Aga Khan University Medical Center accompanied by Dr.Itoh and Mr.Shimizu Mr.Nasir Pirani, Director, Resource Development and Public Affairs Dr.Fasia Qureshi, Pediatrician
Jun 1 Tue	Team Meeting
2 Wed	Karachi to Bangkok TG508 Bangkok to Narita TG640

## Schedule (2)

## Schedule for Mr.Nakamura and Ms.Matsuyama

May 24 to June 20, 1993

May 24 Mon	Narita to Islamabad PK753
24 Tue to 30 Sun	Same as Schedule (1) Peshawar to Islamabad
31 Mon	The World Bank Dr. Siraj Ut Haq Mahmud, FCPS
June 1 Tue to 4 Fri 5 Sat	At JICA Office Ministry of Planning & Development, Dr. M. Bashirul Haq, Chief (Health) Ex-World Bank, Health & Population Project Adviso Harvard Institute for Int'l Development (HIID) Dr. Jonathon Simon, Population Applied Research Proje
6 Sun	UNICEF Ms. Zubeda Katoon, Program Officer for Safe Motherhoo Ministry of Health, Dr. Talat Rizui, Asst. Director General of Health (Basic Health Services)
7 Mon	ODA (Overseas Development Administration of UK) Ms. Carole Rresern, Country Advisor Ms. Roohi Shoaib, Program Officer USAID Ms. Anne H. Aarnes, Chief Health, Population & Nutrit FBS (Federal Bureau of Statistics) Dr. Noor Mohammed Lariq, Deputy Director General Mr. Chaudhary Atta Muhammad, Director Ministry of Health, Bio Statistics Sec. Mr. Sheikh Nazir, Chief Statistical Officer
8 Tue	Delegation of the Commission of the European Communities Mr. Anthony W. Kirk, Counsellor CIDA (Canadian International Development Agency) Ms. Wendolyn Miller, First Secretary (Development) Islamabad to Lahore PK611
9 Wed	Allame Iqbal Medical College, Dept. of Community Health Dr. Chaudhry Muhammad Ashraf Hanja, Assit. Prof. Maternal and Child Welfare Association of Pakistan Dr. Shela, Medical Director
10 Thu	Health Dept. of Punjab Dr. Riaz Mustafa Syed, DGHS Punjab Mr. Sohail Ahmed, Additional Secretary Planning & Development Mr. Ishaq, Senior Chief (Health) RHC, Raiwind BHU, Ali Plaza Abad Public Health Nursing School Dr. Shamin Majeed, Principal Family Planning Association of Pakistan

	Prof. Laeeq Ahmad Dr. Najmi Shamim
11 Fri	Lahore to Karachi PK303
12 Sat	Health Dept. of Sindh Mr. Sajan Memon, DGHS Dr. Nisar Ahmad Siddiqui, Additional Secretary (Tech) Planning & Development Mr. Mohammad Umar Kazi, Chief (Health) Thatta Project Site Dr. Jhaman Das, District Health Officer Dr. Aftab Ahmed Jokhio, Asst. DHO Dr. Naseer M. Nizamani, Aga Khan Univ. BHU, Dhabeji, Dr. Sultan A. Shaikh MCH Center, Gharo, Dr. Suleman Shah
13 Sun	Population Welfare Dept. of Sindh Dr. Sabina Farhat Regional Training Institute, Karachi Dr. Kursheed Sheikh, Principal Ms. Thahat Nisar, Asst. Principal Directorate of Clinical Training, Karachi Dr. Rezik Kazim Ali, Director Dr. Birbud Danwan, Asst. Director Aga Khan University, Community Health Dept. Thatta Project Team
14 Mon	Karachi to Islamabad PK368
15 Tue	Dept. of Health, Islamabad Dr. M. Azhar Khan, DHO Dr. Mohammad Najeeb Durrani, Asst. DHO Population Council Mr. George Cernada, Representative Mr. A.K. Ubaidur Rob, Associate
16 Wed	Ministry of Population Welfare Dr. Safia Amin, Director (Technical) National Institute of Population Studies Mr. Mehboob Sultan, Fellow ADB Ms. Samia Mufti Abbas
17 Thu	Report to Embassy of Japan Mr. Tanoi, First Secretary Report to JICA Office Mr. Mitarai
18 Fri	ADB Mr. Paul L. Chang, Education Specialist Mr. Wan Azmin Bin Wan Ahmad, Health Specialist at Marriott Hotel
19 Sat	Ministry of Health Mr. Faris Rahman, Joint Secretary Economic Affairs Division Mr. Farhat Hussain, Joint Secretary
20 Sun	Islamabad to Narita PK752

**(UNICEF)**

1. Government of Pakistan and Unicef Country Programme of Cooperation (1992-1996) - Master Plan of Operation
2. Annual Report 1992
3. Situation Analysis of Children & Women in Pakistan 1992
4. Situation Analysis of Children and Women in NWFP
5. Program Progress Report 1992
6. REPORT OF KNOWLEDGE, ATTITUDES AND PRACTICE OF FAMILY PLANNING IN MEDICAL STUDENTS June 1992
7. Trainer's Guide (draft) Traditional Birth Attendant Training Programme (UNICEF) (copy)

**(WORLD BANK)**

1. Social Action Programme (SAP), Population Sector, Donor Task Force Guideline (copy)
2. Pakistan Social Action Programme Revised Provincial Implementation Plans: Draft Summary of Key Reforms (May 1993)
3. Pakistan Social Action Programme Project, Aide-memorie of World bank / Multi-donor, Preparation mission (March/April 1993)
4. Staff Appraisal Report Pakistan Family Health Project April 12, 1991
5. Staff Appraisal Report Pakistan Second Family Health Project Jan 25, 1993

**(FEDERAL BUREAU OF STATISTICS)**

1. Women and Men in Pakistan (A Statistical Profile) 1992
2. Monthly Statistical Bulletin March 1993
3. Census of Health Facilities (Private Sector) Final Report Main Findings Mar. 1992
4. Census of Health Facilities (Private Sector) Final Report Executive Summary Mar. 1992
5. ATLAS OF HEALTH ESTABLISHMENTS IN PAKISTAN (PRIVATE SECTOR) Mar. 1992
6. Pakistan Statistical Yearbook 1991

**(UNFPA)**

**"Multi-Sectoral Review of the Population Welfare Programme of Pakistan, 1991"**

1. Population Policy Data Analysis and Research (No. 1)
2. FP/MCH Service Delivery (No. 2)
3. Training and Manpower Development (No. 3)
4. Management Information System of Family Planning Services (No. 4)
5. Logistics and Contraceptives Management (No. 5)
6. Population Education (No. 6)
7. Population Programme Through NGOs / Private Sector (No. 9)
8. 1992 Annual Report of UNFPA Programme in Pakistan
9. Pakistan Country Programme

**(PLANNING COMMISSION)**

1. Pakistan National Programme of Action for the Goals for Children and Development in the 1990s
2. Portfolio of AID-Worthy Projects for the Pakistan Consortium
3. Report of the Committee on Health and Nutrition; Eighth Five Year Plan (1993-98)
4. Social Action Programme Report to the Pakistan Consortium (print)
5. Social Action Programme 1992-95

**(PLANNING AND DEVELOPMENT DIVISION)**

1. Evaluation of Training of Traditional Birth Attendants (DAIS) in Pakistan (print)
2. Evaluation of the Rural Health Programme in Pakistan (print)

**(PIMS)**

1. Quaid-i-Azam Postgraduate Medical College Prospectus
2. Rural Child Survival Project
3. Prospects, College of Medical Technology

**(CIDA)**

1. CANADA FUND FOR LOCAL INITIATIVES
2. Social Action Programme Report to the Pakistan Consortium
3. Counseling about Family Planning Urdu
4. Assessment of Village Health Committees of the Child Survival and Development Pilot Project Health Department, Government of Sindh UNICEF/CIDA-Assisted TBA Training Program

**(PLANNING COMMISSION)**

1. REVIEW OF RESEARCH AND EVALUATION INSTRUMENTS ON BELIEFS AND PRACTICES SURROUNDING BIRTH IN PAKISTAN FEB. 25, 1993
2. GENDER ASSESSMENT OF SOCIAL ACTION PROGRAMME (DOCUMENTS) NOV. 1992

**(SINDH)**

1. ASSESSMENT PILOT PROJECT HEALTH DEPARTMENT, GOVERNMENT OF SINDH UNICEF/CIDA-ASSISTED TBA TRAINING PROGRAM DEC. 31, 1992
2. FAMILY PLANNING INPUTS INTO HEALTH DEPARTMENT (SINDH)
3. Maternity Service in Sindh, (Health Dept. of Sindh)
4. THATTA DISTRICT HEALTH SYSTEMS RESEARCH PROJECT
  - Department of Health, Sindh
  - The Aga Khan University, Karachi
  - Int'l Development Research Center, CANADA
5. Instruction Manual for Family Welfare Centre Staff (Population Welfare Dept. of Sindh)

**(PUNJAB)**

1. Punjab HEALTH BULLETIN 1992
2. ODA-PAKISTAN POPULATION PROGRAMME FAMILY PLANNING OUTREACH IN PAKISTAN DISTRICT WELFARE ACTIVITIES EVALUATION SEP. 1992
3. OPERATIONAL MANUAL FAMILY PLANNING INPUTS INTO THE HEALTH PROGRAMME (Ministry of Population and Welfare) (copy)
4. Impact Evaluation of TBA Training Programme in Punjab



5. Project Launch Workshop; Second Family Health Project, Punjab (Project brief)

(N.W.F.P.)

1. N.W.F.P. Development Statistics, (Planning and Development Dept. of N.W.F.P.)
2. Eight Monthly Review Report of FATA A.D.P., 1992-93 (print)

(POPULATION COUNCIL)

1. Pakistan's fertility and family planning: future directions (Print)
2. Operations Research and Technical Assistance to Improve Family Planning Services
3. A SITUATION ANALYSIS OF FAMILY WELFARE CENTERS IN PAKISTAN (print)
4. The Population Council At Forty Years
5. FINDINGS FROM BASE LINE SURVEY OF VILLAGE-BASED FAMILY PLANNING WORKERS (MAY 24, 1993) (Print)
6. 40th Anniversary Celebration 1952-1992
7. Handbook for Family Planning Operations Research Design
8. Ongoing Operations Research and Technical Assistance Estimated Costs: 1 July - 31 December 1993 (print)
9. Operations Research and Technical Assistance: Pakistan (print)

(MINISTRY OF POPULATION WELFARE)

1. FUNCTIONS RESOURCES AND MANAGEMENT OF FAMILY WELFARE CENTRES (a manual of guidelines for implementation) Jan. 1991

2. Foreign Assistance Requirements (for Pakistan's Population Welfare Programme during the eighth Five Year Plan) 1993-1998

(NIPS)

1. COST EFFECTIVENESS STUDY OF THE FAMILY PLANNING COMPONENT OF THE POPULATION WELFARE PROGRAMME A DISTRICT LEVEL STUDY
2. FUNCTIONAL TASK ANALYSIS OF FAMILY WELFARE CENTRES (FWCs) A DISTRICT LEVEL STUDY
3. Pakistan Demographic and Health Survey 1990/1991
4. Pakistan Demographic and Health Survey 1990/1991 Preliminary Report
5. National Institute of Population Studies

(MINISTRY OF HEALTH)

1. National Programme for the Control of Acute Respiratory Infections in Pakistan 1990 Federal ARI cell, Ministry of Health
2. Integrated Child Survival Training Course for Paramedics of First Level Care Faculties Trainer's Manual (Draft) Apr. 1993, MOH
3. Annual Report of the Director General Health July 1990-June 1991 (MOH, Health Div.) (print)

(OTHERS)

1. Traditional Birth Attendants; A Joint WHO/UNFPA Statement 1992
2. Diarrhoea; It's management and prevention Rural Child Survival Project (ICT) Urdu
3. Manual for Community Health Worker Rural Child Survival Project (ICT) Urdu
4. Children by Choice not Chance (Overseas Development Administration)

5. Pakistan Facts & Figures (UN System in Pakistan)
6. Integrated Child Survival Training Course
  - For Medical Officers of First Level Care Facilities
    - Trainer's Manual
    - Participant's Manual
  - Nutrition training for Primary Health Care Workers
    - Trainer's Manual
    - Participant's Manual
  - Module on Training Methodology (MOH)
  - Instruction Manual for First Level Care Facility Staff (MOH)
7. Text book for family welfare workers (Population Welfare Div. Islamabad)
8. Managing Quality of Care in Population Programs
9. PROSPECTUS OF THE PUBLIC HEALTH NURSING SCHOOL LAHORE FOR THE YEAR 1993-94
10. MEDICAL AUDIT AND PEER REVIEW AS TOOLS FOR PROMOTING EFFICIENCY A Case Study in MCH-FP Setting Lahore, (MCWAP)
11. Economic Survey 1991-92 (Finance Div.)





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