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HASHEMITE KINGDOM OF JORDAN

PRIMARY HEALTH CARE PROJECT

STAFF APPRAISAL REPORT

April 11, 1985

Population, Health and Nutrition Department
Division III

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CURRENCY EQUIVALENTS

Currency Unit = Jordan Dinar (JD)

JD .395 = US\$1.00

JD 1.00 = US\$2.53

GOVERNMENT OF JORDAN FISCAL YEAR

January 1 to December 31

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This report is based on the findings of an Appraisal Mission which visited Jordan in November 1984. Mission members included Richard Skolnik, Dr. Anthony Measham, Juliana Weissman, Suzanne McLees, and Eid Dib (Consultant).

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HASHEMITE KINGDOM OF JORDANPRIMARY HEALTH CARE PROJECTSTAFF APPRAISAL REPORTLOAN AND PROJECT SUMMARY

Borrower	The Hashemite Kingdom of Jordan
Beneficiary	The Ministry of Health
Amount	US\$13.5 million equivalent
Terms	15 years, with 3 years of grace, at the standard variable interest rate
Project Description	<p>The project would support the Government's efforts to reorganize primary health care (PHC) and would improve the coverage, quality, and efficiency of PHC, including birth spacing services, and of outpatient referral care in the basic medical specialties. The project would include: (a) the establishment of 25 new PHC centers; the refurbishing of 9 PHC centers; and the establishment of 17 comprehensive health care centers; (b) training for personnel at all levels who would work in the new health care facilities; (c) audio-visual equipment, materials, and vehicles to improve and expand health education; and (d) funds for local consultants for evaluation of the project, research on key sector topics, preparation of future projects, and project management. The project is expected to reach about one-third of Jordan's population, including a large number of urban and rural poor. It should have a significant impact on health and, in particular, help bring about a reduction in mortality and morbidity of women of childbearing age, infants, and children. The main risk of the project is that the demand for MOH services may be less than anticipated. This risk is being addressed by involving communities in the project at an early stage and by linking improvements in quality and coverage of health care with an improved referral system.</p>

<u>ESTIMATED COST BY COMPONENT:</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
A. Improving Health Care Services	5.7	9.0	14.7
B. Health Manpower Development	5.3	1.0	6.3
C. Expanding Health Education	0.0 1/	0.4	0.4
D. Strengthening Planning, Management, Research, and Evaluation	0.3	0.1	0.4
Base Cost	11.3	10.5	21.8
Physical Contingencies	0.6	1.0	1.6
Price Increases	3.6	3.5	7.1
TOTAL COST	15.5	15.0	30.5

FINANCING PLAN:

Proposed World Bank Loan	0.0	13.5	13.5
Government Contribution	15.5	1.5	17.0
TOTAL	15.5	15.0	30.5

ESTIMATED DISBURSEMENTS:

	<u>Bank Fiscal Year</u>						
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Annual	0.8	1.0	2.7	4.0	3.2	1.5	0.3
Cumulative	0.8	1.8	4.5	8.5	11.7	13.2	13.5

1/ A small amount is not shown due to rounding.

HASHEMITE KINGDOM OF JORDANPRIMARY HEALTH CARE PROJECTSTAFF APPRAISAL REPORTDEFINITIONS OF POPULATION, HEALTH AND NUTRITION TERMS

Adult Literacy Rate	The percentage of persons aged 15 and over who can read and write.
Child Mortality Rate	Annual deaths of children 1-4 years per 1,000 children in the same age group.
Contraceptive Prevalence Rate	The percentage of married women of reproductive age who are using a modern method of contraception at any time.
Crude Birth Rate	Number of live births per year per 1,000 people.
Crude Death Rate	Number of deaths per year per 1,000 people.
Degree of Malnutrition	The Gomez classification scale distinguishes three degrees in malnutrition, namely: first (mild) - 75-90% of expected (or standard) weight for age second (moderate) - 65-75% of expected weight third (severe) - under 60% of expected weight or suffering from edema.
Dependency Ratio	Population 14 years or under and 65 years or over as percentage of population aged 15 to 64 years.
Incidence Rate	The number of persons contracting a disease as a proportion of the population at risk, per unit of time; usually expressed per 1,000 persons per year.

Infant Mortality Rate	Annual deaths of infants under 1 year per 1,000 live births during the same year.
Life Expectancy at Birth	The number of years a newborn child would live if subject to the age-specific mortality rates prevailing at time of birth.
Low Birth Weight (LBW)	Infant weight at birth less than 2,500 gr. LBW may be associated with either pre-term (less than 37 weeks gestation) or full-term but small-for-dates (38 weeks or more) of gestation.
Maternal Mortality Rate	Number of maternal deaths per 1,000 births in a given year attributable to pregnancy, childbirth or post-partum.
Morbidity	The frequency of disease and illness in a population.
Mortality	The frequency of deaths in a population.
Neonatal Mortality Rate	The number of deaths of infants under 28 days of age in a given year per 1,000 live births in that year.
Perinatal Mortality Rate	The number of fetal deaths after 28 weeks of pregnancy and of infant deaths under 7 days of age in a given year per 1,000 live births.
Prevalence Rate	The number of persons having a particular disease at a given point in time per population at risk; usually expressed per 1,000 persons per year.
Rate of Natural Increase	Difference between crude birth and crude death rates; usually expressed as a percentage.
Total Fertility Rate	The average number of children a woman will have if she experiences a given set of age-specific fertility rates throughout her lifetime. Serves as an estimate of average number of children per family.

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GLOSSARY

CHC	-	Comprehensive Health Care Center
IPPF	-	International Planned Parenthood Federation
IUD	-	Intrauterine Device
JFFPA	-	Jordan Family Planning and Protection Agency
JUH	-	Jordan University Hospital
MCH	-	Maternal and Child Health
MOH	-	Ministry of Health
PHC	-	Primary Health Care Center
PMU	-	Project Management Unit
RMS	-	Royal Medical Services
UNRWA	-	United Nations Relief Works Agency
VC	-	Village Clinic

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PRIMARY HEALTH CARE PROJECT

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I. INTRODUCTION

1.01 A World Bank mission carried out a review of the health sector in Jordan in June 1983 and in November 1983 the Bank produced a draft sector report.^{2/} (The final version of the report, the Jordan, Health Sector Review, Report No. 4748-JO, was issued May 26, 1984). The main conclusions of that report concerning sectoral constraints were: (a) although chronic degenerative diseases are increasing in prevalence, the major health problems in Jordan remain preventable communicable diseases, particularly among infants and children, and complications of pregnancy and childbirth; (b) Government investments in the health sector in the last few years overemphasized hospital services at the expense of primary health care; (c) the primary health care system in Jordan does not reach required levels of coverage; and (d) given prevailing health risks and available financial resources, the most cost-effective investment in the health sector for Jordan would be to improve the coverage, quality, and efficiency of primary health care.

1.02 In January 1984, a Bank mission discussed the preliminary version of the sector report with Government. The Government agreed with the major conclusions of the report and proposed a health project to be considered for World Bank financing which would address the main issues identified in it. The project would expand the coverage, quality, and efficiency of primary health care and referral care in the basic specialties, with a special emphasis on maternal and child health. To address these objectives, it would strengthen primary health care services, including birth spacing services, develop health sector personnel, expand health education, improve sector management, and add required physical infrastructure. The main beneficiaries of the project would be people from lower socio-economic groups who depend on the Ministry of Health for health care, particularly women and young children.

II. THE HEALTH SECTOR

A. Background

2.01 Economic and Social Trends. The economy of Jordan grew rapidly over the last decade and GNP per capita rose from about \$400 in 1973 to \$1,700 in 1983. Government has placed a high priority on human resources development and has made considerable progress in expanding education and training. Primary schooling is now universal, enrollment rates are about 90% at the lower secondary level and 70% at the senior secondary level, and the adult literacy rate has doubled in the past

1/ All references to Jordan refer only to the East Bank of Jordan.

2/ Most data that follow for the health sector are for 1982 since the sector review was based largely on data for that year.

twenty years from 32% to 70%. In addition, almost all Jordanian households now have electricity and about two-thirds have access to safe water.

2.02 The social and economic patterns noted above have important implications for the health sector. First, the pace of social and economic change in Jordan has been rapid and over the medium and long term these changes will have a major influence on health, particularly on personal hygiene, demand for health care, and the practice of birth spacing. Second, it is essential in the short and medium term that Jordan address remaining pockets of poverty and the illness and death from preventable causes that remain too prevalent among rural and lower socio-economic status groups. Third, the economy is not likely to grow as fast in the next decade as it did in the previous one, it now has considerable infrastructure to support, and Government's recurrent budgets will probably come under increasing pressure. Hence, it is important for the health sector to develop in a cost-efficient manner.

2.03 Current and Projected Population. The population of the East Bank of Jordan is about 2.5 million. The rate of natural increase is 3.4% per year but population growth, which includes substantial immigration, is 4% per year. Both of these rates are very high, particularly for an upper middle-income country. The population of the East Bank will total 4.3 million in the year 2000 if it grows at the current rate of natural increase.

2.04 Fertility and Mortality. Despite some decline over the last two decades, fertility remains very high. The total fertility rate was estimated at 9.0 live births per woman in 1961-1962 and 7.0 in 1983. The crude birth rate has dropped from 50 per 1,000 population in the early 1960s to 45 per 1,000 people for 1982-1984. This rate is also very high. The mean number of children born to rural women is higher for all age groups than the number born to urban women. In contrast to fertility, mortality has declined rapidly since the early 1960s, primarily as a result of improved living conditions and better access to health care. The crude death rate has been reduced from about 20 per 1,000 in 1960 to 11 per 1,000 in 1983. The present rate is above the average of 8 for an upper middle-income country.

2.05 Age Structure and Population Distribution. Jordan has a relatively youthful population, due largely to its high fertility rate. Children under 15 years of age comprise about 50% of the total population and Jordan, therefore, has a high dependency ratio. About 70% of the population resides in urban areas and almost a third of the population lives in the capital area alone. The average population density is 36 persons per square kilometer. However, population density is 204 people per square kilometer of agricultural land, which is relatively high.

2.06 Health Status. Life expectancy in 1982 was 64 years, which is about average for upper middle-income countries as a whole. Infant

mortality has registered a major decline, from 151 per 1,000 live births in 1961 to about 69 per 1,000 live births in 1983. However, that rate is higher than the average for upper middle-income countries, which is 58. It is also seven times the average rate in the industrialized market economies. Jordan now exhibits a mixed pattern of morbidity and mortality, comprised of the chronic disease profile of industrialized countries and the infectious disease pattern typical of developing countries.

2.07 The pattern of adult mortality has begun to resemble that of an industrialized country. Although data are based only on registered deaths, it appears that the leading causes of death for those over 15 years of age are heart and circulatory disease, respiratory disease, accidents, and cancer. Tuberculosis and other infectious diseases are no longer among the leading causes of adult mortality. Despite the reduction in infant and child mortality in the last two decades, most infant and child deaths are still caused by preventable diseases. Diarrheal and respiratory diseases account for more than half the deaths of children under five years of age. In addition, communicable diseases preventable by immunization, such as measles and tetanus, still cause infant and child deaths. Birth intervals are strongly correlated with residence and education; the more rural and less educated, the shorter the birth interval. The average interval between births is only 18 months and child survival could be increased by better birth spacing. A study in 1976, for example, indicated that the infant death rate averaged 92 per 1,000 live births for children spaced less than 24 months apart but only 38 per 1,000 live births for children spaced 24 to 35 months apart. Thus, the infant mortality rate for children born close together is just above the average rate in lower middle-income countries and reflects serious problems of health care coverage.

2.08 The morbidity pattern is becoming similar to those of other middle-income countries. Diarrheal and respiratory diseases are the most important causes of illness for all age groups and particularly affect lower income groups. Immuno-preventable diseases such as measles, diphtheria, polio, whooping cough, tetanus, and tuberculosis are declining in prevalence, but still occur. There are imported cases of malaria and schistosomiasis but parasitic diseases are generally not a major problem. However, giardiasis and amebiasis are prevalent. Hospital outpatient visits are dominated by diarrheal and respiratory diseases and the leading causes of admission to hospital are uncomplicated deliveries, digestive diseases, accidents, respiratory diseases, and complications of pregnancy.

2.09 Nutritional Status. The prevalence of malnutrition appears to be relatively low. Studies conducted in 1974 of rural children and in 1981 of children in squatter areas of Amman suggest that the malnutrition problems that do exist are related to poverty, young age of new mothers, high fertility, inadequate breastfeeding and diet supplementation, and deficiency in knowledge of dietary and health practices. Malnutrition

appears to be more common in girls than in boys, particularly among poorer families.

B. The Health Care System

2.10 Recent Developments. The number of physicians, hospital beds, and MOH primary health care centers more than doubled during the last two decades and the existing health infrastructure is spread relatively equitably in all regions. However, despite these improvements, about 40% of the families in Jordan do not get adequate primary health care, particularly for their women and young children. More is said of problems of coverage in paragraphs 2.29 and 2.30.

2.11 Health Care Providers. There are four main providers of health services in Jordan. The Ministry of Health (MOH) is the major one and serves about 60% of the population. Its beneficiaries include more than 75,000 civil servants and their families, from whom 2% of salary is deducted for this purpose. The MOH also offers free medical care to families certified as indigent by the Ministry of Social Welfare. In addition, the MOH provides free maternal and child health care and treatment for some communicable diseases and cancer. Any Jordanian not in the groups noted above may receive MOH care on a fee-for-service basis.

2.12 The Royal Medical Services (RMS) is the health care division of the armed forces. The RMS accounts for nearly one-third of all hospital beds and has health facilities in major population centers. Members of the armed forces pay JD0.5 per month for full RMS coverage for themselves and their dependents and the RMS also provides services to reservists and retired members of the armed forces. Individuals requiring specialized care not available elsewhere may use RMS services on a fee-for-service basis.

2.13 The United Nations Relief Works Agency (UNRWA) provides primary care to refugees through its 17 health centers and reimburses other providers for the costs of inpatient hospital care for its beneficiaries. UNRWA provides services largely to the refugee population which lives in camps. However, a majority of those classified as refugees live outside of camps and seek their health care from other providers.

2.14 The Jordan University Hospital (JUH) provides hospital services to the Jordan University community and some other groups on the basis of payroll deductions or insurance premiums. It also serves as a referral hospital for other parts of the health system, on a fee-for-service basis.

2.15 The private health sector is very active in Jordan. About half the population use the private sector to some degree and about 10 to 15% of the population use it exclusively. There are 1,300 private physicians in Jordan, numerous private clinics, and 24 private hospitals,

which contain 23% of all hospital beds. Private physicians work largely in cities and large towns; few are found in small towns or rural areas.

2.16 The table below summarizes the distribution of major health infrastructure by provider in 1982.

Table 1: Major Health Facilities by Provider, 1982

<u>Organization</u>	<u>No. of Hospitals</u>	<u>No. of Hospital Beds</u>	<u>% of Total Beds</u>	<u>No. of Health Centers</u>	<u>No. of Physicians</u>
Ministry of Health	14	1,652	35.8	174 /a	757
Royal Medical Services	6	1,452	31.4	14	474
Jordan University	1	462	10.0	-	213
Private Sector	24	1,053	22.8	-	1,252
UNRWA	-	-	-	17	N.A.
Total	<u>45</u>	<u>4,619</u>	<u>100.0</u>	<u>205</u>	<u>2,696</u>

/a Includes 96 Primary Health Care Centers and 78 MCH Centers

2.17 Coverage. It is difficult to make reliable estimates of coverage by health care provider because many individuals are eligible for and make use of services from more than one provider and because it is not easy to get valid estimates of private sector services. Nonetheless, one can draw a few general conclusions about coverage. First, many people in Jordan do not have good physical access to private sector medical care. Second, the MOH is virtually the only provider of health care outside of large towns and cities. Third, the MOH is likely to be the only accessible and affordable source of health care for most of the rural and lower socio-economic groups in Jordan.

2.18 Organization of MOH Services. MOH health care services are presently organized in four levels:

(a) Village clinics (VCs), which are staffed by an assistant nurse and visited twice a week by a physician from a primary health care center. The VCs offer treatment of simple health problems and screening of cases for referral to physicians.

(b) Primary health care centers (PHCs), which are staffed by, at least, a physician, a practical nurse, and an assistant pharmacist. The PHCs offer immunization, first-line treatment of illnesses, and

referral to specialists. Some PHCs provide dental services. Very few PHCs have laboratories but all have pharmacies.

At the same level of care, there are maternal and child health (MCH) care centers. These are generally staffed by a midwife and a practical nurse and visited twice a week by a physician from a related primary health care center. The MCH centers offer immunization, well baby care, and pre- and post-natal care.

(c) Regional hospitals which offer outpatient specialty clinics and inpatient services.

(d) The Al Bashir Hospital in Amman, which has outpatient specialty clinics, inpatient services, and serves as the main referral hospital for the MOH system. In addition, the Princess Basma Hospital in Irbid is increasingly serving as a referral hospital for maternity services in the northern part of Jordan.

2.19 Maternal and Child Health and Birth Spacing Services. Given that young children and women of childbearing age constitute the most vulnerable groups from the health standpoint, it is important to highlight a number of points concerning existing MCH services. First, the MOH has been offering these services in MCH centers which are physically separate from primary health care centers. Second, midwives are responsible for MCH services but not all MCH centers have a midwife because they are in short supply. Third, primary health care centers generally have not offered pre- and post-natal care for mothers or well baby care for children. These factors have constrained both the quality and coverage of MCH services and the MOH through the proposed project would implement a new approach to MCH care, as noted in Sections III and V of this report.

2.20 Birth spacing services are an important part of MCH care. About 26% of the women of reproductive age use some form of contraception, an increase from 23% in 1976. Among those couples who do practice contraception, about 30% use the pill, 30% the intrauterine device (IUD), 15% contraceptive sterilization, 20% rhythm and withdrawal, and 5% condoms. The 26% rate of contraceptive prevalence in Jordan compares with rates of 27% in Morocco, 41% in Tunisia, 49% in Colombia, and 54% in Korea. Contraceptive prevalence is strongly related to residence, and the rates of contraceptive usage are about 37% in the largest cities, 22% in other urban areas, and 12% in rural areas. Differences by educational level of women are also high; contraceptive prevalence is 17% among women with no education and 35% for women with at least seven years of education.

2.21 The private sector provides the bulk of birth spacing services in Jordan and serves about 18% of the women of reproductive age. The major institutional provider of family planning services is the Jordan Family Planning and Protection Association (JFPPA). This affiliate of the International Planned Parenthood Federation (IPPF) has 15 clinics on the East Bank and provides services to about 7% of the women of

reproductive age. The MOH provides family planning services to about 1% of the women of reproductive age. The low level of MOH birth spacing services stems from the continuing sensitivity to family planning in Jordan and the lack of an effective MOH family planning program, as will be discussed in Section III. Government makes pills available in most MCH centers and IUDs in a few. The MOH and the RMS also provide pills, IUDs, and sterilizations in some of their hospitals. In addition, MOH and RMS hospitals carry out about 50% of the total number of sterilizations performed in Jordan each year, with the private sector carrying out the other 50%. Sterilizations in Jordan are performed largely on older women with a large number of children, for whom another pregnancy could be life-threatening.

2.22 Health Expenditure and Financing. Total expenditure on health in 1982 was about 5.2% of GDP which was above average for middle-income countries. Government accounted for 58% of total expenditure, the private sector for 41%, and UNRWA for 1%. Public expenditure on health increased in real terms from 1978 to 1982 and grew over that period from 10 to 11% of Government's annual recurrent expenditure. Public recurrent expenditure on health as a proportion of GNP, however, fell from 2.4% in 1978 to 2.1% in 1982. Public expenditure on health in 1982 was about US\$39 equivalent per capita. This figure is around the average for middle-income countries. The MOH since 1976 has spent annually about 14% of its recurrent budget on preventive care and 72% on curative care.

2.23 Each of the major health care providers has its own funding sources. The MOH operates principally on allocations from the central government. However, the principle of people paying at least a part of the cost of MOH services and the full cost of drugs is well established in Jordan. At present, the fees for MOH services are about US\$.75 per visit to a general practitioner and US\$2.50 per visit to a specialist and the patients pay the full cost of any pharmaceuticals which are prescribed. Patients also pay about US\$6.30 for each day they stay in hospital, which includes the price of pharmaceuticals. Patients' fees and payroll deductions from the civil service insurance scheme comprise 10-15% of total MOH funds and are projected to grow to about 30% of total funds in the next five years. Most RMS funds come from the central budget but the RMS also receives patients' fees and fees from MOH referrals. The JUH receives direct budget allocations and a transfer from the Jordan University budget. In addition, fees from patients and deductions from the university employees' insurance scheme make up about 33% of its funds. Several of the largest private sector employers carry third party health insurance for their staff. However, most people pay for medical services from their own funds.

2.24 Health Sector Personnel. The table below shows the number of health sector personnel and compares Jordan with other countries in its income group.

Table 2: JORDAN: HEALTH MANPOWER, 1982

Category of Personnel	Total	Jordan Population per Staff	Population per Staff Upper Middle-Income Country
Physician	2,696	896	2,021 /a
Dentist	532	4,540	-
Pharmacist	755	3,200	-
Staff Nurse	946	2,550	1,024
Midwife	266	9,080	-
Health Technician	2,996	806	-

/a Figures are for 1980. The comparator figure for nurses is defined as "nursing person" and includes more than "staff nurses."

Although the comparator figures must be treated with caution, the table does indicate the major imbalance in Jordan between the number of physicians and the number of nursing and midwifery staff. A much higher ratio of nurses and midwives to physicians will be needed to provide efficient primary health care over the long term, as discussed later. In the medium term, however, the MOH will need to depend on physicians for major roles in the public health system since: (a) they are available in adequate numbers; (b) physicians are not as "expensive" in Jordan as in many other countries, relative to GNP per capita or to the salaries of other health care personnel.

2.25 Jordan is in the process of developing an extensive training system for health care personnel. It already has the capacity to train physicians in most specialties and is now establishing programs to satisfy the demand for nurses, midwives, technicians, and health care administrators. Dentists were trained outside of Jordan until this year but the University of Jordan now has a dental school.

C. Key Health Sector Constraints

2.26 Overview. Government has made considerable progress in developing the health sector over the last decade. Today, Jordan has a good stock of physicians in most fields and one of the more successful programs in the world for immunization against childhood diseases. The coverage rates for diphtheria, pertussis, tetanus, and polio, for example, are about 80%. The MOH also has relatively efficient systems of procurement, finance, and accounting and an adequate supply for the public health system of appropriate pharmaceuticals.

2.27 However, as noted in comments on mortality, there remains a considerable amount of illness and death which is preventable, particularly among lower socio-economic groups and infants, children, and women of reproductive age. This stems partly from an unsatisfactory

level of coverage of primary health care. The main challenge confronting the health sector is how Government can rapidly and efficiently improve the health of women and young children and reduce the infant mortality rate.

2.28 As noted in paragraph 1.01 and in more detail in the Health Sector Review, there are several areas of the health care system which need improvement. First, the health system does not cover a satisfactory share of the population, particularly of infants, children, and women of childbearing age. Second, some parts of the health care system do not operate efficiently. Third, there are critical imbalances in the availability of key health sector personnel. Finally, planning and management of the health system need to be strengthened. These points are explored briefly below.

2.29 Limited Coverage. Many people do not get essential health care services. This contributes to people becoming ill and dying from preventable diseases. In addition, the failure to prevent illness or treat it at an early stage often makes it necessary for people to seek hospital treatment, which is costly. The problems of limited coverage are particularly important for pregnant women, for infants, and for children. Half of all pregnant women, for example, receive no pre-natal care. In addition, only 10% of all pregnant women receive immunization against tetanus, 40% of all births are not attended by a trained health care professional, and 50% of the infants and children do not receive well baby care. The failure of the system to cover a larger share of the population stems largely from problems of quality and efficiency, as noted below.

2.30 The MOH also fails to provide adequate birth spacing services. The lack of MOH birth spacing services is largely a result of the inability of the MOH, in a sensitive local environment, to formulate a coherent program of birth spacing services which it expects its staff to carry out as a high priority. High fertility and short birth intervals have a deleterious effect on the health of mothers and children and further improvements in life expectancy will depend largely on reducing the infant mortality rate. In addition, the MOH provides birth spacing services to only 1% of the target group and the contraceptive prevalence rate for the country as a whole is only 26%. Hence, it is essential for health reasons that the public health system expand its provision of birth spacing services. It is also critical to improve the MOH provision of birth spacing services because the MOH is the most important potential supplier of those services to the lower socio-economic groups which are most in need of them and among whom there is an unmet demand for services, according to recent studies.

2.31 Health, Population, and Nutrition Education. The MOH has only recently begun to develop health, population, and nutrition education. There are few trained health educators and there are not yet enough trained Jordanians to staff fully the health education unit in the MOH

or any health education posts at the governorate levels. Largely for this reason, Jordan has not encouraged health education until recently. Hence, few health education materials have been developed, the media provide little information about health, family planning, or nutrition, and there are almost no health education materials in MOH or other public facilities. Communications are very good in Jordan and it should be relatively easy to provide health, population, and nutrition information to all Jordanians once the MOH develops appropriate and suitable materials.

2.32 Efficiency. The MOH needs to improve the efficiency and quality of its health care system as it seeks to expand coverage. First, it must take a more active approach to providing primary health care since the primary health care system has traditionally waited for people to come to it rather than seeking out people in need. Second, the MOH needs to address "structural" issues concerning MCH services. The inability of the health care system to cover a larger share of the most vulnerable groups stems partly from the separation between MCH care and other primary care, as noted earlier. It also stems from a shortage of midwives and the fact that physicians and other health care personnel do not offer much MCH care in the absence of midwives. Lastly, the MCH centers offer different services on different days, rather than all services each day, and this, too, discourages women from seeking MCH services for themselves and their children. Taken together, these factors make it inconvenient and costly in time and energy for a woman to get pre- and post-natal care for herself and well baby care for her children.

2.33 Problems of quality and the lack of some services also discourage people from seeking health care in MOH centers. Village clinics, for example, are generally staffed by a male nurse who can deal with only simple health problems. In addition, many women, particularly among the lower income groups, do not feel comfortable seeking MCH care from a male nurse. Moreover, more than 90% of the MCH centers and PHCs are housed in rented buildings, many of which are unsuitable for use as a medical facility. Generally, they lack a laboratory, physicians are absent when attending village clinics, and many do not provide dental services. Hence, people frequently avoid going to the center nearest their home and go instead to hospital polyclinics.

2.34 A similar and even more critical situation exists concerning childbirth. At the moment, a woman may deliver a baby either at home or in the hospital, which may be quite distant from the woman's home. There is no intermediate level facility close to most communities in which a woman who is not at high risk can deliver. This factor is a major reason why 40% of all births are not attended by a trained health care professional and why the vast majority of attended births take place in hospitals in the major cities.

2.35 The lack of services of acceptable quality has, in fact, contributed to an overwhelming demand for outpatient care at hospital clinics and for hospital maternity services. As a result, relatively

expensive hospital services are frequently used for activities which could be carried out more efficiently at a lower level of the health care system. In addition, the demand for hospital services has frequently been much greater than the hospitals could meet and quality has suffered as a result. Specialists in hospital outpatient clinics, for example, often see 60 to 70 patients per day and some hospital maternity services are overcrowded and forced to send some women home shortly after delivery who ought to remain in the hospital for health reasons.

2.36 Health Sector Personnel. Jordan does not have the right numbers or the right types of personnel to carry out the most critical health care services. First, there is an absolute shortage of midwives, female nurses, and laboratory technicians, and many of the small number of qualified nurses are expatriates with language barriers which decrease their efficiency. Second, the vast majority of qualified nurses and midwives work in hospitals, leaving few to serve in the primary health care system. Third, there is a surplus of general practitioners and physicians in some specialties. At the moment, for example, there is a waiting list of about 150 general practitioners who seek employment in the MOH. Finally, there are few qualified health care administrators.

2.37 The MOH also needs to address some questions of training and career development for health sector personnel. The education of many health personnel, for example, lacked attention to public health issues, maternal and child health care, and family planning. This is especially true of physicians, most of whom have been trained outside of Jordan, and who will need some public health training to play their role efficiently in the new service delivery model for primary health care. In addition, the separation of MCH care from other primary care has led to the feeling among MOH personnel that MCH care belongs to midwives, rather than being a priority which all health care personnel should address. Third, general practitioners have little chance for increasing financial rewards other than by becoming a specialist. Lastly, it has been difficult to encourage Jordanian women to become nurses and midwives. Many Jordanians perceive these to be low status occupations and families have been unwilling to send their daughters away from their communities to pursue them.

2.38 Health Sector Planning and Management. Government needs to improve several areas of health sector planning and management. Improvements are required in the MOH management information system since the MOH has lacked the statistical information necessary to plan and manage the sector. There are also important gaps in Jordan in the supervision of health care personnel. The staff available for supervision have not grown with the rest of the system and personnel at all levels are carrying out their work with insufficient supervision. The referral system also needs strengthening. To encourage people to use services closest to their homes, the MOH will need to improve the quality of its primary health care services and put in place a more efficient referral system. The MOH also needs to employ an increasing number of professional

health care administrators. Health care services at the moment are almost always managed by physicians with little training in administration. Finally, Government must improve long-term planning for the health sector, since health conditions and the demands on MOH services are changing rapidly, and since looming financial constraints on Government's recurrent expenditures will require increasing attention to the cost-efficiency of health care services. To address these issues, it will also be necessary to improve budgeting and accounting procedures and generate better information on the cost of particular services.

III. GOVERNMENT'S STRATEGIES FOR THE HEALTH SECTOR

A. Overview

3.01 The Government proposed in its 1981-85 development plan to extend the coverage of health services by strengthening primary health care activities, and constructing 36 new health centers and 150 new MCH centers. Government also planned to construct 2,300 hospital beds.

3.02 Government has revised its plan targets due largely to unanticipated financial constraints and the conclusions of a recent review of sectoral priorities. The most important change in investment plans was the decision to suspend most of the program for hospital construction and focus MOH efforts, instead, on primary health care.

3.03 The MOH has also decided to reorganize its approach to primary health care and to referral care in order to make the health care system more dynamic and more efficient. The new MOH approach will be based on a comprehensive series of measures linking improvements in health services, training, health education, management, and health facilities. The efforts that are planned follow many of the conclusions of the Health Sector Review and the outcome of the Bank's sector policy discussions with Government and the main aim of the proposed project would be to help the MOH implement this new service delivery model, as described below.

B. Health Services

3.04 The chart on the next page compares the structure of the public health system as it is now with the proposed structure. As a first step toward putting its new delivery model in place, the MOH has begun to integrate MCH services into regular primary health care services. Henceforth, all PHCs will offer MCH services, as well as other primary health care services. In addition, all services will be available any time the facilities are open and physicians will be responsible for MCH care in facilities in which there is no midwife. Finally, the MOH will not build any MCH centers separate from PHCs and will phase out the existing MCH centers, almost all of which rented, when the coverage of regular primary health care centers will allow it.

Table 3: PRESENT AND PROPOSED ORGANIZATION OF MOH SERVICES

	Level/Function	Present System	Proposed System	Major Organizational Change
I	Referral Hospital	Al Bashir Hospital	Al Bashir Hospital	Some outpatient and maternity care will be decentralized to CHCs.
II	General Hospital	Regional Hospitals	Regional Hospitals	Some outpatient and maternity care will be decentralized to CHCs.
III	Referral in Basic Specialties and Maternity Services	Polyclinics at General and Referral Hospitals for Referrals and Hospitals for Maternity Services	Comprehensive Health Care Centers (CHC)	CHC is new type of facility. Referral in basic specialties, and some maternity and emergency services will be offered at this level for the first time. CHCs will also offer primary care to the adjacent populations.
IV	Primary Health Care	Primary Health Care Centers and Maternal and Child Health Centers	Primary Health Care Centers (PHC)	MCH Services will be fully integrated into primary care services and laboratory and dental services added to PHCs.
V	Village Level Primary Care	Village Clinics	Village Clinics Outreach Teams	Physicians will visit Village Clinics more often. Mobile outreach teams will be established to expand coverage and improve follow-up.

3.05 The MOH will also assign two physicians in the future to each PHC. They will share responsibilities for full-time service at a primary center and visits daily to each related village clinic. They will also be responsible for overseeing the health program in schools in their catchment area. As noted earlier, PHCs now have one physician who divides his time between a PHC and several village clinics, making it difficult to provide services of acceptable quality in either setting. In addition, the physicians at PHCs will be specialists in family medicine and the MOH now requires that physicians live in the communities where they serve. These policies aim to provide physicians with better careers in the MOH, ensure that physicians in PHCs have a good understanding of the health problems of the areas they serve, and expand the coverage of care.

3.06 All PHCs in the future will have a dentist and a simple laboratory. These measures will provide needed services closer to people dependent on the MOH and should decrease demand for hospital services. In addition, PHCs will be the base for mobile outreach teams which the MOH will establish. The aim of those teams will be to identify people who need care but do not seek it, encourage people to register with MOH facilities for primary health care, treat people in less accessible areas, and assist the MOH to follow-up on health matters in the communities. The mobile teams will focus their attention on the health needs of pregnant women, infants, and children.

3.07 The MOH will also establish a new level of the health system comprising "comprehensive health care centers" (CHCs). The CHCs will aim at expanding coverage of primary health care, referral care in the basic specialties, emergency services, and maternity services. They will also aim at improving the quality and efficiency of primary and referral care by providing some maternity and referral care outside of hospitals. CHCs will: (a) serve as primary care centers for adjacent populations; (b) serve as referral centers in internal medicine, pediatrics, obstetrics and gynecology, and general surgery for related primary care centers; (c) provide basic maternity services; and (d) provide basic emergency, x-ray, and laboratory services.

3.08 The MOH will put a special emphasis on maternal and child health care. In particular, the MOH will try to increase pre- and post-natal care of pregnant women, the attendance of deliveries by a health care professional, and well baby care for infants and young children. The MOH has set specific targets for these activities which are discussed in paragraph 5.02.

3.09 The Government does not have an explicit nutrition policy. However, it does monitor the growth of children and the nutritional status of pregnant women as part of its MCH services. These activities will be expanded as the MOH improves its primary health care system. In addition, the integration of MCH care into the regular primary health care program means that the staff of all health centers, and not just MCH centers, will be responsible for dealing with nutritional problems, particularly among women and children.

3.10 Government's policy on family planning has been to: (a) provide information on birth spacing as part of MCH care; (b) offer birth spacing services on request in public health facilities, as a health measure; (c) allow voluntary associations and private physicians to offer family planning information; and (d) allow voluntary associations and private physicians to provide birth spacing services on request, also as a health measure.

3.11 The MOH plans to improve its provision of birth spacing services as part of its efforts to strengthen MCH care and the health of women, infants and children. Toward this end, the MOH is preparing a guide for its staff on how birth spacing services should be provided. The MOH will also carry out regular upgrading courses for its staff on MCH care, including birth spacing. MOH personnel will also participate in training courses on birth spacing which are offered by public agencies like WHO and UNFPA and private voluntary agencies like the International Planned Parenthood Federation.

C. Health Manpower Development

3.12 Government is also taking steps to deal with health manpower issues. The Jordan Medical Society, for example, is tightening its licensing requirements for foreign-trained physicians and Government is discouraging the continued use of foreign fellowships for training physicians. Government has also taken successful measures to increase the number of female nurses, midwives, and medical technicians in training and has been registering and upgrading traditional birth attendants. First, Government has established three training centers, on a temporary basis, and two would be established permanently with Bank assistance under the Fourth Education Project and the proposed Manpower Development Project. In addition, Government recently promised communities that young women who study the health professions will be sent back to their own communities to serve and this seems to have contributed to the fact that the number of female candidates for nursing schools tripled this year. Government has also counselled secondary students to study these fields and offered monetary incentives to health care personnel in these categories and to those serving in rural areas. Finally, Government is taking steps to meet other key personnel needs: it will soon begin physicians' residency programs in emergency medicine and in family medicine; it has increased the public health content of nurses' training programs; and Jordan University has started a graduate program in health care administration.

D. Health, Population, and Nutrition Education

3.13 Government is implementing a health education project which USAID is assisting. Under that project, the MOH has prepared a five-year plan for developing health education and the first goal of that plan is for the MOH to establish a core group of health educators at the central level. Those staff will develop the program for health education and be responsible for preparing health education materials or getting them prepared in collaboration with the private sector. The MOH will also

place a health educator in the medical directorate of each governorate. They will be responsible for supervising the implementation of health education programs. Staff at all levels will be given responsibilities for health education and sanitarians will be trained to work as health/environmental educators. The Health Education Division has recently completed work on an immunization campaign and it is preparing for campaigns in the future on: child diarrhea and oral rehydration therapy; anti-smoking; breastfeeding, weaning and child nutrition; and home sanitation. To support these efforts, the USAID-assisted project is financing the services of a health education specialist, overseas fellowships for central and governorate level staff, and the local training of the health/environmental educators.

E. Planning and Management

3.14 Government is also implementing a USAID-financed project to improve health sector planning. That project has led to useful studies on patterns of disease and to the creation of a new management information system for the MOH which it is now putting in place. In addition, a number of Jordanians will be trained in planning and management under the project, which is scheduled to end later this year.

3.15 The MOH is also developing a new referral system, which should be in place by early 1987. This will be an essential part of the effort to decentralize referral care to the CHCs and try to prevent people from bypassing the appropriate level of the health care system and going, instead, directly to hospital outpatient clinics. In addition, the MOH is devising measures to improve supervision of its primary health care program. These include appointing a physician in each governorate who will be a supervisor of health centers and establishing an "audit" system for measuring center performance and quality. These steps should be implemented by late 1986. In the future, physicians at PHCs will have increased responsibilities for supervising the activities of the village clinics. They will also supervise the work of the mobile teams. The CHC administrator will supervise the activities of the PHCs.

F. PHC and CHC Facilities

3.16 The MOH will improve health care facilities as rapidly as feasible to: (a) physically integrate MCH services into regular primary care services; (b) provide primary health care in appropriate facilities; and (c) establish CHCs as required. The MOH will also provide supplementary equipment to existing facilities to enable them to carry out the new service delivery model. In line with the above, the MOH will upgrade some village clinics into PHCs. It will also begin to replace existing MCH centers and existing PHCs which are in rented facilities with new facilities. Lastly, it will convert some PHCs which it owns into CHCs and construct some new CHCs. Most of the improvements of facilities which are planned for the next five years would be financed under the proposed project.

G. Community Involvement

3.17 Communities will play an important role in the new approach to primary health care. First, the health education program will aim at providing communities with information they can use to improve their

own health status -- through, for example, better hygiene, reduced smoking, improved nutrition, and appropriate home treatment of illnesses like diarrhea. Second, health educators, sanitarians, outreach teams, and staff of health centers will work with community leaders to identify health problems and community residents who are not satisfactorily covered by the public health system. A special effort will be made in this way, for example, to identify pregnant women and children under six who need health care services. Third, communities which want new MOH services will be asked to donate land to the MOH as a sign of their interest in better health care. Fourth, communities will participate in periodic meetings with MOH staff and the staff of MOH facilities to help to identify and find solutions to community health problems. Jordan has a well-defined community structure and communities are already participating in the above activities. The MOH plans to build upon existing community efforts to enhance community participation in the future.

IV. THE BANK'S ROLE

A. Previous Involvement

4.01 The Bank in recent years has helped Government to improve access to basic social services and develop projects with high potential in agriculture and industry. With the first objective in mind, the Bank has financed a series of projects in education, urban development, and water supply. In addition, the Bank is financing three activities which directly relate to the health sector. The Fourth Education Project is financing the construction in Irbid of a training institute for nurses, midwives, and technicians. That part of the project was delayed for about two years, largely because of site changes due to the suspension of the hospital building program. However, work on that component is speeding up and the Institute should open for the school year beginning September 1987. The Amman Urban Development Project financed the construction of two health centers which the MOH is operating successfully. The Bank is also helping to finance a research project which is examining the impact of that urban project on the health of people in the affected community. The Manpower Development Project, which has recently been appraised, would finance the establishment of a training center for health personnel in Zarqa. That center would offer the same programs of study as the Irbid Paramedical Institute financed under the Fourth Education Project. The Bank also plans in the next five years to finance other projects in education, water supply and urban development, all of which will have important effects on health status.

B. Rationale for Future Bank Involvement

4.02 The proposed project would be the first World Bank lending operation in Jordan which focuses on the population, health, and nutrition sectors. There are several justifications for Bank involvement in this operation. First, the project is in line with the overall strategy of World Bank assistance to Jordan. Second, there are still serious health problems in Jordan which need to be addressed as a matter of high priority.

Third, the shared concern of the Bank and Government for more equitable and efficient provision of health services in Jordan led Government to request the Bank to carry out the health sector review and to the development of the proposed project. Fourth, the Bank has discussed sector strategy with the MOH extensively during both sector work and project preparation and the Bank believes that the MOH approach to addressing its most important sectoral issues is a reasonable one. It is well-focused on maternal and child health and at the same time helps to address some sector-wide problems of efficiency. Finally, no other external assistance agencies are prepared to assist Jordan in financing a project which will take a comprehensive approach to improving primary health care and referral care.

4.03 For the above reasons the proposed project has been built around Government's health sector strategy and aims at helping the MOH put into place its new service delivery program for primary health care and for referral care in the basic specialties, as discussed in paragraphs 3.01 to 3.17. In addition, the health care program that would be implemented under this project would be used in health centers to be established under the Second Amman Urban Development Project, which is under preparation. It would also be supported by staff who would be trained in institutions assisted by the Fourth Education Project and the proposed Manpower Development Project.

V. THE PROJECT

A. Project Objectives

5.01 The goals of the project are to assist in reducing morbidity and mortality in Jordan which result from preventable causes, with a special focus on the health problems of mothers and children. The project would address these goals by helping to expand the coverage and improve the quality and efficiency of primary health care, including birth spacing, and of referral care in the basic specialties. The project would put in place the foundations of a new service delivery model, which would be expanded throughout Jordan, if successful.

B. Project Targets

5.02 The Government has established specific targets for improving health care which it aims to meet during the life of the project. It plans to : (a) increase the share of pregnant women who receive pre-natal care from the MOH from 20% to 40% of all pregnancies; (b) increase the share of deliveries which are attended by MOH staff from 30% to 40% of total deliveries; (c) increase the share of couples who get contraceptive services from the MOH from 1% to 6% of the eligible couples; and (d) increase the share of children under six years of age who get MOH well baby care from 15% to 30% of all children under six.1/ If these targets are achieved

1/ MCH services in Jordan focus on children under six years of age, rather than under five, as in most countries.

and there is no increase in the share of services of the other providers, then the percent of women who get pre-natal care will rise from 60 to 80; the percent of births which are attended will go from 60 to 70; the contraceptive prevalence rate will rise from 26% to 31%; and, the percent of children under six getting well baby care will increase from 50 to 65. Achieving these targets should assist considerably in reducing mortality and morbidity in women, infants, and children.

C. Project Beneficiaries

5.03 The main beneficiaries of the project would be:

(a) About 140,000 people, or 6% of the population, who are expected to make use of the primary health care centers related to the project. Of this group, the project would provide suitable access to primary health care facilities for the first time to about 25,000 people.

(b) About 200,000 people, or 8% of the population, who are likely to make use of the comprehensive health centers financed under the project for primary care.

(c) About 930,000 people, or 37% of the total population, who are expected to use the CHCs for referral care. This number includes people in groups (a) and (b) above.

5.04 A large share of the beneficiaries of the project would be people from the lower socio-economic groups in Jordan. Three of the CHCs, for example, would be located in urban poverty areas. Most other CHCs and PHCs would be located away from major cities and be oriented toward providing services to people who are not well served at present. About 37% of the people who would make use of the new PHCs and CHCs would be women of child-bearing age and children under six.

D. Summary Project Composition

5.05 The project would be implemented over about a seven year period between 1985 and 1992 and would finance the investments noted below.

Expansion and Improvement of Health Care Services

- (a) The establishment of 25 new primary health care centers.
- (b) The refurbishing of 9 existing primary health care centers.
- (c) The establishment of 13 new comprehensive health care centers.
- (d) The refurbishing of 4 existing primary health care centers to make them into comprehensive health care centers.

The new model for health care delivery would be implemented first in these facilities.

Development of Health Sector Personnel

The residency training of 175 physicians, the post-graduate training of 20 health care administrators and 60 nurses' trainers, and the pre-service training of 40 nurses, 90 midwives, 195 practical nurses, and 235 medical technicians.

Expansion of Health, Population, and Nutrition Education

Audio-visual equipment, materials and vehicles to expand health, population, and nutrition education to the community level.

Strengthening Health Sector Planning, Management, Research and Evaluation

Funds for local consultants to assist the MOH in carrying out mid-term and final evaluations of the project, research on key sector topics, and preparation of future projects. The project would also include office furniture, equipment, and vehicles for project management.

E. Detailed Project Description

5.06. Health Care Services. To assist Government in putting in place its new service delivery model, the project would finance civil works, equipment, furniture, and vehicles needed to establish 25 new PHCs, refurbish 9 existing PHCs, establish 13 new CHCs, and convert 4 PHCs into CHCs. The total cost of these efforts would be about US\$20.9 million equivalent, or 68% of the total project costs. Nineteen of the 25 new PHCs would replace existing PHCs which are operating in unsuitable rented facilities. Six of the new PHCs would be built in areas which do not have acceptable access to primary health care at present. The map at the end of the report shows the locations of the facilities to be aided by the project.

5.07 The PHCs would serve populations which average about 5,100 people. As noted earlier, they would have two physicians, who would share responsibility for the center and related village clinics. They would also have a midwife responsible for MCH services, a dentist, and a simple laboratory. PHCs would offer maternal and child health care, including: pre- and post-natal care, birth spacing information and services, well baby care, immunizations, and health and nutrition education. They would also offer identification and treatment of chronic and communicable diseases, first-line curative services, basic laboratory services, and dental care. As noted earlier, the MOH will continue to encourage the use of oral rehydration therapy for appropriate cases of diarrhea and it is likely that oral rehydration salts will be produced in Jordan in the near future.

5.08 CHCs would have an average catchment population of about 91,000. CHCs would serve as a primary health care center for the immediately adjacent population and for these services would have one or more family physicians, a midwife, a dentist, nursing staff, and laboratory services. As discussed previously, CHCs will also serve as referral centers for primary health

care centers in their catchment areas for cases in internal medicine, pediatrics, obstetrics and gynecology, and general surgery. Each CHC would have at least one full-time specialist in each of those fields except general surgery; a general surgeon would work only part time in some centers. Specialists in other fields would visit the center on a part-time basis as the need for their services is established. CHCs would also have a 6 to 12 bed maternity section to handle normal deliveries and a section for handling uncomplicated emergencies. CHCs would be managed by physicians with training in health care administration and they would supervise PHCs in their catchment area.

5.09 The demand for services and the staffing, equipment, and facilities that would be required to meet that demand have been based on data on the present use of services in Jordan and norms for service delivery which the MOH developed during project preparation. Key assumptions and norms were:

(a) PHCs will cater to 60% of the people in urban areas and 80% of the people in rural areas. These assumptions are based on present patterns of demand.

(b) The demand for PHC care will be about four visits per year per person. This is a relatively high figure for a developing country but consistent with Jordanian patterns of use and the large proportion of pregnant women and children in the population.

(c) When the new referral system is put in place, physicians at the PHCs will refer about 15% of their cases to CHC specialists or to the CHC for laboratory work. This will probably decrease over time to about 10%.

(d) Physicians at the PHCs should see from 30 to 50 patients per day.

(e) Physicians in the basic specialties should see 20 to 30 patients per day.

5.10 Estimates of demand were made on the basis of the above assumptions for each catchment area. The MOH then calculated the required number of staff for each center using the norms it had established. On the same basis, the MOH formulated a standard list of equipment and materials which would be needed. Finally, the MOH established space norms for each service area of the PHCs and CHCs and the Ministry of Public Works (MOPW) prepared prototype architectural designs.

5.11 The MOH selected the locations for proposed facilities on the basis of a review of facilities nationwide and criteria agreed with the Bank. These criteria included socio-economic status of the communities, availability of transportation and communication, access to health services of other providers, and size of population. The method of site selection favored areas which are poor, have limited access to other providers,

do not have good communications, but which do have at least 5,000 people for PHCs. The recommendations of local health directors were also considered. Government expects communities to donate land for PHCs as a sign of their commitment to the importance of improving health services. The criteria for locating CHCs were similar to those for PHCs. However, they also took account of the number of PHCs which would refer to each CHC and the potential for reducing demand for hospital outpatient services.

5.12 One prototype design has been formulated for PHCs. It contains 367 square meters, is based firmly on the planned services, and is about 40% smaller than similar facilities built earlier. Three prototype designs have been formulated for the CHCs which are considerably smaller than the few early versions of comprehensive centers in Jordan. Three of the CHCs to be constructed would contain 730 square meters, seven would have about 800 square meters, and the three urban centers would have about 1,000 square meters.

5.13 Health Manpower Development. The project would finance that part of the MOH training program for health sector personnel which is needed to put the new service delivery model in place. About 800 MOH staff would receive long-term training under the project and about 2,000 staff would participate in continuing education workshops. This component would cost US\$8.4 million equivalent, equal to 27% of the total project cost. A small part of the training is not offered in Jordan and would be carried out abroad. The majority of the training would be carried out in Jordan - in ongoing programs or in programs which are being established to meet the demands of the new MOH system. Staff who are selected for pre-service training will be committed to working in the new health care facilities to which they are assigned for one to two years for each year of training.

5.14 Twenty-four managers for the CHCs would be trained at Jordan University in a recently established two-year masters degree program in health care administration. Upon completion of their studies in Jordan, the trainees would participate in three-month internships in health care facilities abroad, under government or bilateral financing.

5.15 Ninety-five specialists in family medicine would be trained in two-year local residency programs to staff the PHCs and the primary care services of the CHCs. Forty-five specialists in emergency medicine would be trained in two-year local residency programs for the emergency sections of the CHCs. These residency programs will begin in 1986. The project would also finance the local training in two-year residencies of a total of 25 specialists in internal medicine, pediatrics, and obstetrics/gynecology to assist in staffing the referral sections of the CHCs.

5.16 The project would finance the local training of 60 nurses' trainers who will become teachers at nurses' training institutions. The MOH will select experienced nurses who show promise of being good nursing educators and give them intensive training during a three-month period. They will

then be paired with experienced nursing education specialists whose work is being supported by the Overseas Development Administration of the United Kingdom (ODA) and USAID. In addition, the project would include the local training of 40 registered nurses in three-year programs, 90 midwives in two-year programs, 195 assistant nurses in 18-month programs, and 235 medical technicians in two-year programs. These staff would be trained in ongoing programs in Jordan, which Government is in the process of making more oriented toward public health.

5.17 Finally, the project would include funds for 40 MOH staff to participate in short-term international training programs related to primary health care. It would also finance three types of local workshops which would be carried out to prepare staff to meet the aims of the new service delivery model: (a) workshops for 300 physicians; (b) workshops for 750 auxiliaries; and (c) workshops for training staff of new facilities as they prepare to begin operations. The workshops would be intensive and would usually be three to five days long. The unit cost of the workshops is estimated at US\$60 equivalent, per participant, which would be reasonable. The MOH already has considerable experience in operating workshops for continuing education; the workshops for the staff of project-assisted centers would be new for the MOH and based on "Project Launch" activities which have worked successfully in several Bank-assisted projects in the urban sector.

5.18 Health, Population, and Nutrition Education. The proposed Bank assistance would help the MOH to implement its five-year plan for health education, which was discussed in paragraph 3.13 and would complement the USAID-financed health education project which is helping the MOH to strengthen the Division of Health Education at the central and governorate levels. Essentially, this component would help the MOH to carry health education directly to the community level. The project would finance equipment, audio-visual materials, and vehicles for health education outreach and the supervision of health education activities. The equipment and materials would be based in the health centers to be established under the project. This component would cost about US\$0.7 million equivalent, equal to 2% of the total project cost.

5.19 Health Sector Planning and Management. The cost of this component would be US\$.6 million equivalent, equal to 2% of the total project cost. This component would include about US\$135,000 equivalent, for equipping, furnishing, and providing office materials for the Project Management Unit. It would also include about US\$320,000 equivalent for consultant services to support the evaluation of this project and research related to key sector topics. Lastly, this component would include about US\$145,000 equivalent to finance consultant services to help the MOH develop future projects in the health, population, and nutrition sectors. The Directorate of Planning, Training, and Research of the MOH would oversee research activities carried out under the project and it is expected that much of the work would be carried out jointly by the MOH and the academic community. The Bank and government have already agreed on the outlines of a five-year research program and from 1986 to 1991 the MOH would oversee a study each year on

one of the following topics: health manpower problems; cost of health services; efficiency of public and private services; outstanding issues in nutrition; and, maternal and child morbidity and mortality. During negotiations, government gave assurances that it would review with the Bank by September 30 each year the proposals for research to be conducted the following year. Government would also carry out a mid-term evaluation of the project by December 31, 1988, and a final evaluation by December 31, 1991, and during negotiations, the government also gave assurances to that effect.

VI. PROJECT COSTS AND FINANCING PLAN

A. Cost of the Project

6.01 The total cost of the project is estimated at US\$30.5 million equivalent. The foreign exchange component of the project would be about US\$15.0 million equivalent, or about 49% of the total project cost. The breakdown of project costs by project component and by category of expenditure is given on the next page and shown in detail in Annex 3. The Government would waive all identifiable taxes and duties related to project-financed items.

6.02 The base cost estimates for goods and services to be financed under the project are for March 1985. The estimated unit costs of civil works would be US\$304 equivalent per square meter and is based on the unit costs of recent contracts for the construction of similar works and on final architectural designs. The cost estimates for furniture, equipment, and vehicles are based on final lists of items and on the costs of similar items procured in 1984. The cost of local training takes account of recent experiences in Jordan. The cost of short-term overseas training is estimated at US\$24,000 per staff-year, including all expenses, and is based on recent fellowships awarded to Jordanians by bilateral agencies. These base costs are comparable to those for similar items in other countries of the region.

6.03 The project includes contingency allowances of 10% for civil works, furniture, equipment, and vehicles. The overall allowance for price escalation is about 33% of base costs plus physical contingencies. Total contingencies are equal to 40% of base costs. This has been calculated on the basis of the following annual price increases over the project implementation period, for all expenditure categories:

	1985	1986	1987	1988	1989	1990	1991	1992
Local Costs	5%	7.5%	8%	8%	8%	8%	5%	5%
Foreign Costs	5%	7.5%	8%	8%	8%	8%	5%	5%

6.04 The foreign exchange component as a percentage of total costs, has been calculated as follows: civil works (including architectural fees), 46%; furniture, 63%; equipment, 90%; vehicles, 90%; overseas training, 90%; local training, 10%; and consultant services, 10%.

JORDAN PRIMARY HEALTH CARE PROJECT
Table 4: ESTIMATED COSTS BY COMPONENT
(in millions of JD and US\$)

Component	JD			US\$			Z Base Cost
	Local	Foreign	Total	Local	Foreign	Total	
A. Improving Health Care Services	2.2	3.6	5.8	5.7	9.0	14.7	67.0
B. Health Manpower Development	2.1	0.4	2.5	5.3	1.0	6.3	29.0
C. Expanding Health Education	0.0 1/	0.2	0.2	0.0 1/	0.4	0.4	2.0
D. Strengthening Planning, Management Research and Evaluation	0.1	0.1	0.2	0.3	0.1	0.4	2.0
Base Cost	4.5	4.1	8.6	11.3	10.5	21.8	100.0
Physical Contingencies	0.2	0.4	0.6	0.6	1.0	1.6	7.0
Price Increases	1.4	1.4	2.8	3.5	3.5	7.1	33.0
TOTAL COST	6.1	5.9	12.0	15.5	15.0	30.5	140.0

JORDAN PRIMARY HEALTH CARE PROJECT
Table 5: ESTIMATED COSTS BY CATEGORY OF EXPENDITURE
(in millions of JD and US\$)

Category	JD			US\$			Z Base Cost
	Local	Foreign	Total	Local	Foreign	Total	
A. Civil Works	1.9	1.6	3.5	4.9	4.1	9.0	41.0
B. Furniture	0.2	0.4	0.6	0.4	1.0	1.4	6.0
C. Equipment	0.1	1.3	1.4	0.4	3.2	3.6	16.0
D. Vehicles	0.0 1/	0.5	0.5	0.1	1.2	1.3	6.0
E. Overseas Fellowships	0.1	0.2	0.3	0.1	0.4	0.5	2.0
F. Local Training	2.1	0.2	2.3	5.2	0.6	5.8	27.0
G. Consultant Services	0.1	0.0 1/	0.1	0.3	0.0	0.3	2.0
Base Cost	4.5	4.1	8.6	11.3	10.5	21.8	100.0
Physical Contingencies	0.2	0.4	0.6	0.6	1.0	1.6	7.0
Price Contingencies	1.4	1.4	2.8	3.6	3.5	7.1	33.0
TOTAL COST	6.1	5.9	12.0	15.5	15.0	30.5	140.0

NOTE: Row and Column totals may not agree due to rounding.

1/ A small amount is not shown due to rounding.

B. Project Financing Plan

6.05 An I.B.R.D. loan of US\$13.5 million equivalent would finance about 44% of the total net-of-tax project cost. The Government would provide financing of US\$17.0 million equivalent, which would equal about 56% of the total net-of-tax project cost. The Bank loan would finance the foreign exchange costs of civil works, equipment, furniture, and vehicles. This would equal 90% of the foreign exchange costs of the project. The Government would finance all of the local costs of the project and the foreign exchange costs of overseas and local training, equal to 10% of the foreign costs of the project. The Government would finance these foreign costs because the costs of local training are included in the regular MOH recurrent budget and because bilateral agencies are likely to assist government in financing the short-term overseas training related to this project. The financing plan is summarized below and given in greater detail in Annexes 4 and 5.

JORDAN PRIMARY HEALTH CARE PROJECT
Table 6: FINANCING PLAN BY CATEGORY OF EXPENDITURE
 (in US\$ millions) *

Category	Total Base Cost	Local Cost	Foreign Cost	GOJ Financing	IBRD Financing
Civil Works	9.0	4.9	4.1	4.9	4.1
Furniture	1.4	0.4	1.0	0.4	1.0
Equipment	3.6	0.4	3.2	0.4	3.2
Vehicles	1.3	0.1	1.2	0.1	1.2
Overseas Fellowships	0.5	0.1	0.4	0.5	0.0
Local Training	5.8	5.2	0.6	5.8	0.0
Consultant Services	0.3	0.3	0.0	0.3	0.0
Total Base Cost	21.9	11.4	10.5	12.4	9.5
Physical Contingencies	1.5	0.5	1.0	0.5	1.0
Price Contingencies	7.1	3.6	3.5	4.1	3.0
TOTAL COST	30.5	15.5	15.0	17.0	13.5

C. Costs of the New Service Delivery Model

6.06 The Bank and Government have estimated the unit costs of services to be provided in the PHCs and CHCs to be constructed under the project. The cost per outpatient visit to a PHC would be about US\$5.50 equivalent.

That would include the cost of all services - clinical exam, laboratory work, and drugs and is about the same as the cost per outpatient visit at existing PHCs, which provide essentially no laboratory services. The cost per outpatient visit to a private general practitioner in Jordan is about US\$7.50 equivalent. The cost per outpatient visit at a CHC is estimated at US\$5.00 equivalent. This would be about the same as the present cost of outpatient services at hospital clinics and is considerably less than the US\$15.00 equivalent which private specialists receive per outpatient visit. One must treat these comparisons as indicative because the MOH does not carry out program budgeting and accounting and the cost of existing services is a rough estimation. Nonetheless, the above analysis suggests that the unit cost of services under the new model would be about the same or slightly less than under the existing model. Moreover, one expects services under the new model to be of higher quality than present services are for reasons noted in Section III of the report.

D. Project Recurrent Costs

6.07 At full operation in 1992, the project-assisted programs would add about US\$2.8 million equivalent per year to the annual recurrent budget of the MOH. This would equal about 5% of the 1985 recurrent budget of the Ministry of Health and about .3% of the 1985 national recurrent budget. Thus, the project would have a relatively limited impact on the absolute amount of the national recurrent budget. The national recurrent budget would have to grow by only .03% per year and the recurrent budget of the Ministry of Health would have to grow by only about .5% per year from 1985 until 1992 to meet project-related recurrent costs when all project-financed institutions would be in full operation. Even under very pessimistic assumptions of growth for the Jordanian economy, these incremental costs should not be difficult to meet.

6.08 The Bank has reviewed with Government the recurrent costs that would be generated by implementing the new delivery system nationally between now and the year 2000, when the population of Jordan is projected to be 4.3 million. The cost at that time of operating a CHC for each 100,000 people would be about JD1.3 million per year. This would be equal to about 6% of the 1985 budget of the MOH and could be achieved in the year 2000 with an annual real growth of the MOH budget of .4% between 1985 and 2000. The MOH could probably meet the needs for PHCs in the year 2000 by establishing 200 new PHCs, 100 to replace existing PHCs and MCH centers and 100 to expand coverage. It would cost the MOH about JD5.0 million to operate those PHCs, equal to about 23% of the 1985 MOH recurrent budget. The MOH budget would have to grow in real terms by 1.3% per year between 1985 and 2000 to meet these expenses. Jordan is in the midst of rapid social and economic change and it is not possible to determine what the pattern of use of health services will be in the future. The above analysis suggests, however, that the new service delivery model would be an affordable basis for providing MOH primary and referral care in the future.

VII. PROJECT IMPLEMENTATION

A. Status of Project Preparation

7.01 The status of project preparation is well advanced. The Bank has extensively reviewed with Government its new program for health care delivery and the Bank and Government have agreed to the proposed staffing of each facility to be established or improved under the project. In addition, the Bank has approved the lists of equipment, furniture, and vehicles to be financed under the project and the project-financed training program. The Bank has also approved final designs for the PHC model and the two models of CHC which would be built in the first phase of construction. The MOH has acquired 26 of 38 sites, sufficient to begin the first phase of construction on schedule.

7.02 The MOH has already begun to implement some of the changes in health care services which relate to the project, including offering MCH care at all health centers, providing regular MCH services at all times, rather than only on certain days, and requiring that physicians live in the communities in which they serve. In addition, a number of MOH teams are preparing manuals and circulars for MOH staff on specific responsibilities for supervision, general MCH services, maternity services, and birth spacing services. The Bank has already reviewed much of the information which will be contained in the manuals. The MOH should be ready to begin construction of project-financed health care facilities in January 1986, about three months after the anticipated date of loan effectiveness.

B. Project Management Arrangements

7.03 The MOH would be responsible for the execution of all project components and has created a Project Management Unit (PMU) to coordinate project implementation. A project director, two architects, a civil engineer, a procurement specialist, an accountant, and support staff are already employed in the PMU and the director and the architects had major roles in the preparation of the project. During negotiations, government gave assurances that it would maintain the PMU during the project implementation period and staff it, at least, with a full-time director, two architects, an accountant, a procurement specialist, and adequate support staff.

7.04 The PMU is a regular unit of the MOH which is linked to the Office of the MOH Undersecretary. It would coordinate the execution of project-financed activities which would be carried out by regular line units of the ministry. The MOH has also established a Project Advisory Committee to advise the Project Management Unit on issues that may arise. The MOH Undersecretary is the chairman of the committee and all MOH Department Directors are committee members. The committee will meet once per month or at the request of any member.

7.05 The Department of Primary Health Care would be responsible for implementing the new service delivery model. The Division of Health Care

Centers within that Department would take a major part in those efforts. The Health Education Division of the Primary Health Care Department would be responsible for implementing the expanded program for health, population, and nutrition education. The Department of Planning, Training and Research would be responsible for implementing the training and planning and research components of the project. That department has coordinated project preparation and would assist the Director of the PMU in coordinating the overall project.

7.06 The MOH has not previously implemented a project assisted by the World Bank and had difficulties managing its component of the Fourth Education Project due to unclear responsibilities for project execution within the MOH. To help address these factors, the MOH for the proposed project has established precise managerial guidelines for all staff involved in the project. These are contained in a handbook for project management which the MOH prepared and which indicates the stages of all administrative activities, responsibility for the activity, and the maximum time permitted to carry it out. The handbook also contains implementation plans for each component of the project. As noted in paragraph 7.02, the MOH is also preparing an implementation manual for each health service activity related to the project which will serve as guides for MOH staff in the field who will be carrying out the new service delivery program.

C. Specialist Services and Fellowships

7.07 The project would not finance any specialist services from outside of Jordan. However, the project would finance the research costs of consultants recruited from the academic and health communities in Jordan who would assist in carrying out project related research and evaluation studies and in preparing future health sector projects. Project preparation funds would also be used for architectural services. During negotiations, government gave assurances that it would submit to the Bank for review the terms of reference and qualifications of specialists to be financed under the project.

7.08 The project would finance about 9 staff-years of short-term overseas training for health center administrators and public health specialists. During negotiations, Government gave assurances that it would submit to the Bank by July 31 of each year during implementation, an outline of proposed training programs for the following calendar year. The Government has a well-enforced "bonding program" for trainees. Students trained at public expense in the health professions must serve in a government post two years for each year of training or they must repay government the full cost of their training. However, females who are trained in nursing and midwifery must serve only one year for each year of training -- the reduction being an effort to encourage females to enter these fields.

D. Sites

7.09 The Government has already identified almost all of the sites on which it intends to construct facilities under the project. In addition, it

has acquired 26 of the 38 required sites which is more than sufficient to initiate on schedule the first phase of project related construction. During negotiations, government gave assurances that it would acquire all of the remaining sites by July 31, 1986, which would give sufficient time for the second phase of construction to begin on schedule.

E. Procurement

7.10 The table below summarizes procurement arrangements:

Table 7: PROCUREMENT BY CATEGORY OF EXPENDITURE, INCLUDING CONTINGENCIES
(US\$ millions)

Category	P R O C U R E M E N T M E T H O D			
	ICB	LCB	Other	Total Cost
Civil Works	12.31 (5.64)	0.20 (0.09)	-	12.51 (5.73)
Furniture	1.80 (1.24)	0.25 (0.15)	-	2.05 (1.39)
Equipment	4.91 (4.44)	0.32 (0.26)	-	5.23 (4.70)
Vehicles	1.87 (1.68)	-	-	1.87 (1.68)
Overseas Fellowships	-	-	0.68 (0.00)	0.68 (0.00)
Local Training	-	-	7.75 (0.00)	7.75 (0.00)
Consultant Services	-	-	0.47 (0.00)	0.47 (0.00)
TOTAL	20.99 (13.00)	0.77 (0.50)	8.90 (0.00)	30.56 (13.50)

NOTE: Figures in parentheses are the respective amounts financed by the Bank.

7.11 Architectural Design and Supervision. The MOH has appointed the Ministry of Public Works to prepare architectural studies for the project and to supervise project-financed construction. The architects in the PMU will liaise with the MOPW on behalf of the Ministry of Health and coordinate the architectural program with other parts of the project. The MOPW will recruit private consultant architects in accordance with Bank guidelines to assist it in carrying out supervision and the estimated cost of architectural services reflects the cost of private services.

7.12 Civil Works. The remodeling to be carried out under the project is simple work that would cost less than US\$50,000 equivalent for any individual contract and has an aggregate value of only US\$200,000 equivalent. Therefore, the MOH would award contracts for this work in accordance with LCB procedures which the Bank has found to be generally satisfactory. Contracts for new construction have an estimated value of US\$12.31 million equivalent and would be awarded in accordance with ICB procedures acceptable to the Bank.

7.13 Goods. The value of equipment, furniture, and vehicles to be procured under the project would be about US\$9.15 million equivalent. The MOH would group furniture, equipment, and vehicles to the extent possible in large contracts for bulk procurement. The MOH would award contracts for packages exceeding US\$100,000 equivalent on the basis of ICB. Items which cannot be grouped in bid packages of more than US\$100,000 would be procured on the basis of LCB procedures which the Bank has found generally satisfactory. The procurement of equipment, vehicles, and furniture by means other than ICB would be subject to an aggregate limit of US\$0.8 million equivalent - or 9% of the total value of goods to be procured under the project.

7.14 Preferences. In the comparison of bids obtained on the basis of ICB, qualifying domestic manufacturers would be allowed a margin of preference equal to the existing rate of customs duties applicable to competing imports or 15% of the CIF price, whichever is lower.

7.15 Bank Review Requirements. The Bank would review prior to contract award: (a) all construction contracts in excess of US\$250,000 equivalent; and (b) all contracts for goods which are in excess of US\$150,000 equivalent. Contracts falling in the above categories are expected to be about 75% of the total estimated value of goods and civil works to be procured under the project. Other contracts would be subject to Bank review after contract award.

F. Disbursements

7.16 The proceeds of the I.B.R.D. loan would be disbursed as follows:

<u>Category</u>	<u>Amount US\$ Million Equivalent</u>	<u>Percent of Expenditures to be Financed</u>
1. Works (including architectural fees)	4.9	100% of foreign expenditures and 46% of local expenditures
2. Furniture	1.2	100% of foreign expenditures and 60% of local expenditures
3. Equipment and Vehicles	5.5	100% of foreign expenditures and 80% of local expenditures
4. Unallocated	1.9	
Total	<u>13.5</u>	

7.17 The disbursement schedule is given in Annex 9. That schedule is based on a project implementation period of about seven years. The disbursement profile for all Population, Health and Nutrition Projects (PHN) is about 10 years and there are no profiles for Jordan or for PHN projects in the EMENA region. The profile for the proposed project is shorter than the overall PHN profile since (a) the project is an advanced state of preparation; (b) Jordan has a good disbursement record; (c) the loan would finance only straightforward activities which are to be carried out in the first four years of the project. The Project Completion Date would be June 30, 1992, and the Project Closing Date would be December 31, 1992.

7.18 To facilitate payments to contractors and suppliers and to expedite disbursements, a revolving fund would be established in a commercial bank in Jordan, in an initial amount of US\$500,000. The World Bank would replenish that fund each month on the basis of standard documentation for reimbursable expenditures. During negotiations, Government gave assurances that it would establish and operate the revolving fund in a manner satisfactory to the Bank. All disbursements would be fully documented except those against contracts valued at US\$10,000 equivalent or less. Disbursements against those contracts would be made on the basis of statements of expenditure. The documentation for disbursements made against statements of expenditure would be correlated with related withdrawal applications and they would remain on file in a single location and made available for review by Bank representatives during supervision.

G. Accounts and Audits

7.19 The project management team would establish accounts for the project in accordance with internationally accepted accounting procedures. During negotiations, the Government gave assurances that:

- (a) it would maintain satisfactory accounts;
- (b) it would maintain separate accounts on the revolving fund;
- (c) annual audits of project expenditures would be carried out by independent auditors acceptable to the Bank;
- (d) the audits would be conducted annually and the accounts and audit would be submitted to the Bank for review within six months of the close of the Government's fiscal year; and
- (e) the auditor would give a separate opinion on the revolving fund and on statements of expenditure.

Following the pattern of other Bank-assisted projects in Jordan, the Government's Auditor General's Office would serve as the independent auditor of the project.

H. Project Monitoring and Evaluation

7.20 The PMU would monitor the day-to-day implementation of the project and would submit to the Bank progress reports every four months. The PMU would also coordinate efforts to carry out the mid-term and final evaluations of the project discussed earlier. During negotiations, Government gave assurances that it would submit a Project Completion Report to the Bank within six months of the project Closing Date. The Directorate of Planning, Training, and Research of the MOH would monitor the effect of the project on health care services and the extent to which the MOH meets the project targets noted in paragraph 5.02. The MOH, in conjunction with the two universities in Jordan, would also carry out studies of the impact of the project and of specific program improvements related to the project, as noted in paragraph 5.19.

VIII. PROJECTS BENEFITS AND RISKS

A. Benefits

8.01 The main benefit of the project would be a reduction in mortality and morbidity, particularly of people in lower socio-economic groups and of infants, children, and women of childbearing age. These should come about as the public health system expands coverage and improves the quality of primary care, including birth spacing services, maternity care, and

referral care in the basic specialties. If the project meets its targets, as noted in paragraph 5.02, it would produce an increase of: 33% in the share of pregnant women who get pre-natal care; 17% in the share of deliveries which are attended by a health care professional; 20% in the contraceptive prevalence rate; and, 35% in the share of children under six years of age who get well baby care. These benefits would accrue even if there were no increases in the services of other providers, and would represent major improvements in the ability of the MOH to provide care, particularly to those who depend on it for health services.

8.02 The project would also have three other important benefits. First, the MOH is using the project as a basis for developing and implementing comprehensive health planning norms for the first time, concerning estimates of demand, required case loads, and space allocations (para. 5.09). The use of norms will considerably improve health planning in Jordan. Second, the project would improve the efficiency of the public health system by providing better quality services at the same or lower unit costs. Providing improved primary care, maternity and referral care, and health education closer to communities will also involve communities more in improving their own health and hygiene practices. Finally, the approach to health care taken in this project would be expanded throughout Jordan, if it is successful.

B. Risks

8.03 The main risks of the project would be: (a) demand for services may be less than planned; (b) people may continue to bypass lower levels of the system; and (c) health care personnel may continue to take a passive approach to health care and not focus sufficiently on outreach, preventive care, and MCH care. The demand for services is always difficult to predict, particularly when there are several providers. The risks of overestimating demand have been limited by concentrating services on areas most dependent on the MOH, setting clear and efficient norms for staffing, equipping, and designing facilities, and making estimates on the basis of the best available data on present patterns of use. A new referral system would be put in place; coupled with improvement in quality, it would limit the risk that people will not seek care at lower levels of the system. It will, of course, take time to change the orientations of the public health system. However, the comprehensive approach of the project, the involvement of MOH staff and communities in the project, and the large amount of project-related training would all encourage change in the right direction.

IX. AGREEMENTS REACHED AND RECOMMENDATIONS

9.01 During negotiations, government provided assurances that it would:

- (a) carry out a mid-term evaluation of the project by December 31, 1988 and final evaluation of the project by December 31, 1991 (para. 5.19);
- (b) review annually with the Bank by September 30 the proposals for project-related research to be carried out the following year (para. 5.19);
- (c) maintain a Project Management Unit during the project implementation period and staff it with a full-time director, two architectural staff, an accountant, a procurement specialist and adequate support staff (para. 7.03);
- (d) submit to the Bank for review the terms of reference and qualifications of specialists recruited under the project (para. 7.07);
- (e) submit to the Bank each year by July 31 the proposed project-related training program to be carried out the following calendar year (para. 7.08);
- (f) acquire by July 31, 1986 all sites for construction to be financed under the project (para. 7.09);
- (g) establish and operate a revolving fund for the project in a manner satisfactory to the Bank (para. 7.18);
- (h) submit accounts and audit reports to the Bank within six months of the close of each fiscal year (para. 7.19);
- (i) submit a Completion Report to the Bank within six months of the Closing Date (para. 7.20).

9.02 Subject to the above assurances and conditions, the project constitutes a suitable basis for an IBRD Loan of US\$13.50 million equivalent to the Hashemite Kingdom of Jordan.

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**HASHEMITE KINGDOM OF JORDAN
PRIMARY HEALTH CARE PROJECT
HEALTH AND POPULATION DATA SHEET ¹**

ANNEX 1
Page 1 of 2

<u>A. General Country Data</u>		<u>Year</u>
1. Population Estimate (millions)	2.5	1983-84
2. Population Projection (millions)	4.3	2000
3. GNP per Capita (US\$)	1,690	1982
4. Urban Population (% of total)	70	1982
5. Adults Literate (% of population 12+ years of age)	70	1982
6. Area (East and West Banks) (km ²)	98,000	1982
7. Population Density (East and West Banks) (per km ² of agricultural land)	203.9	1981
 <u>B. Population</u>		
1. Crude Birth Rate (per 1,000)	45	1982-84
2. Crude Death Rate (per 1,000)	11	1983
3. Annual Rate of Population Growth (%)	4.0	1983
4. Annual Rate of Natural Increase (%)	3.4	1983
5. Total Fertility Rate	7.0	1983
6. Infant Mortality Rate (per 1,000)	69	1983
7. Life Expectancy at Birth (years)	64	1982
8. Population Age Structure (%)		
0-14 years	50.6	1983
15-64 years	46.5	1983
65+ years	2.9	1983
9. Women in Childbearing Ages (15-49 years of age as % of total population)	18.0	1982
10. Percentage of Women of Childbearing Age Using Contraception	26.0	1983-84
 <u>C. Health Sector Resources</u>		
1. Doctors per 1,000 Population	1.2	1983
2. Hospital Beds per 1,000 Population	1.8	1983
3. Short-Stay Beds per 1,000 Population	1.6	1982
4. Governmental Expenditure on Health as % of GDP	2.6	1982
5. Governmental Expenditure on Health as % of GNP	2.1	1982
6. MOH Budget as % of Total Governmental Budget	2.7	1983
 <u>D. Hospital Utilization</u>		
1. Total Admissions per 1,000 Population	91	1983
2. Total Patient days per 1,000 Population	410	1983
3. Average Occupancy Rate (%)	62.2	1983
4. Average Length of Stay (days)	4.5	1983
5. Percent of Hospital Beds Located in Amman	71.9	1983

¹Unless otherwise indicated, all data refer to the East Bank only.

Data are recent estimates made by the appraisal mission and are based on the following documents:

- (a) IBRD, 1984. World Development Report;
- (b) IBRD, EPD, 1984. Social Indicators Data Sheet, Table 3A (June);
- (c) IBRD, PHN, 1984. Jordan Health Sector Review (Report No. 4748-JO) (May 25);
- (d) Jordan Fertility and Family Health Survey, 1983;
- (e) Hashemite Kingdom of Jordan, Ministry of Health, 1982 and 1983. Annual Reports, Amman;
- (f) Hashemite Kingdom of Jordan, Ministry of Health, 1984. Estimates prepared based on results of 1982 and 1983 Annual Reports, Amman.

HASHEMITE KINGDOM OF JORDAN
PRIMARY HEALTH CARE PROJECT
STAFF APPRAISAL REPORT

MAIN DOCUMENTS AVAILABLE IN THE PROJECT FILE

A. Bank Documents

Jordan Health Sector Review, (Report No. 4748-JO), World Bank, May 25, 1984.

B. Project Proposal

"Project Preparation Information," Ministry of Health, July 19, 1984.

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"Supplementary Information for the Project Proposal," Ministry of Health, November 1984.

"Draft Project Implementation Manual," Ministry of Health, January 1985.

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C. USAID Documents

Jordan: Health Education Project, USAID, 1980.

Jordan: Health Management and Services Development, USAID, 1983.

D. Other Background Information

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Jordan Demographic Survey, 1981: A Summary of Results, Laboratories for Population Statistics, June 1983.

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Jordan Five Year Development Plan (1981-1985), Jordan National Planning Council, 1981.

"Maternal and Child Health Services," Abbas, Dr. Adnan, 1983.

Statistical Yearbook of the Ministry of Health, Ministry of Health, 1982; 1983 (in Arabic).

JORDAN PRIMARY HEALTH CARE PROJECT

ESTIMATED COSTS BY CATEGORY OF EXPENDITURE AND PROJECT COMPONENT

(US\$'000)

Category of Expenditure	COMPONENT				Base Cost	Physical Contingencies	Price Contingencies	TOTAL COST
	Improving Health Care Services	Health Manpower Development	Expanding Health Education	Strengthening Planning Management, Research and Evaluation				
Civil Works	8,987.6	-	-	-	8,987.6	898.7	2,624.6	12,510.9
Furniture	1,371.9	-	-	28.4	1,400.3	140.0	506.4	2,046.7
Equipment	3,316.9	-	225.7	38.2	3,580.8	358.1	1,288.1	5,227.0
Vehicles	1,073.5	-	214.8	30.4	1,318.7	131.9	424.7	1,875.3
Oversess Fellowships	-	465.8	-	-	465.8	46.6	169.3	681.7
Local Training	-	5,788.0	-	-	5,788.0	-	1,967.0	7,755.0
Consultant Services	-	-	-	354.4	354.4	-	112.6	467.0
Base Cost	14,749.9	6,253.8	440.5	451.4	21,895.6	1,575.3	7,092.7	30,563.6
Physical Contingencies	1,474.9	46.7	44.0	9.7	1,575.3	-	-	-
Price Contingencies	4,647.8	2,136.2	168.8	139.9	7,092.7	-	-	-
TOTAL COST	20,872.6	8,436.7	653.3	601.0	30,563.6	-	-	30,563.6

NOTE: Row and Column totals may not agree due to rounding.

April 2, 1985

JORDAN PRIMARY HEALTH CARE PROJECT
FINANCING PLAN BY PROJECT COMPONENT
 (US\$'000)

Component	Total Base Cost	Local Cost	Foreign Cost	GOJ Financing	IBRD Financing
Improving Health Care Services	14,749.9	5,736.0	9,013.8	5,736.0	9,013.8
Health Manpower Development	6,253.8	5,255.8	998.0	6,253.8	-
Expanding Health Education	440.5	44.0	396.5	44.0	396.5
Strengthening Planning Management Research and Evaluation	451.4	344.9	106.5	370.4	81.0
Base Cost	<u>21,895.6</u>	<u>11,370.8</u>	<u>10,524.8</u>	<u>12,404.2</u>	<u>9,491.3</u>
Physical Contingencies	1,575.3	584.3	991.1	626.2	949.2
Price Contingencies	7,092.7	3,622.0	3,470.8	4,033.2	3,059.5
TOTAL COST	<u>30,563.6</u>	<u>15,577.1</u>	<u>14,986.7</u>	<u>17,063.6</u>	<u>13,500.0</u>

NOTE: Row and column totals may not agree due to rounding.

April 2, 1985

JORDAN PRIMARY HEALTH CARE PROJECT
FINANCING PLAN BY CATEGORY OF EXPENDITURE AND PROJECT COMPONENT
 (US\$'000)

Category	COMPONENT												Base Cost	Physical Contingencies	Price Contingencies	Grand Total
	Improving Health Care Services			Health Manpower Development			Expanding Health Education			Strengthening Planning, Management, Research and Evaluation						
	Total	GOJ	INRD	Total	GOJ	INRD	Total	GOJ	INRD	Total	GOJ	INRD				
	Base Cost	Financing	Financing	Base Cost	Financing	Financing	Base Cost	Financing	Financing	Base Cost	Financing	Financing				
Civil Works	8,987.6	4,858.0	4,129.6	-	-	-	-	-	-	-	-	-	8,987.6	898.7	2,624.6	12,510.9
Furniture	1,371.9	439.0	932.9	-	-	-	-	-	-	28.4	9.1	19.3	1,400.3	140.0	506.4	2,046.7
Equipment	3,316.9	331.6	2,985.3	-	-	-	225.6	22.6	203.0	38.2	3.8	34.4	3,580.8	358.1	1,288.1	5,227.0
Vehicles	1,073.5	107.5	966.0	-	-	-	214.9	21.5	193.4	30.4	3.1	27.3	1,318.7	131.9	424.7	1,875.3
Overseas Fellowships	-	-	-	465.8	465.8	-	-	-	-	-	-	-	465.8	46.6	169.3	681.7
Local Training	-	-	-	5,788.0	5,788.0	-	-	-	-	-	-	-	5,788.0	-	1,967.0	7,755.0
Consultant Services	-	-	-	-	-	-	-	-	-	354.4	354.4	-	354.4	-	112.6	467.0
Base Cost	14,749.9	5,736.0	9,013.8	6,253.8	6,253.8	-	440.5	44.1	396.4	451.4	370.4	81.0	21,895.6	-	-	-
Physical Contingencies	1,474.9	573.6	901.3	46.7	46.7	-	44.0	4.5	39.5	9.7	1.3	8.4	1,575.3	-	-	-
Price Contingencies	4,647.8	1,744.6	2,903.2	2,136.2	2,136.2	-	168.8	16.4	152.4	139.9	92.0	47.9	7,092.7	-	-	-
GRAND TOTAL	20,872.6	6,054.2	12,818.3	8,436.7	8,436.7	-	653.3	65.0	588.3	601.0	463.7	137.3	30,563.6	1,575.3	7,092.7	30,563.6

NOTE: Row and column totals may not agree due to rounding.

April 2, 1985

ACTIVITIES	Calendar Year												
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
I. HEALTH SERVICES													
A. CIVIL WORKS													
1. NEW CONSTRUCTION													
SITE SELECTION AND ACQUISITION													
TOPOGRAPHICAL SURVEY													
SOIL TESTS													
PRELIMINARY DESIGN													
FINAL DRAWINGS													
SITE DEVELOPMENT PLANS													
RFD DOCUMENTS													
RFD APPROPRIATION													
BIDDING													
RFD EVALUATION													
CONTRACT AWARD													
CONSTRUCTION													
GUARANTEE AND LIABILITY													
2. REPAIRS													

NOTE: Some activities will be carried out in two phases. In those cases, the top line indicates phase one and the bottom line, phase two.

April 2, 1985

XOJAN PRIMARY HEALTH CARE PROJECT
SUMMARY PROJECT IMPLEMENTATION SCHEDULE

ANNEX 6

Page 2 of 3 Pages

Calendar Year	1984			1985			1986			1987			1988			1989			1990			1991			1992		
ACTIVITIES	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd			
B. FURNITURE AND EQUIPMENT																											
<u>PRELIMINARY LISTS</u>																											
FINAL LISTS																											
BID DOCUMENTS																											
BID ADVERTISEMENT																											
BIDDING																											
BID EVALUATION																											
CONTRACT AMEND																											
MANUFACTURING & DELIVERY																											
C. VEHICLES																											
III. HEALTH WORKER DEVELOPMENT																											
<u>A. ONSEAS</u>																											
<u>B. LOCAL</u>																											

April 2, 1985

YOUNG PEOPLE'S HEALTH CARE PROJECT
SUMMER PROJECT IMPLEMENTATION SCHEDULE

ANNEX 6
 Page 3 of 3 Pages

Calendar Year	1984	1985	1986	1987	1988	1989	1990	1991	1992
III. HEALTH EDUCATION	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th
A. FURNITURE & EQUIPMENT									
B. VEHICLES									
IV. PLANNING, MANAGEMENT, RESEARCH AND EVALUATION									
A. STUDIES									
B. VEHICLES/EQUIPMENT FOR PMU									
C. PROJECT MANAGEMENT ACTIVITIES									

April 2, 1985

JORDAN PRIMARY HEALTH CARE PROJECT

ANNEX 7

TRAINING SCHEDULE

	BANK FISCAL YEAR							
	1986	1987	1988	1989	1990	1991	1992	1993
TRAINING								
	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th	1st 2nd 3rd 4th
OVERSEAS								
Health Care Administrators				xxxx 12	xxxx 12			
Training Visits		xxxxxxxx 8	xxxxxxxx 8	xxxxxxxx 8	xxxxxxxx 8	xxxxxxxx 8	xxxxxxxx 8	
LOCAL		xxxxxxxxxxxxxxxxxxxxxxxx 12	xxxxxxxxxxxxxxxxxxxxxxxx 12	xxxxxxxxxxxxxxxxxxxxxxxx 12	xxxxxxxxxxxxxxxxxxxxxxxx 12	xxxxxxxxxxxxxxxxxxxxxxxx 12		
Health Care Administrators		xxxxxxxxxxxxxxxxxxxxxxxx 16	xxxxxxxxxxxxxxxxxxxxxxxx 16	xxxxxxxxxxxxxxxxxxxxxxxx 20	xxxxxxxxxxxxxxxxxxxxxxxx 17	xxxxxxxxxxxxxxxxxxxxxxxx 12		
Family Physicians		xxxxxxxxxxxxxxxxxxxxxxxx 12	xxxxxxxxxxxxxxxxxxxxxxxx 30	xxxxxxxxxxxxxxxxxxxxxxxx 8	xxxxxxxxxxxxxxxxxxxxxxxx 17	xxxxxxxxxxxxxxxxxxxxxxxx 12		
Emergency Physicians			xxxxxxxxxxxxxxxxxxxxxxxx 8	xxxxxxxxxxxxxxxxxxxxxxxx 8	xxxxxxxxxxxxxxxxxxxxxxxx 12	xxxxxxxxxxxxxxxxxxxxxxxx 12		
Nurse/Midwife Trainers			xxxxxxxxxxxxxxxx 15	xxxxxxxxxxxxxxxx 15	xxxxxxxxxxxxxxxx 15	xxxxxxxxxxxxxxxx 15		
Registered Nurses (RNs)		xxxxxxxxxxxxxxxx 10	xxxxxxxxxxxxxxxx 10	xxxxxxxxxxxxxxxx 10	xxxxxxxxxxxxxxxx 10	xxxxxxxxxxxxxxxx 10		
Midwives		xxxxxxxxxxxxxxxx 23	xxxxxxxxxxxxxxxx 23	xxxxxxxxxxxxxxxx 22	xxxxxxxxxxxxxxxx 23	xxxxxxxxxxxxxxxx 22		
Practical Nurses		xxxxxxxxxxxxxxxx 50	xxxxxxxxxxxxxxxx 50	xxxxxxxxxxxxxxxx 50	xxxxxxxxxxxxxxxx 50	xxxxxxxxxxxxxxxx 45		
Technicians		xxxxxxxxxxxxxxxx 60	xxxxxxxxxxxxxxxx 60	xxxxxxxxxxxxxxxx 60	xxxxxxxxxxxxxxxx 58	xxxxxxxxxxxxxxxx 57		
CAR Specialists		xxxxxxxxxxxxxxxx 9	xxxxxxxxxxxxxxxx 9	xxxxxxxxxxxxxxxx 8	xxxxxxxxxxxxxxxx 8	xxxxxxxxxxxxxxxx 8		
WORKSHOPS								
For Physicians	xxxx xxx 3	xxxx xxx 3	xxxx xxx 3	xxxx xxx 3	xxxx xxx 3	xxxx xxx 3		
For Auxiliaries	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10		
For Project Launch	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 10	xxxxxx xx 11		

XXX = period of training
Numbers underneath line show number of people to be trained or number of workshops to be conducted.

April 2, 1985

JUDAH PRIMARY HEALTH CARE PROJECT

ANNEX 8

SUMMARY IMPLEMENTATION SCHEDULE FOR NEW SERVICE DELIVERY MODEL

CALENDAR YEAR	1985	1986	1987	1988	1989	1990	1991	1992
I. IMPROVING SERVICES								
A. INCREASE MOU/PHC								
	XXXXXXXXXXXX							
B. REVISE AND IMPLEMENT SCHEDULE FOR SERVICES								
	XXXXXXXXXXXX							
C. DEVELOP AND DISTRIBUTE MANUALS								
	XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
D. DEVELOP AND IMPROVE SUPERVISION SYSTEM								
	XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
E. DEVELOP AND IMPLEMENT NEW PERSONAL SYSTEM								
	XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
F. OPEN NEW PROJECT FACILITIES								
			XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
II. HANPOWER DEVELOPMENT								
A. TRAIN STAFF								
		XXXXXXXXXXXXXXXXXXXXXXXXXXXX						
B. DEPLOY STAFF IN NEW CENTERS								
			XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
C. PROJECT LAUNCH WORKSHOPS								
			XXXX	XXXX	XXXX	XXXX	XXXX	
III. HEALTH EDUCATION								
A. TRAIN CORE STAFF								
	XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
B. STRENGTHEN GENERAL SERVICES								
	XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
C. DEPLOY COORDINATOR STAFF								
		XXXXXXXXXXXXXXXXXXXXXXXXXXXX						
D. GET MATERIALS IN CENTERS								
			XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
E. CAMPAINS								
	XXXXXX	XXXX	XXXX	XXXXXXXX	XXXX	XXXX	XXXXXX	XXXX
IV. PROGRAM EVALUATION AND RESEARCH								
A. RESEARCH STUDIES								
		XXXX	XXXX	XXXXXX	XXXX	XXXX	XXXX	
B. MID-TERM EVALUATION								
				XXXXXX				
C. FINAL EVALUATION								
							XXXX	

April 2, 1985

JORDAN PRIMARY HEALTH CARE PROJECT

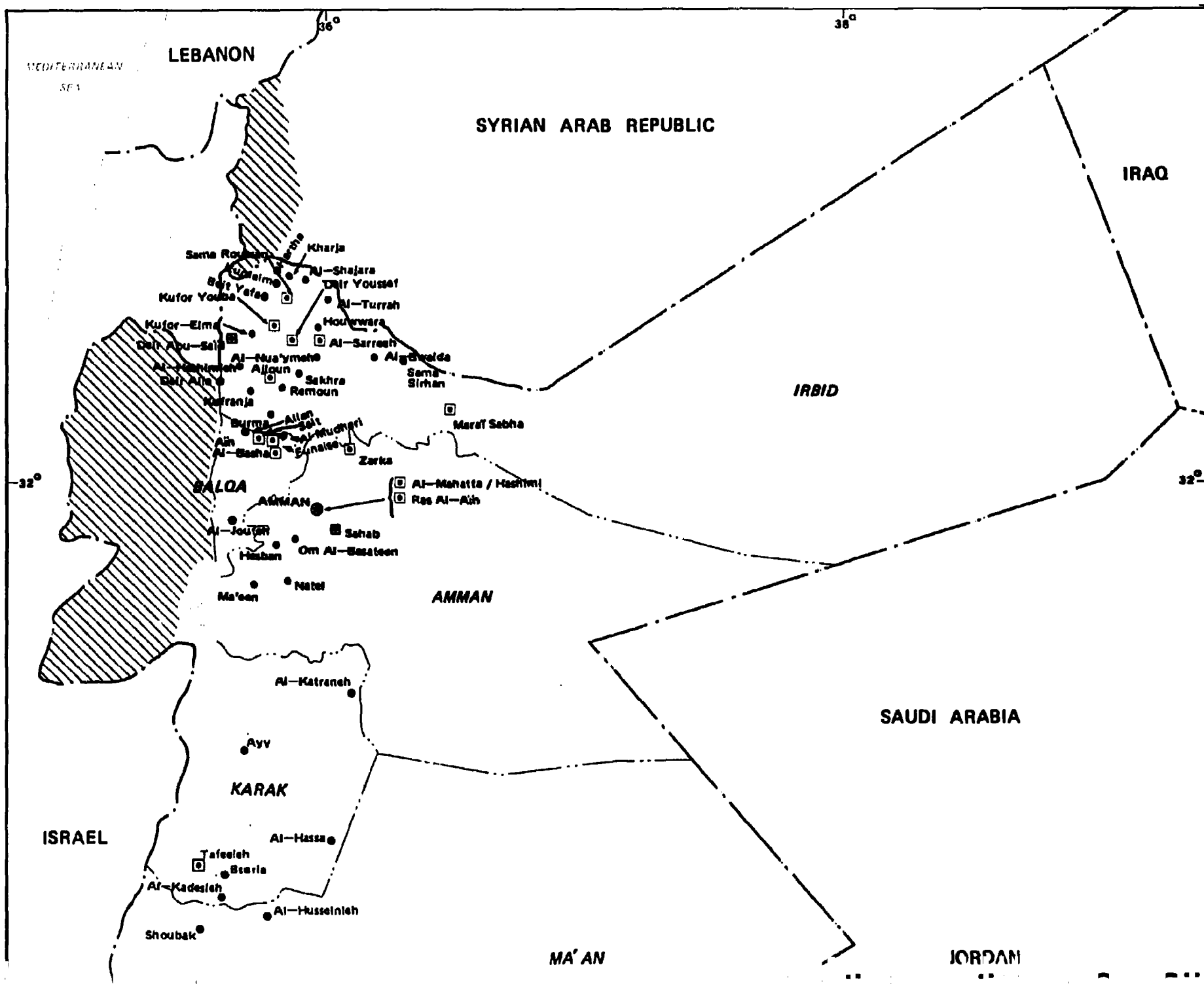
ESTIMATED SCHEDULE OF DISBURSEMENTS

(million US\$)

Fiscal Year/ Semester Ending	Disbursements		Accumulated Disbursements		Undisbursed Balance	
	Amounts	%	Amounts	%	Amounts	%
FY 1985	:	:	:	:	:	:
June 30, 1985	0.0	0.0	0.0	0.0	13.5	100.0
FY 1986	:	:	:	:	:	:
December 31, 1985	0.5	3.7	0.5	3.7	13.0	96.3
June 30, 1986	0.3	2.2	0.8	5.9	12.7	94.1
FY 1987	:	:	:	:	:	:
December 31, 1986	0.4	3.0	1.2	8.9	12.3	91.1
June 30, 1987	0.6	4.4	1.8	13.3	11.7	86.7
FY 1988	:	:	:	:	:	:
December 31, 1987	1.3	9.6	3.1	23.0	10.4	77.0
June 30, 1988	1.4	10.4	4.5	33.3	9.0	66.7
FY 1989	:	:	:	:	:	:
December 31, 1988	1.9	14.1	6.4	47.4	7.1	52.6
June 30, 1989	2.1	15.6	8.5	63.0	5.0	37.0
FY 1990	:	:	:	:	:	:
December 31, 1989	1.7	12.6	10.2	75.6	3.3	24.4
June 30, 1990	1.5	11.1	11.7	86.7	1.8	13.3
FY 1991	:	:	:	:	:	:
December 31, 1990	1.0	7.4	12.7	94.1	0.8	5.9
June 30, 1991	0.5	3.7	13.2	97.8	0.3	2.2
FY 1992	:	:	:	:	:	:
December 31, 1991	0.2	1.5	13.4	99.3	0.1	0.7
June 30, 1992	0.1	0.1	13.5	100.0	0.0	0.0
FY 1993	:	:	:	:	:	:
December 31, 1992	:	:	:	:	:	:

NOTE: Row and column totals may not agree due to rounding.

April 2, 1985



JORDAN FIRST HEALTH PROJECT

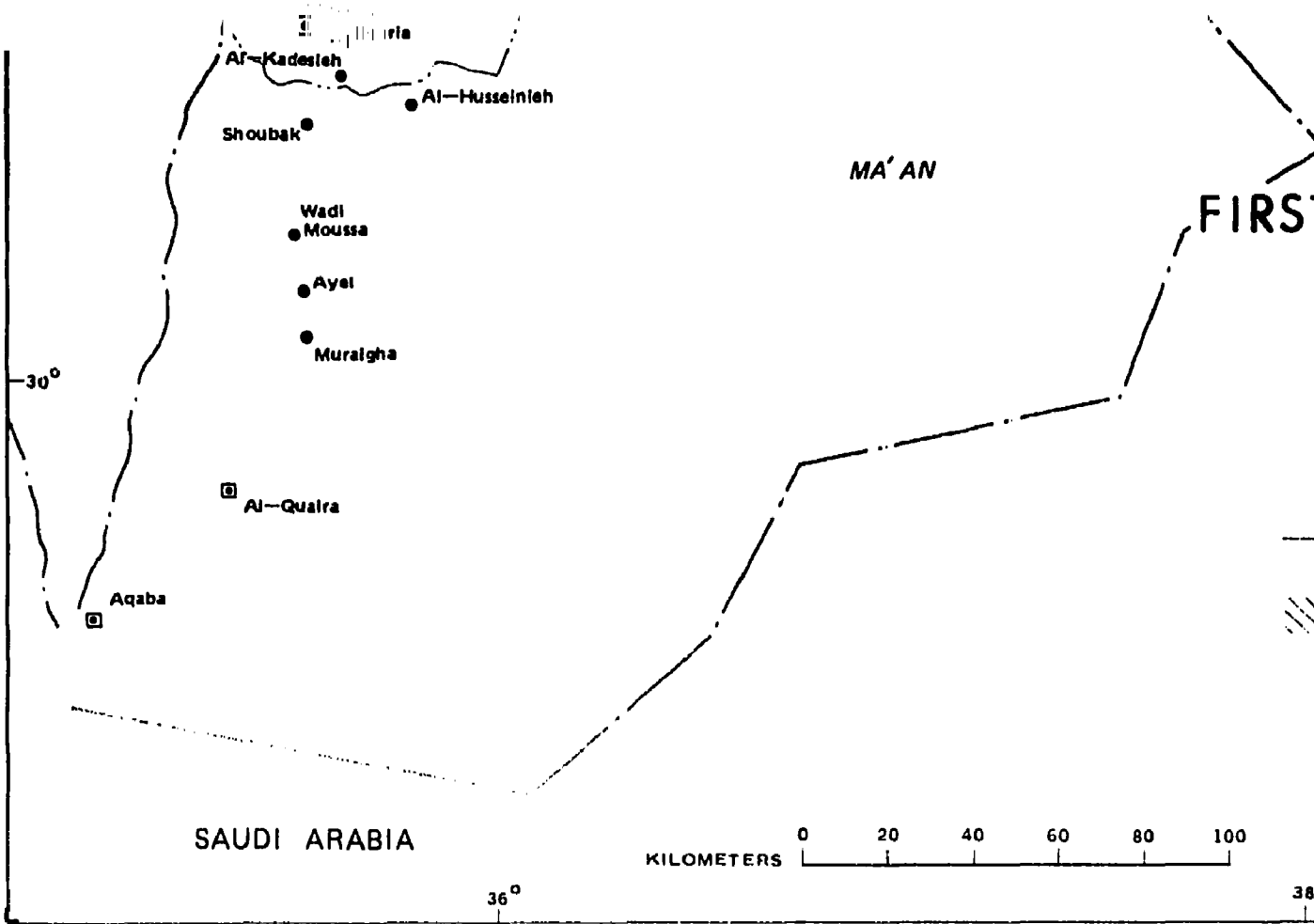
MA'AN

HEALTH CARE CENTERS

- PRIMARY HEALTH CARE CENTERS TO BE UPGRADED (9)
- NEW PRIMARY HEALTH CARE CENTERS (25)
- ◻ PRIMARY HEALTH CARE CENTERS TO BE UPGRADED TO COMPREHENSIVE HEALTH CARE CENTERS (4)
- ◻ NEW COMPREHENSIVE HEALTH CARE CENTERS (13)
- ⊙ NATIONAL CAPITAL
- GOVERNORATE BOUNDARIES

/// OCCUPIED TERRITORIES

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APRIL 1985

IBRD 18690

