

**INTRODUCTION TO HEALTH SITUATION
IN KOREA**
With Special Reference to KIPH Health Research

January 1986

**KOREA INSTITUTE FOR
POPULATION AND HEALTH**

FOREWORD

The purpose of this small booklet is to provide a brief overview of the Korean health situation and related policies and programs. Included are only those program and service areas for which the Korea Institute for Population and Health carries out research.

In spite of rapid Korean economic development, national health programs have expanded at a slow rate, but in the course of past five Five-Year Economic and Social Development Plans, the government has been able to establish comprehensive health planning to provide Health for All by the Year 2,000. The government has been striving to reach a health level for all Koreans that would permit them to lead socially and economically productive lives. In support of the government as it works to reach this goal, KIPH has been undertaking the many health research activities given in the following pages.

We hope this booklet will contribute to your understanding of Korean health programs parallel with your visit to our Institute.

January 1986

A handwritten signature in cursive script, appearing to read 'Chan Moo Park'.

Chan Moo Park, M.D., Ph. D.

President

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I. GENERAL SITUATION

A. Socio-Economic Status

Korea has achieved remarkable economic and social progress through its series of five-year economic development plans launched in 1962. During the twenty three years between 1962 and 1984, the GNP increased at an average rate of 8.4% per annum. As a result, the nation's total GNP grew from \$2.3 billion to \$81.1 billion, and the per capita GNP increased from \$87 to \$1,998, both at current prices. This growth has been propelled by the rapid expansion of commodity trade volume which rose from \$480 million to \$55.9 billion at current prices, and by the rising share of domestic savings in total investment which rose substantially from 25.5% in 1962 to 91.5% in 1984. The nation's industrial structure has been radically transformed; the mining and manufacturing sector increased its share of the GNP from 16.3% to 30.7% during this period.

Socio-Economic Development

Indicators	Unit	1962	1984
Gross National Product (at current prices)	Bil. \$	2.3	81.1
Per Capita GNP (at current prices)	\$	87	1,998
Commodity Trade Volume	Bil. \$	0.48	55.9
Domestic Savings (of total investment)	%	25.5	91.5
Mining & Manufacturing Share (of GNP)	%	16.3	30.7
Employed Population	1,000 pers.	7,662 ^{1/}	14,417
Unemployment Rate	%	8.2 ^{1/}	3.8
Poverty Group (of population)	%	40.9 ^{2/}	9.8 ^{3/}

Notes: 1/, 2/ and 3/ denote figures for 1963, 1965, 1980 respectively.

Source: Economic Planning Board, The Korean Economy: Past Performance, Current Policies, and Future Prospects, 1985.

Parallel with this rapid economic growth, employment opportunities increased; the employed population nearly doubled from 7.7 million to 14.4 million during the same period. As a result, the portion of the population below the absolute poverty line fell from 40.9% in 1965 to 9.8% in 1980.

The Fifth Five-Year Economic and Social Development Plan (1982-1986), which differs from its predecessors in a number of respects, adapted a new approach toward development. The Fifth Plan pays more attention to the well-being of ordinary citizens than any of its predecessors. The basic direction of social development is to provide more jobs and assure equal opportunities in economic activities and upward social mobility. Emphasis is made to expand employment opportunities and enhance the quality of human resource through promoting education and manpower development. Also, policy measures deal with the basic needs: housing, health care, nutrition and other essentials, and developing a social security system.

The Korean government has also begun to prepare the Sixth Five-Year Plan to go into effect in 1987. The ultimate goal of this plan is to remove the remaining obstacles to Korea's development and to prepare for an industrially advanced society by the beginning of the 21st century.

B. Demographic Status

Socio-economic development during the last 25 years have contributed to a fertility decline by changing attitudes toward the small family. Further, the national family planning program policy adopted first in 1962 as part of the five-year economic development plans has also contributed greatly to the fertility decline. The total fertility rate (TFR) declined from 6.0 in 1960 to 2.4 in 1984. The crude birth rate declined from 43.0 to 23.4 per thousand between 1960 and 1980 and the decline was estimated at 23.0 per thousand for 1984.

Thanks to dramatic improvement in health status following socio-economic development, the crude death rate declined from 14.6 to 6.7 per thousand between 1960 and 1980, and a decline of 6.2 per thousand was estimated for 1984. Consequently, the natural population increase rate declined sharply from 2.84 to 1.68 per cent per annum between 1960 and 1984. Considering population mobility, the population growth rate could be said to have declined to 1.57 per cent in 1980 and 1.55 per cent per annum in 1984.

Major Population Indices

Indices	1960	1970	1980	1984
Total Population (thousand)	25,040	32,241	38,124	40,578
Total Fertility Rate	6.0	3.9 ^{1/}	2.7 ^{2/}	2.4
Crude Birth Rate (per thousand)	43.0	32.1	23.4	23.0
Crude Death Rate (per thousand)	14.6	9.4	6.7	6.2
Population Growth Rate (per cent)	2.84	2.21	1.57	1.55
Density (persons/Km ²)	254	319	385	410

Note: 1/ and 2/ denote figures for 1971 and 1981.

Source: Bureau of Statistics, Economic Planning Board, Population Census Data, 1960-1980 and EPB, Fifth Five-Year Economic and Social Development Plan (1982-1986): Population Plan, 1981 KIPH, 1982 National Family Health Survey Data and National Survey on Aged Population, 1984

In spite of the decline of fertility the population grew from 25,040 thousand in 1960 to 38,124 thousand in 1980 and to 40,578 thousand in 1984. With this figure, Korea's population density went up from 254 persons/Km² in 1960 to 385 persons/Km² in 1980 and to 410 persons/Km² in 1984, which is the third highest in the world.

The government set the demographic targets for the Fifth Five-Year Economic and Social Development Plan period (1982-86) at a further reduction of population growth rate to about 1.5 per cent by 1986. The estimated 1982 population, 39.3 million, will reach 41.8 million in 1986. The population goal was originally set assuming that the population replacement level (TFR:2.1) would be attained by 1988, in which case the population growth rate would be 1.0 per cent in 2,000 and the population size would become stable at about 61.3 million in 2050.

Population Projection and Demographic Goals

Year	Population (000)	CBR	CDR	CMR	PGR
1982	39,331	23.3	6.5	1.1	15.8
1984	40,578	23.0	6.2	1.2	15.5
1986	41,839	22.1	5.9	1.2	15.0
2000	50,066	16.9	6.0	1.0	10.0
2050	61,310	13.6	13.6	0.8	-0.8

Source: Economic Planning Board, Fifth Five-Year Economic and Social Development Plan (1982-86): Population Plan, 1981

Our government plans, however, to revise its demographic goals to achieve a 1.0 per cent population growth rate by 1993, so that according to the new projection, the population size will become stable at about 55.7 million in 2030.

A conspicuous change will be the increased ratio of older population, 65 or over, to the entire population. This ratio will reach 6 percent in 2,000 and 14.1 percent (15.5 percent in a newer projection) in 2030 compared to 3 percent in the 1960s, a situation which calls for appropriate welfare measures for the 'grey' population.

There has been a heavy migration from rural to urban areas because of rapid urbanization and industrialization. The urban population ratio shifted from 28.0 in 1960 to 57.3 in 1980, 62.7 in 1984, and is expected to stabilize at 77.2 in 2,000.

II. GENERAL HEALTH SITUATION

A. Health Status

The rapid economic development of the Republic of Korea has brought about dramatic improvement in the health status of Koreans in general. Economic development has been accompanied by rising food intake and consequently a mitigation of the diseases and illnesses related to dietary deficiencies. Substantial investment in water supply systems, sewage disposal facilities, and housing improvements has had a generally desirable impact on health by reducing the incidence of communicable diseases caused by water contamination, crowding, and poor environmental sanitation.

Life expectancy at birth as of 1980 was estimated at 69.1 years for females and 62.7 for males, roughly 15 years more than the average life expectancy during the 1960s. It is estimated at 71.3 for females and 64.9 for males in 1985.

Major Health Indices

Indices	1960	1970	1980	1984
Life Expectancy at Birth ^{a/}				
Male	51.1 ¹⁾	59.8	62.7 ³⁾	64.9 ⁴⁾
Female	53.7 ¹⁾	66.7	69.1 ³⁾	71.3 ⁴⁾
Crude Death Rate ^{b/} (per 1,000 pop.)	14.6	9.4	6.7	6.2
Infant Mortality Rate ^{b/} (per 1,000 births)	62.3 ¹⁾	53.0	36.8	33.3
Maternal Mortality Rate ^{b/} (per 100,000 births)	88 ²⁾	83	42	36

Source: a/ BOS, EPB, The Life Table of Koreans in 1978-79, 1982
EPB, Fifth Five-Year Economic and Social Development Plan (1982-86): Population Plan, 1981

b/ Yearbook of Public Health and Social Statistics, MOHSA, 1970-1985
Kong, Sae Kwon, and others, Mortality and cause of death in Korea, KIPH, 1983

Note : 1), 2), 3) and 4) denote figures for 1955-60, 1968, 1978-79, and 1985, respectively.

The crude death rate has decreased from 14.6 per 1,000 population in 1960 to 6.7 and 6.2 per 1,000 population in 1980 and 1984, respectively. The most sensitive index, infant mortality has also decreased rapidly. There were 62.3 deaths per 1,000 live births in 1955-60, but this fell to 36.8 and 33.3 deaths per 1,000 live births in 1980 and 1984, respectively. The maternal mortality rate decreased from 88 in 1968 to 42 and 36 per 100,000 live births in 1980 and 1984.

As can be seen in the following table, the leading causes of death in Korea in 1953 were communicable and/or infectious diseases such as tuberculosis, pneumonia, bronchitis, and gastroenteritis. In 1983, however, the major causes were such chronic diseases as hypertensive and cerebrovascular diseases, accidents and malignant neoplasm.

Ten Leading Causes of Death in Korea

Rank	1953 ^{1/}	1983 ^{2/}
1.	Tuberculosis	Hypertensive disease
2.	Gastroenteritis	Cerebrovascular disease
3.	Cerebrovascular disease	Accident
4.	Pneumonia, bronchitis	Aging
5.	Nervous system disease	Malignant neoplasm of stomach
6.	Senility	Chronic liver disease and cirrhosis
7.	Heart disease	Traffic accident
8.	Infectious and parasitic disease	Tuberculosis
9.	Malignant neoplasm	Suicide and self-inflicted injury
10.	Unspecified	Emphysema, bronchitis & asthma

Source: 1/ Kim, K.D., Preventive Medicine, 1974
 2/ BOS, EPB, Cause of deaths statistics, 1983

Despite the reduction in mortality, morbidity still remains high. Social statistics gathered by the Economic Planning Board in 1983 indicate that at least 7.6 percent of the population were bedridden for an average of 4.3 days per 2 week period. Though the infectious and/or communicable diseases have been very much reduced, respiratory and digestive system diseases are still the most common, and about 6 percent of the population

are infected with parasitic diseases. While malaria and cholera have practically disappeared, typhoid fever, diphtheria, poliomyelitis, Japanese B. encephalitis, whooping cough, measles and leprosy still occur and tuberculosis still continues to be an important public health problem. The national sample survey in 1980 revealed pulmonary tuberculosis among 2.5 percent of the population.

Ten Main Diseases Causing Morbidity

Rank	Diseases	Percent Distribution (%)
1.	Diseases of the respiratory system	42.1
2.	Diseases of the digestive system	18.0
3.	Diseases of the nervous system and sense organs	8.0
4.	Diseases of the skin and subcutaneous tissue	7.3
5.	Infectious and parasitic diseases	5.6
6.	Diseases of the genito-urinary system	4.9
7.	Accidents poisoning and violence	4.3
8.	Diseases of the musculaskeletal system and connective tissue	3.1
9.	Diseases of the circulatory system	1.6
10.	Mental disorders	1.5

Notes: Patients covered by health insurance in 1984 were analyzed in 17 major classifications.

Source: Yearbook of Public Health and Social Statistics, MOHSA, 1985

B. Health Resources

1. Facilities

In the last two decades, the nation's health facilities have been continuously augmented to meet the health needs of the population. The following table shows the various health facilities available in the country. During the period 1960 and 1984, The number of general hospitals^{1/} and hospitals^{2/} has been increasing steadily and clinics and dental clinics have also increased. The number of oriental medical hospitals or clinics has fluctuated slightly. Midwifery clinics have decreased relatively in inverse proportion to the increase in OB & GY clinics, while pharmacies sharply increased by 6 times. Health centers, responsible mainly for public health, which have been established in each county and district, have increased from 80 in 1960 to 224 in 1984 along with the increase in the number of counties

Changes in Health Facilities

Classification	1960	1970	1980	1984
General Hospital	22	12	82	170
Hospital	128	220	233	310
Clinic	3,863	5,402	6,344	7,584
Dental Hospital/Clinic	757	1,344	2,028	2,752
Oriental Medical Hospital/Clinic	1,779	2,443	2,328	2,628
Midwifery Clinic	963	752	488	503
Pharmacy	2,525	8,439	12,337	15,409
Health Center	80	192	214	224
Health Subcenter	1,347 ^{1/}	1,354	1,321	1,303
MCH Center	—	4 ^{2/}	8	97
Primary Health Post	—	22 ^{3/}	372 ^{4/}	1,310

Notes: 1/, 2/, 3/, and 4/ denote figures for 1967, 1971, 1977, and 1981, respectively.

Source: Yearbook of Public Health and Social Statistics, MOHSA, 1960-1985.

1/ A general hospital must be equipped with more than 80 beds and have at least the following 8 departments; internal medicine, general surgery, pediatrics, obstetrics and gynecology, radiology, anesthesia and dentistry, with the appropriate specialists.

2/ Hospitals must have more than 20 beds.

and districts in province and cities, while health subcenters, which have been established in each town and township, have also increased. There were only 8 MCH centers until 1981, but additional 89 MCH centers have been constructed at the underserved rural area. Primary health posts to take care of the remote rural population have been developed since 1977 and have expanded their coverage.

2. Manpower

The increase in health manpower has kept pace with that of health facilities during the period. As shown in the following table, 28,015 physicians, 4,972 dentists, 28,531 pharmacists, 3,591 oriental medical doctors, 17,501 technicians, 54,081 nurses, 5,991 midwives, and 92,264 nurses-aid had been licensed as of 1984, though not all of them are practicing. Community Health Practitioners – a newly developed category of health worker – deployed as heads of the primary health posts in remote rural areas, totalled 1,310 in 1984 and will be increased to 2,000 sometime in 1986.

Changes in Licenced Health Manpower

Unit: persons

Classification	1960	1970	1980	1984
Physician	7,765	18,184	25,564	28,015
Dentist	1,369	2,122	3,620	4,972
Pharmacist	4,696	14,648	24,366	28,531
Oriental Medical Doctor	2,922	2,828	3,015	3,591
Technician	—	2,403	8,955	17,501
Nurse	4,836	17,958	40,373	54,081
Midwife	4,134	6,182	4,833	5,991
Nurse-aid	—	3,452	61,072	92,264

Source: Yearbook of Public Health and Social Statistics, MOHSA, 1960-1985

Along with the increase in facilities and manpower, the ratio of hospital beds per unit of population and the ratio of health manpower to population have both in general improved greatly. Hospital beds per 100,000 persons increased from 51.3 in 1970 to 99.7 in 1980 and 169.9 in 1984. Population per physician decreased from 1,773 in 1970 to 1,284 in 1984, population per dentist from 15,194 to 8,162, population per pharmacist from 2,201 to 1,422, and population per nurse from 1,795 to 750 during the period 1970 to 1984.

Major Health Resources Indices

Classification	1970	1980	1984
Hospital Beds per 100,000 Persons	51.3	99.7	169.9
Population per Physician	1,773	1,493	1,284
Population per Dentist	15,194	10,552	8,162
Population per Pharmacist	2,201	1,568	1,422
Population per Nurse	1,795	944	750

Source: Yearbook of Public Health and Social Statistics, MOHSA, 1970-1985

3. Sectoral and Regional Distribution

The Korean health system is heavily dependent upon the private sector. Of all the medical facilities except pharmacies given in the previous table, 82.5% were private as of 1984. According to a 1981 report, 72% of the physicians, 80.4% of the dentists, 97.5% of oriental medical doctors practised in the private sector, a fact which has had a strong impact on the availability of health services.

In addition, most private facilities are in urban areas. As of 1984, 80.8% of all medical facilities and 83.2% of hospital beds were in urban areas, while more than 85.3% of all physicians, 81.8% of dentists, 85.4% of oriental medical doctors, and 87.6% of nurses were practising in urban areas, which indicates that access to health services is still somewhat difficult for the rural population.

This maldistribution of health resources has been the result of a laissez-faire policy in health care development and of low public sector investment. As in other countries, the private sector tends to invest more in health care in the cities where the economic demand

for health care is greater than in rural areas. The private health system, has been patterned after those found in the United States of America and Japan, focuses on institutional care of the sick often in highly sophisticated hospitals and is dominated by physicians who are supported by relatively few auxiliary health workers. This limits the quantity of service and the access to and availability of essential health care for the majority. In addition, as a result of changing consumption patterns and the accelerated drive for social development, it can be anticipated that the demand for health care and health care costs will rise rapidly as they have done in most of the developed nations.

The government reinforced its plan to expand the public sector in such areas as health centers, health subcenters, MCH centers and primary health posts to overcome these problems. It has also attempted to distribute equal health services and resources through the expansion of the health insurance scheme, establishment of a health care delivery system and regionalization of health resources.

4. Expenditure

The proportion of the total government budget allotted to the national health budget, including social affairs, has fluctuated in the last two decades, from 2.56% in 1961 to 1.92% in 1970, 2.73% in 1980 and 2.81% in 1984. Of the total 1984 national budget of 10,386,289 million won (equivalent to US \$12,552.9 million), 291,699 million won (equivalent to US \$352.5 million) was allocated to health, including social affairs.

Proportion of Total Government Budget Going to National Health & Social Affairs

Classification	Unit: US \$ million			
	1961	1970	1980	1984
National Health & Social Affairs Budget (A)	11.3	27.1	268.2	352.5
Total Government Budget (B)	439.6	1,409.4	9,817.4	12,552.9
A/B (%)	2.56	1.92	2.73	2.81

Note: At current prices

Source: White Paper on Health and Social Affairs, MOHSA, 1982, 1985

The proportion of the gross national product expended on national health was increased from 2.7% in 1970 to 3.4% in 1977, and was estimated at 4.6% for 1980, but the private sector claims a larger portion than the public sector. Individual payments covered 85% of health expenditures in 1970, but this was slightly reduced to 83.3% in 1977 and to 82% in 1980.

National Health Expenditure

Unit: Billion Won (%)

Classification	1970	1977	1980
Public Expenditure	10.6 (14.8)	95.1 (16.7)	286.0 (18.2)
Central Government	4.7 (6.6)	58.7 (10.3)	
Local Government	5.9 (8.2)	36.4 (6.4)	
Private Expenditure	60.8 (85.2)	476.1 (83.3)	1,286.0 (81.8)
Total Health Expenditure	71.4 (100.0)	571.2 (100.0)	1,572.0 (100.0)

Health Expenditure/GNP (%)	2.7	3.4	4.6
Per Capita Health Expenditure (Won)	2,272	15,861	45,800

Source: Chong Kee Park, Health Finance and Medical Insurance in Korea, Korea Development Institute, 1979

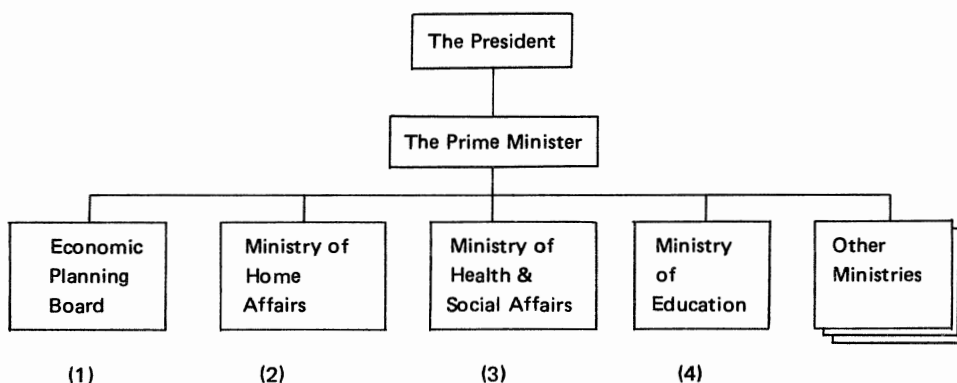
Chong Kee Park, Medical Insurance and National Economy, Medical Insurance Journal, July 1982

C. Government Organization of Health Services

Among the 2 Boards and 20 Ministries of the Korean Government, four Ministries; the Economic Planning Board, the Ministry of Home Affairs, the Ministry of Health and Social Affairs and the Ministry of Education, have functions related to health services.

First, the Economic Planning Board allocates the budget to support health programs. Second, the Ministry of Home Affairs administers the local governments to which local health organizations such as health centers or subcenters belong. Third, the Ministry of Health and Social Affairs has overall responsibility for health and social affairs, and last, the Ministry of Education is responsible for the training and education of health related manpower.

Central Government Organization of Health Services

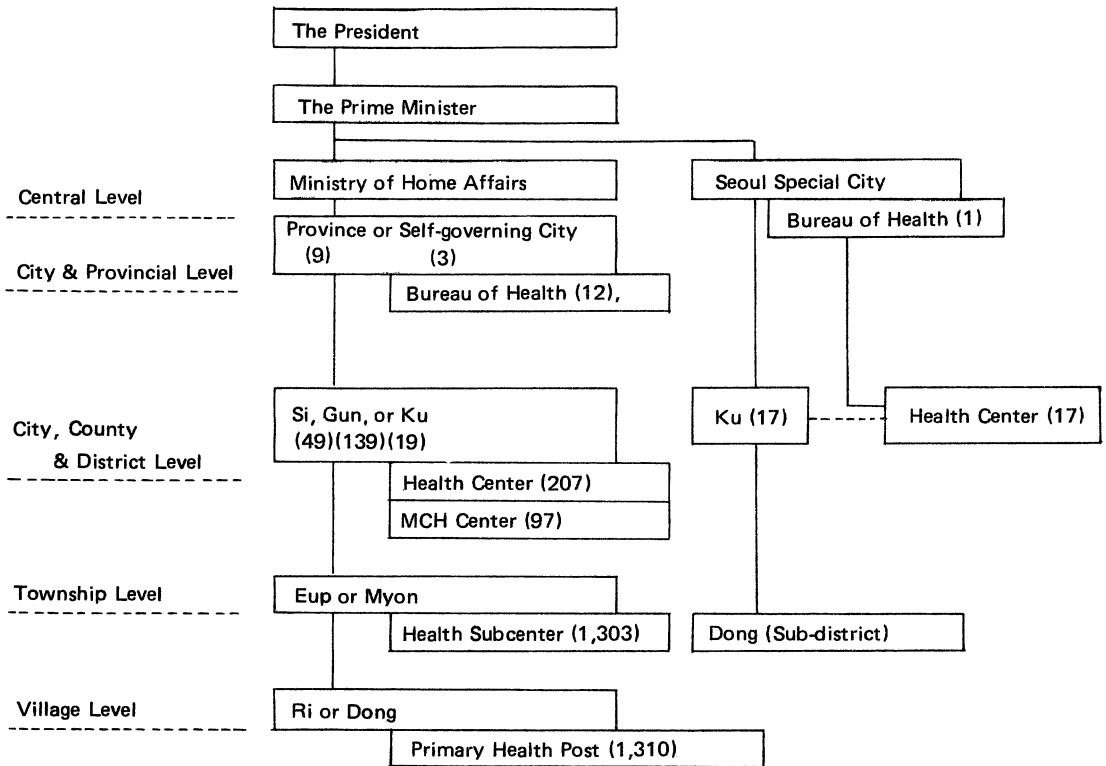


- (1) EPB: Execution of Budget and Mobilization of Resources
- (2) MOHA: Control of Local Government
- (3) MOHSA: Overall Health and Social Affairs
- (4) MOE: Training and Education of Health Manpower

Local health services are administratively under the Ministry of Home Affairs (except Seoul Special City which is directly under the Prime Minister) and technically under the Ministry of Health and Social Affairs. Each of the local governments of Seoul Special City, three self governing cities and nine provinces has a Bureau of Health which is responsible for health related affairs. Seoul Special City and the self governing cities are composed of districts, and the provinces, of small cities and counties. Each small city, county and dis-

trict has one health center which made a total of 224 health centers as of 1984. The 97 MCH centers are at this health center level. The MCH centers conduct MCH programs where medical resources are insufficient. There are 1,303 health subcenters at the township level, and 1,310 Primary Health Posts at villages.

Local Government Organization of Health Services



D. Health Policies and Strategies

1. Policies

The following policies were established for the improvement of the health situation and social well-being in the 5th Five Year Economic and Social Development Plan (1982-1986).

- a. minimize health care needs by strengthening public services and management with special emphasis on disease prevention
- b. develop an economic health system and improve accessibility to and availability of health services by establishing a health care delivery system, which assures an equitable distribution of health resources and restrains health cost
- c. reduce population growth by reinforcing the family planning program, strengthening social support policies and promoting the emigration program
- d. develop a comprehensive social security system including health insurance and medical aid.

2. Strategies

The following strategies have been applied to realize these policies.

- a. Strengthen public health services and management
 - 1) strengthen measures to prevent acute epidemic diseases
 - 2) promote efficiency in tuberculosis and leprosy control services and in parasite and sexually transmitted disease control services, and in handling adult and chronic diseases
 - 3) improve maternal and child health services
 - 4) provide safe water supply systems in rural areas
 - 5) establish a food and drug safety control center
- b. Establish health care delivery system and assure equitable distribution of health resources
 - 1) reorganize and expand the health and medical care delivery network
 - 2) reduce the urban concentration of medical service resources

- 3) set up a primary health care service network in underserved communities
 - 4) maintain inter-dependence between the public and private medical sectors
 - 5) modify the medical service fee system
 - 6) expand medical resource availability and improve the medical manpower training system
- c. Reduce population growth
- 1) reinforce family planning program in isolated communities
 - 2) improve contraceptive use qualitatively
 - 3) reinforce family planning program I.E. & C. activities
 - 4) promote emigration
 - 5) promote social support policies for small family norm
- d. Expand the medical security system
- 1) expand medical insurance coverage
 - 2) strengthen medical insurance management
 - 3) improve quality of medical aides

III. HEALTH SYSTEM AND MANAGEMENT

A. Health Care Delivery System

A health care delivery system contributes to the following: 1) health services made equitably accessible and available to all, 2) limited health resources most efficiently used, 3) public health maximized. So to develop an effective and efficient health care delivery system, the division of functions and an equitable distribution of health resources, the setting up of a catchment area, the development of health facilities standard models, and a patient referral system are essential.

Korea has, however, been struggling with several problems in establishing its health care delivery system. First, several different ministries are involved in health services each with different functions based on its objectives and policy directions, so that there is often conflict and duplication in the process of planning, implementation and supervision. Second, health planning is strongly centralized and uniformly applied to the whole country which places constraints on the implementation of planning and makes it difficult to adapt to local situations. Third, Korea's health system, because it was developed with insufficient investment in the public sector, has been heavily dependent upon the private sector which is more likely to invest in urban than in rural areas. Fourth, since functions are not explicitly divided between clinics and hospitals, nor between general and specialist physicians, there is strong competition. This results not only in duplication of investment and waste of health resources, but also in increases in medical costs, which cause economic difficulties for consumers and misuse of medical care. Fifth, due to the unclear definition of the roles and functions of medical facilities and manpower, the patient referral system is not well established, which in turn leads to physicians' malpractice and to patient concentration at hospitals because patients shop around for medical care.

KIPH, with the cooperation of university professors, conducted a project, "The Regionalization of the Nationwide Health Care Delivery Network" over a period of three years beginning in 1981. The study recommended a nationwide health care delivery system and the catchment area model as basic guidelines for long-term health policy.

Recommended Health Care Delivery System

In the newly established health care delivery system, health facilities were divided into four levels, taking into consideration such characteristics as patients, service providers, and size of facilities. (See the following table.)

Recommended Medical Facilities

Category	Facilities	Patients covered	Physicians	Remarks
Primary medical care facilities	<ul style="list-style-type: none"> ● General clinics/ Specialist clinics ● Health centers/ Health subcenters/ Primary health posts 	<ul style="list-style-type: none"> ● Outpatients residing in the concerned community 	<ul style="list-style-type: none"> ● Generalists/ Specialists 	<ul style="list-style-type: none"> ● Primary medical facilities on islands or in remote areas can accept inpatients in case of emergency.
Secondary medical care facilities	<ul style="list-style-type: none"> ● 200-300 bed hospitals (A type) ● 50-100 bed hospitals in rural areas (B type) 	<ul style="list-style-type: none"> ● Outpatients and/or inpatients referred from primary medical facilities in secondary catchment area 	<ul style="list-style-type: none"> ● Specialists 	<ul style="list-style-type: none"> ● Size of hospitals and level of medical care flexible depending on characteristics of catchment areas
Tertiary medical care facilities	<ul style="list-style-type: none"> ● General hospitals in central city of tertiary catchment area 	<ul style="list-style-type: none"> ● Outpatients and/or inpatients referred from primary and/or secondary medical facilities in tertiary catchment area 	<ul style="list-style-type: none"> ● Specialists by department 	
Specialized hospitals	<ul style="list-style-type: none"> ● Mental hospitals/ Rehabilitation centers/ Industrial accident hospitals/ Cancer centers/ Communicable disease control centers 	<ul style="list-style-type: none"> ● Specific disease patients within tertiary catchment area 	<ul style="list-style-type: none"> ● Specific disease specialists 	

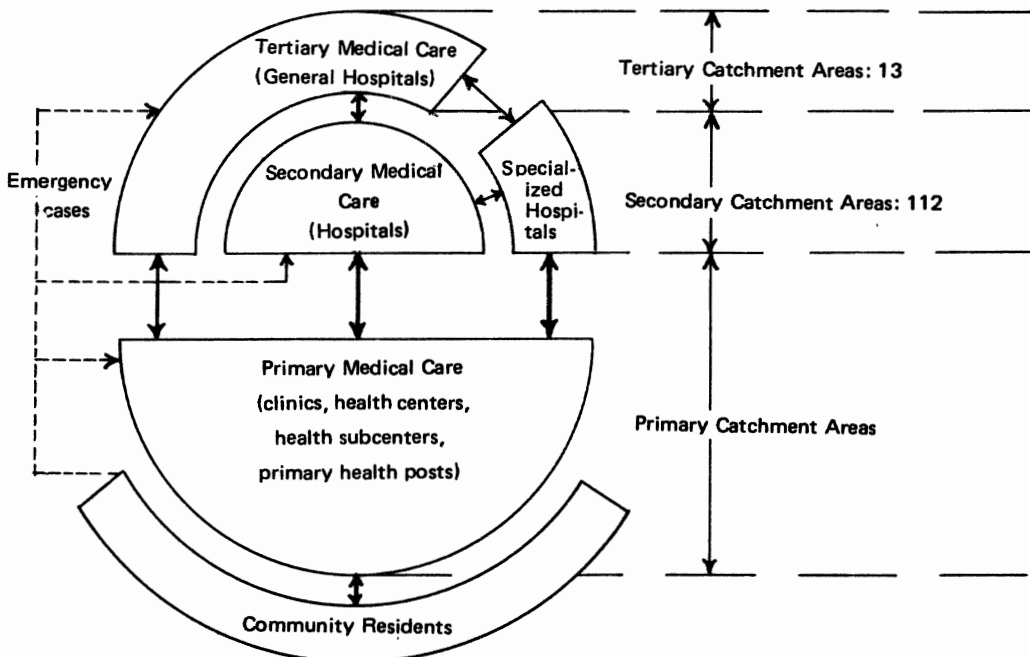
Each primary medical care facility, making up the primary catchment area, should provide primary care through direct contact with community residents within the area. Patients beyond the primary care category should be referred to secondary or tertiary medical facilities.

Each secondary medical care facility, making up the secondary catchment area, should take care of emergency patients or patients referred from primary medical care facilities. On the other hand, patients beyond the secondary care facilities should be referred to tertiary medical facilities.

Tertiary medical care facilities take care of patients referred from primary or secondary medical facilities and/or emergency patients. On the other hand, patients with mental diseases, cancer, communicable diseases, rehabilitative diseases, or industrial accidents are referred to specialized hospitals.

The nationwide health care network necessary for the equitable distribution and systematization of these medical facilities was reorganized as shown in the following chart.

Model of Health Care Delivery System and Catchment Area



The whole country was divided into thirteen tertiary catchment areas in each of which the central medical facilities serve as tertiary medical facilities. Each tertiary catchment area was divided into approximately 10 secondary ones for a total of 112. In each secondary catchment area, central medical facilities serve as secondary medical facilities. Taking into consideration life patterns and administrative boundaries, each secondary catchment area was divided into primary catchment areas to maximize accessibility to medical care. The medical facilities in all primary catchment areas are primary medical facilities. In particular, for 56 secondary catchment areas where medical facilities are insufficient, the government supports the construction and operation of private hospitals for the efficient functioning of the area.

The government will develop policies for the appropriate distribution of facilities by catchment area, basic models for medical facilities by category, and formulate a medical manpower plan to actualize the catchment areas soon. At the same time, it will introduce the health care delivery system, encourage a autonomously functioning patient referral system and develop mechanisms which control patient concentration reasonably at general hospitals. It was suggested that the government conduct health care delivery system demonstration projects in the several secondary catchment areas, and replicate the system nationwide by adopting the results.

B. Health Statistics and Management Information System

Until the early 1970s, national policy was focused on economic development, so statistical information has improved more in the economic sector than in the social sector. In the later part of the 1970s, social sector development was emphasized and various health programs and research activities as well as an expanded medical insurance program were implemented so thereafter, health statistics began to develop and various improvement measures were implemented.

At the national level, there are two organizations responsible for health statistics: the Bureau of Statistics of the Economic Planning Board (BOS, EPB) and the Division of Statistics of the Ministry of Health and Social Affairs (MOHSA). EPB Statistics Bureau's main functions are to coordinate national statistics, manage the population and household census and collect and analyze vital statistics. The function of the Division of Statistics of MOHSA is to collect and produce health statistics. There are twenty nine types of routine reports and about ten general control reports accumulated through administrative reporting channels in MOHSA and these are processed to obtain statistical data. Most of them are service statistics.

The analysis, evaluation and feed-back systems for health statistics are not effective and their use rate is very low. Particularly, the data collection at hospitals and clinics has not been established. Public health sector statistics are limited in scope with inadequate budget allocations, and the system has not functioned well. Since various institutes produce health statistics independently and inefficiently, the health management information system should be established to increase the validity and objectivity of the statistics.

Health Management Information System Development Project

MOHSA published "Basic Plan of A Comprehensive Information System Development in Health and Social Affairs" in 1984 and KIPH was requested to implement a health management and information system development demonstration project. The project had three phases: 1) health management information development at the 'eup' and 'myon' (town and township) levels, 2) the same at the 'gun' and smaller city level and 3) the same at the large city, province and national levels.

The first demonstration project was implemented at one 'eup' and twelve 'myons' in Kangwha-gun, Kyonggi-do from January to August 1985. The development of this system was primarily concerned with primary health care, focusing on maternal and child health,

family planning, tuberculosis control and medical services, and with vital statistics. The project objectives were to develop a new health and death registration system, a recording and reporting system, an evaluating system, and an information feed-back system. The available statistical data was analyzed and standardized.

During the demonstration project period, eight months from January to August 1985, evaluation by the index-points-method as well as travelling spot checks was implemented. Qualitative improvement in maternity and child health was made and health workers recognized the importance of information system and health statistics. But excessive reporting on health program performance was a side effect of performance evaluations by the higher level organization and was not completely corrected.

Births and deaths were almost perfectly reported because Kanghawa-gun was a health insurance demonstration project area so the insured received their insurance benefits on the basis of their reports.

C. Health Insurance and Medical Fee System

1. Development of Medical Insurance Schemes

The Medical Insurance Law was passed in 1963, but its complete enforcement was delayed until 1976, largely due to unfavorable socioeconomic conditions. During that time it was implemented only on a provisional or experimental basis at several firms and areas.

In 1976 the Korean government embarked on a new medical insurance program with a sweeping amendment of the Medical Insurance Law that went into force in 1977. This program was designed to improve the delivery of health services and enhance the social security program in response to requirements at that time, that is, the rising standard of living. It provided cash benefits and medical care to insured persons and their dependents.

In the initial stages coverage was compulsory for two categories of workers including employees and employers of firms, institutions and organizations in industry, commerce and other fields with 500 or more employees. Employees and employers of firms situated in industrial estates were automatically covered (Class I Medical Insurance). Voluntary coverage was also available to all the self-employed and the general public not covered under compulsory insurance (Class II Medical Insurance). In either case, insurance societies established within each firm or organized in the appropriate administrative district played the role of insurers under the supervision of the Ministry of Health and Social Affairs (MOHSA).

In 1979 the coverage was broadened to include firms with 300 or more employees and another medical insurance scheme was introduced for public officials and private school teachers. The Medical Insurance Law was amended again in 1981 to apply to workers in independently-run agricultural, fishery and retail businesses and was made compulsory. As a result six insurance societies were established at the local level as an experiment which is on-going in an attempt to develop an adequate model. In addition to this regional medical insurance scheme, occupational medical insurance societies could be set up to manage health insurance on an occupational basis.

In 1982 the Class I scheme was expanded again for compulsory coverage establishments with five workers or more.

2. Issues

The Korean medical insurance system gradually expanded until coverage as of June 1984 was 42 percent of the total population which was assured of coverage through the various insurance schemes. (Please refer to the following table.)

Medical Insurance Status

Classification	Beneficiaries (thousand)	Coverage (%)
Medical Insurance	17,064	42.1
Industrial Establishment Medical Insurance	11,646	28.7
Public Officials & Private School Teachers	3,994	9.8
Regional & Occupational Medical Insurance	1,424	3.6
Medical Aid	3,528	8.0
Total	20,322	50.1

Note: Total population, as of 1 July 1985, is 40,578,000.

This relatively rapid expansion, however, has a limitation in that the segment of the population which needs access to health care most but cannot purchase services for a variety of reasons, is excluded from the social insurance system. Currently, therefore, the problem that is of major concern is the expansion of coverage to the rest of the population, about 50 percent of the total. Admittedly, the problem is more serious for this includes for the most part a group that cannot afford to pay for health services either because of generally low incomes or because of financial hardships associated with extremely high medical care costs.

In connection with this, the fact that there is a variety of medical fee systems makes the problem worse. In Korea there are three kinds of medical fees; a fee for the insured and one for the beneficiaries of medicaid for which standards and annual increase rates are determined and regulated by the government, and the fees for patients who are not covered by medical insurance, and which require only the approval of a mayor or governor. In general, therefore, the fee for the noninsured exceeds, by a substantial margin, the medical

fees controlled directly by government, and it is believed that medical institutions cover part of the deficit resulting from the allegedly low regulated fees by shifting the burden to the noninsured patients who are generally low income earners.

Another problem is that the finances of all the medical insurance schemes have begun to deteriorate. In the case of Industrial Establishment Medical Insurance (formerly Class I) the financial position of which has been relatively good, 91 percent of its total revenues went to pay statutory and subsidiary benefit in 1984 obviously because of the increase in demand for medical care. When administrative and other costs are added to this, it amounts to 99 percent of total revenue, so it is expected that the scheme will show a deficit at the end of 1985. Government Insurance had already shown a six percent of deficit in 1984. Other schemes' financial status is even more serious than those ones described.

In addition, medical insurance faces quite a few problems, some of which are not amenable to solutions in the near future.

3. KIPH Activities

KIPH has taken part in a regional medical insurance pilot program since the inception of the program by evaluating the results and making a special study of reform measures for the betterment of regional medical insurance. Moreover a research team was organized at the beginning of 1984 to devise a scheme for universal medical insurance coverage at the request of MOHSA. As a result of this research it was recommended that the current scheme be extended to cover the relatively low income class either by extending medical aid coverage or by paying a government subsidy to reduce part of the contribution burden to, say, 50 percent of the total amount.

A deductible scheme to control costs which is expected to be effective in restraining health care spending, was suggested in addition to patient cost-sharing, which is now being implemented. The change in the medical care fee payment system was recommended because the traditional fee-for-service system is believed to be responsible for rising medical care costs since doctors provide medical care in excess of what is necessary. In addition, strengthening of the functions of health centers and sub-centers was strongly recommended.

Nonetheless it is likely that medical care costs will continue to rise for a variety of reasons. The measures suggested by the KIPH research team will, however, serve as a basic guide in devising Korean medical insurance policy.

A study on the optimal medical fee schedule has been used for years by MOHSA and the Economic Planning Board as a basic data in determining the annual rate of increase.

As a result of this research the following were published:

- a. Baseline survey for community medical insurance scheme in rural areas, July, 1981
- b. A study on beneficiaries' receptive attitude of community medical insurance in 3 demonstration areas, October, 1982
- c. Seminar on the strategies for expanding community-based medical insurance, November, 1982
- d. A study on the medical insurance fee system, December, 1982
- e. Evaluation on the community-based health insurance demonstration project, April, 1983
- f. A study on the improvement of health insurance issues, April, 1984
- g. Workshop on health insurance and revitalization of health subcenter, December, 1984
- h. A study on the strategies to expand medical insurance for whole population, October, 1985

IV. HEALTH SERVICES

A. Rural Primary Health Care

1. Development of Rural Primary Health Care Program

Korea has made tremendous strides in meeting the health needs as an integral part of its effort to build a welfare society by adopting primary health care as the key approach to health for all.

The Korea Health Development Institute (KHDI) was established in 1976 to develop a low-cost health care delivery system for rural areas through a primary health care approach with community health practitioners (CHPs) as the major new health manpower to be tested. The Institute carried out a health demonstration project for three years and also a trial training program for CHP. Since this CHP program was found to be highly successful, it was recommended for national implementation. The CHP program was adopted by the government on December 31, 1980, via a special law on health care services for the rural population, and this went into effect in 1981.

The Korea Institute for Population and Health (KIPH), which resulted from the merger of KHDI and the Korean Institute for Family Planning (KIFP) in July 1, 1981, has been assigned to develop and carry out the CHP training program. During the period from 1981 to 1985, the government recruited and trained 1,600 CHPs and assigned them to remote rural villages. The number of CHP will gradually be increased to 2,000.

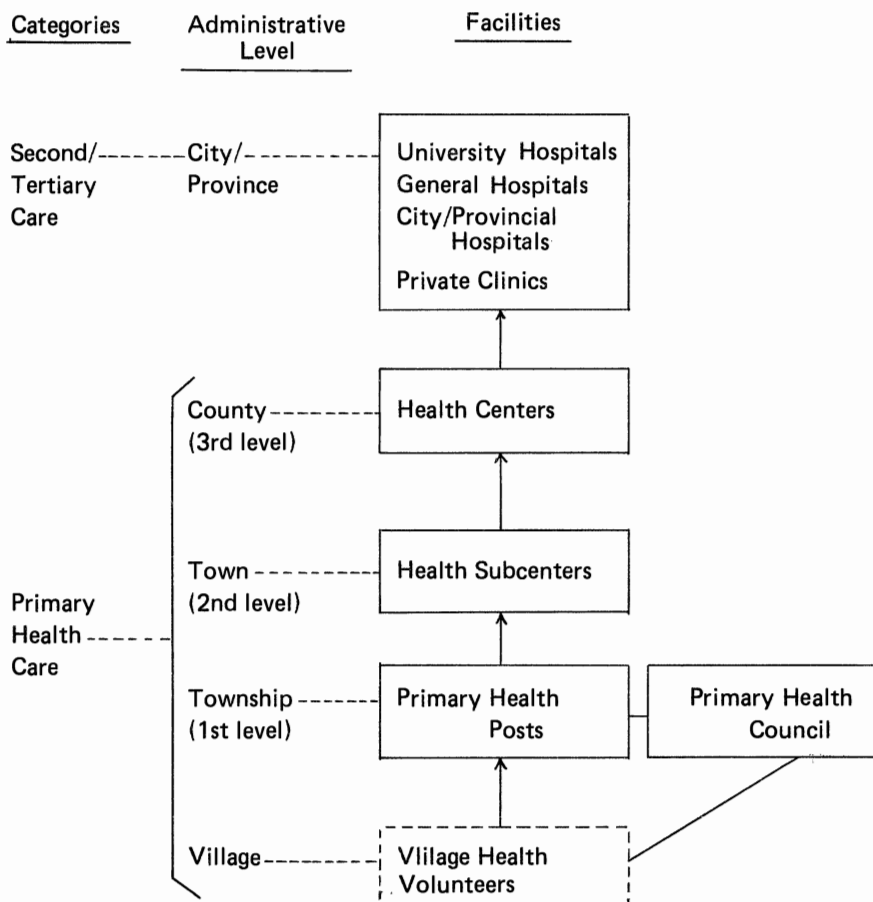
2. Implementation of Primary Health Care Program in Rural Areas

The government has developed not only primary health posts (PHPs) to which CHP are posted but also primary health councils and village health volunteers. The CHP at the village level serves about 1,000 to 5,000 and provides comprehensive preventive care as well as primary curative care. The community provides land for a PHP building, and the government (central/local) provides a salary for the CHP, drugs and medical equipment. The PHP is run by a primary health council.

The health subcenters at the township level are staffed by a community physician with two to three health workers, and are responsible for curative care, maternal and child health including family planning, tuberculosis control and other preventive care, and cover a population of 10,000 to 15,000 people.

County level health centers are responsible for community preventive care, for providing curative care, maternal and child health including family planning and environmental health and supervising the health subcenters and primary health posts.

Rural Primary Health Care System



Functions and Operation of Primary Health Care System

Facilities	Area	Population served	Manpower	Function	Operation
Primary Health Post (1st level)	5-10 villages	1,000-5,000	one community health practitioner (CHPs are professional nurses and/or midwives)	<ul style="list-style-type: none"> - organization/development of the community - program planning - program implementation and management - management of community health problems, MCH/FP, and common/minor acute, ailments 	Run by community under central/local government
	one town	10,000-15,000	one community physician and two-three health workers	<ul style="list-style-type: none"> - curative care - MCH/FP - TB control - comprehensive preventive care 	Run by local government under central government
Health Center (3rd level)	one county	100,000-150,000	one or two community physicians and ten to fifteen paramedical/administrative personnel	<ul style="list-style-type: none"> - curative care - comprehensive preventive care - MCH/FP - TB and other communicable disease control - sanitation - supervision of health subcenter and PHP 	Run by local government under central government

3. Training Program for Community Health Practitioner and Community Physician

The community health practitioner training program lasted 24 weeks, and was divided into eight weeks of classroom training, twelve weeks of clinical practice and four weeks of field practice. The training was carried out in eight regionalized medical or nursing faculties.

The total of eight weeks of theory was divided into five major content areas: 1) management of curative care, 2) maternal/child health, 3) community development, 4) related community health maintenance, 5) administrations of PHP. Clinical practice was the second phase of the CHP training and was a continual part of preceptorship or internship. Its goal was to acquire skills in diagnosing and managing commonly encountered acute, chronic, emergent and health maintenance care problems. The four weeks of field practice was carried out at a recruiting post, and the CHPs were encouraged to test their knowledge and skills as much as possible in an actual rural field setting.

The community physician training program lasted twelve weeks, and was divided into two weeks of class room training, eight weeks of clinical practice and two weeks of field practice. It focused on strengthening of general patient care management, community preventive care management and health subcenter management.

Number of Community Health Practitioners and Community Physicians Posted by Year

Manpower	1981	1982	1983	1984	1985
Community Physicians	316	450	735	481	707
Community Health Practitioners	365	353	392	367	390

4. Activities of Community Health Practitioners

During the last five years from 1981 to 1985 the following research projects were carried out: the evaluation of the CHP's activities, analysis of the use of the CHP's post and analysis of the status of the primary health council. According to the study, CHPs were serving an average of seventeen cases per day. Of the total services they provided 69.0 percent were curative care and 31.0 percent were preventive. Most CHPs have performed well as planned and responses to their work from the communities have been very positive because of their dedicated work. 90 percent of the consumers accepted the CHP services and were satisfied with them. The utilization rate of the CHP's post by residents was

relatively high. But the function of primary health council consisting of community leaders to support the management of the CHP's post was very weak because of inadequate motivation and a lack of participation by residents.

For the development of primary health care manpower, KIPH conducted the CHP training program based on a competency based curriculum, training material and evaluation tools for learning achievement.

A study on strengthening the health subcenter's activities is being planned and another study on strengthening the management of the primary health care system in rural areas will be conducted soon.

B. Urban Primary Health Care

1. Development of the Urban Primary Health Care Project

The Republic of Korea is making every effort to translate its primary health care strategy into concrete programmes and health benefits for all. During the last decade, the government placed strong emphasis on reaching the whole population, particularly those in the greatest need. Its health services programmes have so far focused on rural areas where medical resources are relatively scarce, but it was recently realized that urban residents, particularly the urban poor who live in deprived areas, need government health care services as much as rural people do.

As a result of rapid urbanization and industrialization since the 1960s, Korea's urban population increased to 57% in 1980 and will reach 77% of the total population by the year 2,000. In-country migration has been generated mainly by the rural poor who seek employment opportunities in urban areas. The majority of migrants live in deprived and unsanitary housing conditions in the most densely populated areas. Their health care is often insufficient due to their limited financial resources, the low level of their community mindedness, and the low capacity of the public health sector in their areas.

The government has been attempting to respond to their needs by developing primary health care programmes for the urban poor as well as those in rural areas.

To accomplish this the Fifth Five Year Economic and Social Development Plan (1982-1986) includes plan to develop an urban primary health care project for the urban poor in Seoul City during the period of the Plan and to expand programmes based on the final evaluation of the project to cover other major large cities. KIPH was entrusted by the government to carry out the project between 1982 and 1986 to develop effective and efficient health care systems based on primary health care to improve the health of the urban poor. At present, urban primary health care is at the development stage and has been carried out experimentally on a small scale. As part of the Sixth Five Year Development Plan (1987-1991), the first draft of the primary health care sector plan formulated by the MOHSA includes plans to expand urban primary health care programmes for the urban poor to major large cities.

2. Implementation of the Project

The objectives of the project were to develop effective and efficient health systems

based on primary health care for the urban poor which can be replicated in areas where needed. Particularly, the project addressed itself to the following issues; 1) what essential health care services would be provided and how such services would be delivered/generated, 2) what approaches would be taken to mobilize community resources and to promote self-reliance in health care, 3) how the management of primary health care programmes could be improved in poor urban areas.

The major health problems were identified as the high prevalence of preventable and controllable illnesses, insufficient utilization of health services, insufficient public sector health services, and poor sanitary conditions and facilities.

Implementation strategies for the project were to establish a functional relationship with the health center in the area, to strengthen intersectoral coordination with relevant sectors concerned, to give priority in delivering health services to the most socio-economically deprived group and to focus on prevention and control of illnesses, and to cover services the private sector cannot handle.

The project site was selected supplying the following criteria; low income areas designated by Seoul City, areas where beneficiaries of medical aid programmes are double those in other areas and where squatter housing is concentrated. The total population covered by the project was 45,000 people or approximately 10,000 households. The primary target population group, 11,159 persons, were residents of seventeen "tongs" in the area and the secondary target population group, 33,971 persons, live in another forty four "tongs" in the project area.

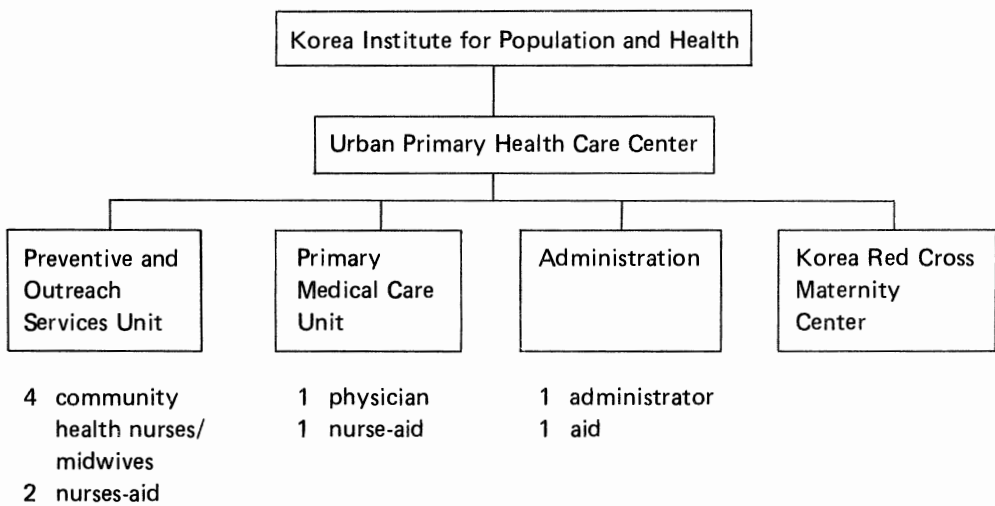
The project has provided most of the essential primary health care services, i.e. maternal care, basic immunization for young children, lab sessions for supplementary feeding for infants, nutritional surveillance, family planning, health education, and treatment of minor illness and patient referrals. The project does not directly deal with water supply, and garbage and excreta disposal services. Water supply has been available to 99% of households in the area. The garbage and excreta disposal services are provided every three days by Seoul City, but a health education programme on water supply, and sanitation and handling of garbage has been provided.

For the primary target population group, active outreach services have been provided including home visits by community health nurses/midwives, and community health volunteers have been assigned to each "ban". For the secondary target population group, the project has provided in-services and assigned community health volunteers to each "tong".

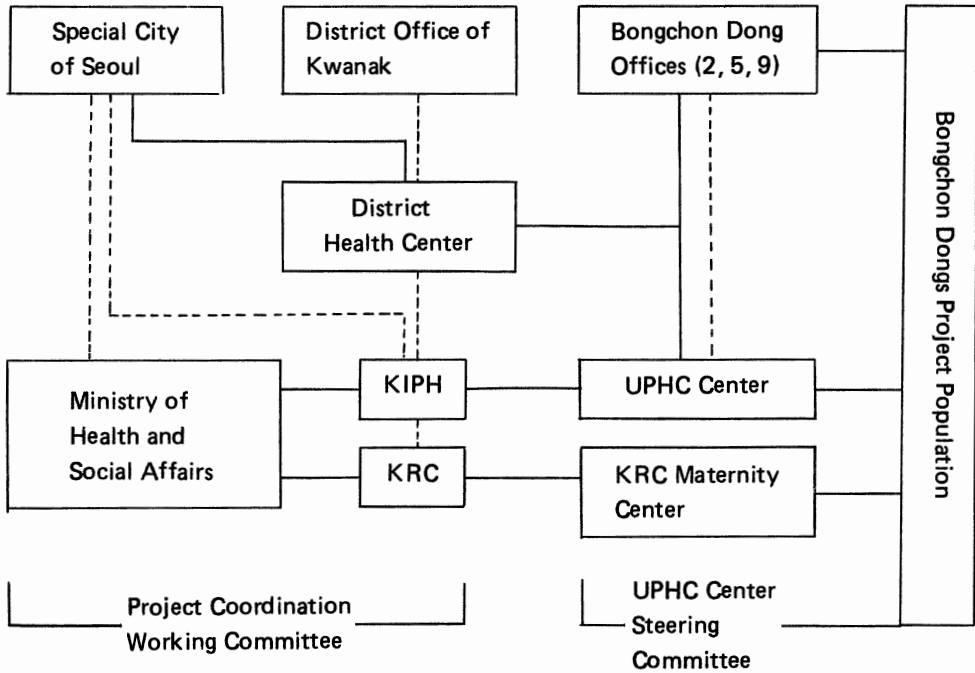
To implement the project in the field, the Korea Institute for Population and Health established an Urban Primary Health Care Center (UPHC Center) at the Korea Red Cross

Maternity Center in the project area, and assigned one physician, four community health nurses/midwives, three nurses-aid, and two administrative clerks to provide the services. In addition to the UPHC Center, the elderly's houses and community health volunteers' and/or other residents' houses have been regularly used as services posts to increase accessibility for residents. A total of 190 community health volunteers are used to promote community involvement and self-reliance. The UPHC Center Steering Committee was composed of heads of "dongs" and "tongs", Saemaul Movement leaders, members of Saemaul Women's Association, and other community leaders. The Committee consults with the field team and is involved in decision-making for management of the UPHC Center.

Organization of the
Urban Primary Health Care Center



**Organization Arrangement
for the Urban Primary Health Care Center**



Legend - - - - - Coordination
 - - - - - Adm. & Supervision

C. Maternal and Child Health Program

The government has provided maternal and child health care (MCH) services for the underserved population since 1967 and it promulgated a special MCH law to provide MCH services by the national and local governments in 1973. The national goal of the MCH program is to maintain and improve the quality of human resources for national development, to reduce the maternal and infant mortality rates to the lowest possible level, and to improve the health situation of the population with special emphasis on preschool children and pregnant mothers. At present the MCH program gives priority to the following; 1) protection of infants and children from infectious diseases by providing essential vaccinations, 2) prenatal and postnatal care, 3) provision of delivery kits and/or professional care for deliveries, 4) I.E. & C. activities.

In 1984, the MCH program target population was 11,684 thousand, 28.8% of the total population; 14.6% of the children aged 0-6 and 14.2% of eligible women aged 15-44. And at the same year the maternal mortality rate was estimated at 3.6 per 10,000 live births and infant mortality at 33.3 per 1,000 live births.

The government has provided MCH services through government health network such as health centers and subcenters. (Refer to the following family planning chapter.) The government established 91 MCH centers, as a supplementary to health center network, nationwide to strengthen MCH programs especially in underserved areas. There are two types of MCH centers: "A" type has 16 beds or a total space of 1,026m², and "B" type has 6 beds or 734m². All MCH centers are equipped with delivery tables, ambulance and VTR set for health education. Besides delivery services and emergency care, the centers provide family health consultation, family planning services and curative services for infants and mothers. In principle, the centers have to be operated 24 hours per day, and except in special cases, mothers and infants after delivery are encouraged to stay at the centers for 2 nights and 3 days.

There are several constraints in the program. The national budgetary allocation to the MCH program is fairly small; in 1984, only 1.6 percent of government health budget was allocated to it. This contrasts with the family planning budget, which accounts for 16.7 percent of the total health budget. MCH workers' knowledge and skill at health subcenters are generally considered as at a low level. There is not only a severe shortage of qualified midwives but there is also a high drop-out among MCH workers. In addition there is in general, a lack of public understanding about the need for MCH services.

The private sector has provided more MCH services than public sector, though based on fee-for-service. According to national survey conducted by KIPH in 1982, 69.4% of

the total deliveries have been attended by health professionals; 82.5% in urban areas and 46.7% in rural areas. 55.7% of the babies were delivered at clinics/hospitals, and 36.7% of them at home. 69.3 percent of the pregnant women received prenatal care and its average number was 3.4 times per pregnant woman. The coverage of basic vaccinations is 69.4% in BCG, 80.2% DPT, 80.6% polio, and 55.4% measles respectively.

Major MCH Indices, 1982

Classification	Urban	Rural	National
Coverage of Vaccination			
BCG	71.8%	65.1%	69.4%
DPT	82.7	75.9	80.2
Polio	81.9	78.3	80.6
Measles	58.3	50.4	55.4
Rate of Prenatal Care	77.3	54.8	69.3
Average Number of Prenatal Care	3.6 times	2.8 times	3.4 times
Rate of Safe Delivery Attended by Health Professionals	82.5%	46.7%	69.4%
Place of Delivery			
Hospital/Clinic	69.3%	32.2%	55.7%
Health Center	1.6	0.6	1.2
Midwifery Clinic	8.4	3.0	6.4
Home	20.8	64.2	36.7

Source: National Family Health Survey, 1982, KIPH

KIPH conducts routine monitoring and evaluation focused on MCH workers' performance and on the MCH services provided by the centers for MCH program evaluation. KIPH developed long-term (to the year 2,000) and short-term (for the 6th 5 Year Socio-Economic Development Plan) planning for MCH to support national policy formulation for MCH. KIPH has conducted a demonstration project to develop a risk scoring system which MCH field workers can easily apply, and the government accepted the results and replicated it nationwide. Recently, KIPH has been collecting data and information on the risk scoring system from MCH workers at health subcenters to evaluate it.

D. Family Planning

1. Evolution of Family Planning Program

The Korean national family planning program, begun in 1962, originated from both a concern for family well-being and awareness that a high population growth rate effectively cancels advances in economic development. In the initial stage, the main emphasis was placed on contraceptive supplies and I.E. & C. activities through home visits by family planning workers and through designated private doctors.

Contraceptive supplies and devices were distributed by the government free of charge and a contraceptive target system was instituted for the efficient management of the family planning program. At that time (the 1960s), over 70% of Korea's population lived in rural areas, and contraceptives were unheard of in these areas. In 1966 mobile teams were organized to provide remote rural regions with family planning services efficiently. In 1968 mothers' clubs were established at the "ri" and "dong" levels to provide better rural area family planning services.

But from 1962, an increasing number of the rural people began to migrate to urban areas, and beginning in the 1970s family planning services for urban areas began to gain increasingly more weight compared with those in rural areas. The government could not cope with urban family planning needs since past family planning services and I.E. & C. activities had been designed primarily for rural areas. There had to be new family planning services specifically designed for the urban population, for instance, a social support system for the urban poor, for those living on industrial sites, and for men in the Homeland Reserve Forces. Since 1974, families with no more than two children are allowed income tax exemptions and those who undergo sterilization and have only two children have priority in buying government-built houses on preferential terms, and there are other incentive systems which favor those with two children. Population education was also included in regular school curricula. But urban family planning services have not succeeded in that most of these services are not well suited to those in the lower income category.

Many family planning workers have been well aware of the need to integrate family planning services with other related socio-economic development plans, and in 1972, an attempt was made to integrate family planning services with the New Village Movement but with less than satisfactory results. In 1978, the government began working on the integration of the family planning program with the MCH and TB control programs, and in fact in 1982 sterilization and menstrual regulation were included in the medical insurance scheme. In the past, family planning services were provided primarily for population control, but these days the family planning programs are closely integrated into public health programs.

In setting up the Fifth Five Year Economic Development Plan (1982-1986), the government paid particular attention to the impact of the population increase on the nation's socio-economic development. Realizing that, unless drastic population control measures were undertaken, it would not implement the Plan successfully, the government announced a new population control policy in December of 1981. It called for: 1) setting up a new family planning management system, 2) instituting a new social support system to inculcate the idea of the small family norm, 3) establishing new laws designed to eradicate the son preference attitude, 4) strengthening I.E. & C. activities for family planning, and 5) establishing close coordination among government organizations related to the population control programs.

Since 1982, the government has been exerting its utmost efforts to put into effect these five points considered essential for successful implementation of the various population programs.

2. Program Organization and Operation

The Ministry of Health and Social Affairs (MOHSA) is responsible for the overall implementation of the national family planning program. Within MOHSA, the Family Health Division in the Bureau of Public Health controls all activities related to MCH and family planning. At the provincial level, the Family Health Section in the Public Health Division is responsible for overall control including the operation of the mobile unit. Health centers at the city and county levels provide MCH and family planning services. The health centers are under the administrative control of the provincial government through city and county offices. At the township level, one to two field workers are assigned to each health subcenter to provide MCH and contraceptive services and motivation for the eligible population. The Saemaul Women's Association at the village level participates in the MCH/FP program as a grass roots level volunteer organization.

The National Institute of Health (NIH) is responsible for MCH/FP personnel training programs which were carried out by the Korean Institute for Family Planning (KIFP) until 1981. The Korea Institute for Population and Health (KIPH) is responsible for research and evaluation in the fields of population and health including family planning. The Planned Parenthood Federation of Korea (PPFK), a private voluntary association established in 1961, is responsible for the I.E. & C. support component of the national FP program, including support for the nationwide system of the Saemaul Women's Association. The Korean Association for Voluntary Sterilization (KAVS), a private voluntary organization established in 1975, is responsible for physicians' training courses, and maintenance of the sterilization equipment provided by the government. This arrangement

enables the participating agencies to delegate responsibility, thus taking advantage of their particular strengths and minimizing duplication while maintaining program integration.

Most contraceptive services are provided through family planning workers and designated private physicians. Field workers distribute condoms and oral pills themselves, and refer sterilization and IUD acceptors to those designated physicians who have been trained and approved by the government. Family planning workers, including 2,170 regular government workers and 246 PPFK information officers, total 2,416. The ratio of workers to target women, aged 15-44, averages one worker per 1,200 women in rural areas, and one for every 6,900 in urban areas.

There is currently a total of 2,320 family planning designated hospitals and clinics throughout the country. The designated private physicians provide contraceptive services at their own clinics and are reimbursed by the government on a per case basis. Sterilization services are provided free of charge, and IUDs, condoms, and oral pills are distributed for very modest service fees.

3. Changes in contraceptive Practice and Fertility

According to the findings of the 1985 survey done by KIPH, the contraceptive practice rate has increased significantly from 9 percent in 1964 to 70 percent in 1985. Of the total eligible married women in the age group 15-44, about 13 percent had used contraceptives in the past but stopped for one reason and another, and 16 percent had never practised contraception.

Comparing the contraceptive practice rates by method between 1979 and 1985, the sterilization rate increased drastically from 20.4 percent to 40.4 percent while the rates for other methods including IUD, oral pills and condoms have increased slightly. It is assumed that the high acceptance of sterilization, particularly female sterilization, can be attributed to several factors including fertility termination oriented contraceptive use, the high discontinuation rate of IUD and oral pill users due to side effects, and the providing of female sterilization services free of charge. Of the total practice rate of 70 percent, the proportion of ineffective method users was 10.9 percent, which included the rhythm method, withdrawal method, foam and others.

The practice rate also differs among women by age and number of children. The practice rate is highest for the 30s age group or for women with two children as shown in the table. Generally, the rate is high in the relatively older age groups where they have already had the desired number of children and are practising contraception to terminate fertility.

Contraceptive Practice Rate Trends for Women (1976–1985)

	1976	1979	1982	1985
By Region				
National	44.2 %	54.5 %	57.7 %	70.4 %
Urban	48.0	55.1	58.7	71.6
Rural	40.2	53.6	55.7	67.7
By Age				
15 – 24	15.4	18.3	22.5	35.8
25 – 29	31.9	40.9	44.6	60.8
30 – 34	55.8	68.5	71.7	84.2
35 – 39	61.5	71.9	79.9	87.2
40 – 44	45.1	53.3	62.3	69.5
By Number of Children				
0	4.6	7.0	11.0	14.1
1	18.2	20.7	24.3	44.9
2	44.0	58.2	66.7	82.5
3	59.0	69.0	76.4	84.6
4	60.4	68.9	70.8	80.2
5 or more	47.2	58.5	64.2	76.8
By Education				
No schooling	39.3	50.9	57.6	77.0
Primary school	42.8	54.2	60.3	74.1
Middle school	44.2	52.9	55.5	69.0
High school	50.9	58.0	54.6	66.8
College or more	51.8	61.1	64.6	78.1
By Method:				
Vasectomy	4.2	5.9	5.1	8.9
Female Sterilization	4.1	14.5	23.0	31.6
I.U.D.	10.5	9.6	6.7	7.4
Orall pill	7.8	7.2	5.4	4.3
Condom	6.3	5.2	7.2	7.2
Others*	11.3	12.1	10.3	11.0

* Including rhythm method, withdrawal, foam-tablets, others.

In spite of legal, social, and ethical constraints as well as extensive government contraceptive services, induced abortions among married women aged 15-44 have increased yearly. According to 1985 survey data, however, the increase rate for induced abortions has slowed and the total induced abortion rate fell from 2.6 in 1982 to 1.8 in 1983. This means that expectations were met not only as they concern population problems but also in terms of maternal health.

The national family planning program has contributed greatly to the decline in fertility during the last 25 years. The total fertility rate (TFR) declined from 6.0 in 1960 to 2.1 in 1985, a 65.0 percent reduction. The decline in fertility among women under age 29 is believed to have resulted from the trend toward delayed marriage parallel with modernization, while that for women aged 30 or more has been greatly affected by the extensive application of family planning. The women's ages at first marriage rose from 22.6 in 1960 to 24.1 in 1980. Basically, socio-economic development has contributed to the fertility decline by changing attitudes toward the small family, but the gap between fertility in urban and rural areas remains large: a sample survey in 1985 showed that the total fertility rate in urban areas was 2.0 but 2.3 in rural areas.

Age Specific Fertility Rates, 1960-1985

Age Group	1960	1971	1976	1982	1985
15-19	37	6	10	12	7
20-24	283	188	147	161	162
25-29	330	341	275	245	187
30-34	257	234	142	94	52
35-39	196	124	49	23	8
40-44	80	41	18	3	1
45-49	14	3	1	-	-
TFR	6.0	4.7	3.2	2.7	2.1

Source: KIPH, National Fertility and Family Planning Survey, 1971, 1976, 1982, 1985.

4. Future Program Directions

The national family planning program, which has led to a conspicuous reduction in the fertility rate and an increase in the contraceptive practice rate, has been appraised both domestically and internationally as very encouraging. Several anticipated unfavorable socio-

and demographic factors and the changing patterns of contraceptive behaviour during recent years clearly indicate, however, a more difficult task ahead. Furthermore, because of the large existing population in relation to the available land area and resources in Korea, and because of the increasing difficulty of lowering the fertility rate further to achieve 1% population growth by 1993, the national family planning program will have to be strengthened if it is to meet its objectives. At this point, the following must be considered for further strengthening; first, the current operation and management systems of the national FP program for recruiting new acceptors among the young, the 20s group, to use contraceptives for birth spacing and to encourage a high continuation rate; second, the integration of the family planning program with other development programs including primary health care; third, innovative social support policies including incentive and disincentive schemes encouraging small families and reducing the power of the boy preference value.

E. Health Education

The Division of Health Education, which was recently established in the Ministry of Health and Social Affairs (MOHSA), is responsible for Korea's national health education program. The government promulgated its seven point National Healthy Life Guidelines to inspire people's health consciousness, and during 1984, developed and distributed 6,000 copies of the manual on health education to community level agencies and institutions. It also distributed 2,400 weekly health newsletter, 100,000 posters, and 250 sets of slides of health education.

The government has utilized different private and public sectors to implement its health education program. At the grassroots level 2,528 MCH, family planning, and TB control workers make frequent home visits meeting. New Village Movement women's group leaders conduct person to person health education for village residents, which includes family planning, tuberculosis control, prenatal care, vaccination and child care, personal hygiene, and sanitation. Group health education programs on family planning, personal hygiene and sanitation are also provided in Homeland Reserve Forces training, at the monthly 'ban' (local community) meetings, and at the village meetings when farmers are not busy.

The government use the mass media as a key source for health education for the general public. In 1980 87% households owned television sets and 1983 Korean Broadcasting System National Time-Budget Survey showed that people watched television 2 to 3 hours a day. Health education spot announcements and other short programs have been on the increase. Since 37% of the population reads newspapers, health education articles appear in them often. Parallel with economic development, people have become conscious of their health needs and articles on health care are in popular demand. The government has been strengthening safety program as well as health education at industrial sites to prevent industrial accidents and occupational diseases.

The Ministry of Education (MOE) is responsible for school health programs and these will be improved. It is also responsible for the health education included in textbooks and the development of better training for teachers. The Korea Education Development Institute has been working for many years to revise the health education curricula at elementary, middle and high schools. In 1985 the Korea Institute for Population and Health (KIPH) analyzed the contents of population and maternal and child health in the elementary school textbooks. Revisions of the books will be suggested to improve their health content. Officials have been working for the coordination between MOE and MOHSA to improve the school health education program.

In addition to MOHSA, several private and public health related agencies such as the Planned Parenthood Federation of Korea, the Korea National Tuberculosis Association, the Korea Institute for Environmental Protection, and pharmaceutical companies have been producing slides, movies, leaflets, booklets and posters in their specialized fields. Their movies and slides are widely used by the public and leaflets and posters are distributed throughout the nation. The Korean Red Cross has a health education department which is mainly responsible for producing slides on health education material for schools and the public. These slides are used frequently by school hygiene classes.

Health education subjects are incorporated into the health workers training programme to train their personnel in health education. A three week course on health education for health center officials has been given at the National Institute of Health.

In 1982 the Korean Society of Health Education was established with 110 members and its main function is to publish an annual health education journal. In 1985 Korea became a member of International Union of Health Education and was elected as a board member.

F. Nutrition

According to a 1984 national nutrition survey by MOHSA the average daily caloric intake was 1,900 Kcal and the average daily protein intake 69gr. The intakes of calcium, riboflavin and vitamin A are less than recommended, but, the survey results show that there are no significant nutritional problems for the Korean people as a whole. From limited studies undertaken, a high proportion of rural pre-school and school children has unsatisfactory hemoglobin and hematocrit levels which is regarded as anaemic.

Iron deficiency is the commonest form of nutritional anaemia among children and women of child-bearing age in rural Korea. Its causes are an inadequate intake of iron-rich foods and a low level of iron absorption in a predominantly rice diet containing little animal protein. Nutrition surveys in recent years have revealed that many children in rural areas had clinical signs of angular stomatitis indicative of riboflavin deficiency. Its occurrence may be attributed to the lack of milk, eggs and meat in the rural diet.

Korea same as in the case of any other developing country, has not yet formulated concrete national nutrition programmes as one of its principal goals in accelerating socio-economic development. The number of programmes to meet nutritional needs are even fewer and they are usually drawn on an ad-hoc basis without integrating them into the national development plans. The Office of Rural Development (ORD) launched Applied Nutrition Programmes (ANP) from late 1960s in rural areas to improve the quality of life in rural communities as a whole and their nutritional status in particular. ANP in Korea has been regarded as fairly successful but, ANP activities were limited to rural areas, the proportion of ANP receiving villages was small and ANP assigned workers were not able to cover the entire community, because there were only two ANP workers per county (one county usually has about 100 thousand population). ANP, unfortunately, has not been integrated into the health sector and nor expanded to other districts including urban low income areas. At present, the Korea Rural Nutrition Institute (KRNI), established in 1978, has been undertaking ANP in rural areas. It has trained many ANP workers, produced many surveys on the nutritional status of rural households, and developed nutritionally valuable foods to upgrade the overall health status of the rural population.

Korea Health Development Institute undertook MCH project in Hongchon Gun, Kangwon Province from 1979 to 1981 as a part of primary health care demonstration project and conducted "Nutrition services in primary health care demonstration project". A nutritionist was assigned to the health center, which was the first trial in Korea, and her major function was: 1) nutrition consultation for infants, children, pregnant and lactating women, 2) measuring and evaluating growth of 0-5 aged children, 3) nutrition education for health personnel and the general population within the district, 4) cooking demonstra-

tions including a weaning diet. The result of the Hongchon Project is described in "Evaluation Report on Operation of the Hongchon MCH center".

National workshop on I.E. & C. strategy development for nutrition was held by the Korea Institute for Population and Health (KIPH) as a national workshop on I.E. & C. strategy development for nutrition. The workshop concluded by reviewing and debating on existing nutritional situation and policies that Korea should have a long-term master plan with definite strategies on food production and nutrition development.

In 1984 KIPH conducted project on "Recommended dietary allowances for Korean" with the advisory committee members from universities and produced the 4th revised edition of the guidelines of Korean food consumption. The recommended daily calorie allowance was 2,500 Kcal for adult males and 2,000 Kcal for adult females. The recommended daily protein allowances are 75gr. for adult males and 65gr. for adult females.

In 1985, in cooperation with specialists in universities, KIPH conducted an experiment study on energy and protein metabolism which was to give baseline data for setting-up the requirement level for all nutrients for Koreans.

KIPH has supported nutrition unit of the government at the national level by providing required data and information.

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