

A MODEL FOR ACCELERATED BASIC HEALTH CARE AND MEDICAL SERVICES
PROGRAM FOR RURAL AREAS OF IRAN

With Particular Reference to Some of Shiraz's
Rural Areas and Villages

by

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B.S., National Development-Rural Agr., 1972
University of Shiraz, Iran

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER'S OF REGIONAL AND COMMUNITY PLANNING

Department of Regional and Community Planning

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1980

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"No individual should be deprived of medical care because of inability to pay, just as no individual should go hungry or lack adequate housing because of low income."¹

¹Feldstein, Martin, "The Health Care Muddle: II-A New Approach to National Health Insurance", The Public Interest, No. 23, Spring, 1971, p. 93.

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In the name of Allah, the most merciful, the most beneficent

ACKNOWLEDGEMENTS

I herein gratefully acknowledge the assistance and counsel given to me by Professor Vernon P. Deines and Professor Clarence Johnson, my major advisors, during the various stages of the report.

Sincere thanks and appreciation are extended to other members of my advisory committee, Dean Bernd Foerster and Professor O. John Selfridge for their direction, encouragement and assistance in preparation of this report. Thanks also to Carol Knepper for her typing and editing assistance.

I also thank my wife for her support, endurance and patience, but most of all, I would like to thank Mrs. Ozra Taghvaei, my mother.

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Chapter 1

THE PROBLEMS OF HEALTH CARE AND MEDICAL SERVICES

RURAL AREAS OF THE WORLD

A great number of the people of the world are living in rural areas. These areas, generally, lack many public facilities and services that can be found in urban areas. Rural people provide most of any nation's food and in some countries they provide fiber and wood and account for most of the nation's domestic mineral and energy supply. They play an increasingly important role in the nation's manufacturing, trade, and service economy.

Ironically, rural people generally endure the inequitable human and social conditions resulting from isolation, and this is typical all over the world.¹

"Two-thirds of all the seriously poor (with income of \$100 a year) live in rural areas of the world. This is approximately 140 million in Africa, 30 million in Latin America, and 525 million in Asia."¹

The rural people of developed countries, generally, have less problems than those of less developed countries in all areas. In developed countries the majority of rural people do have at least a satisfactory shelter, transportation facilities, and have access to the health care and medical services facilities, etc., while in less developed countries the situation is not so. They don't have a satisfactory type of transportation facilities and they have to go to the cities for any type of medical services, etc.

¹A new strategy for Development, the Tripartite World Conference on Employment, Income Distribution and Social Progress and the International Division of Labor, Geneva, June, 1976.

In 1973 in England only 1.2 percent of the rural people did not have running water in their homes, while this figure was 83 percent in Iran; 74 percent in New Guinea; 85 percent in Turkey and 88 percent in the Philippines.¹

The number of rural people served by one doctor in 1973 was 1,100 in England; 60,000 in Brundi; 57,000 in Iran; 22,000 in the Philippines, and 18,000 in New Guinea.²

RURAL AREAS OF IRAN

In Iran, the rural areas have similar problems to the rural areas of other less technologically developed countries (LTDC). Almost all of its 60,000 settlements, small and large villages scattered all over the country, are in dire need of the basic health and sanitary services.

Health

Until the twentieth century there were almost no western health services in the country. Between 1900-1950 health conditions though better than in some neighboring countries, were at best poor and at worst gruesome by western standards. For example, in almost all of the villages and small communities and even some small towns, families lived in a one or two-room house, often sharing with animals. Drinking water was usually polluted and the public baths were unhygienic. In these areas the birth rates are high and the productivity is low. By all prevailing international standards their diet and clothing are below the minimum level of subsistence. Low caloric and protein-poor food results in low energy, malnutrition, sus-

¹UNICEF/WHO Joint Committee on Health Policy (1975). Report of the twentieth session, off. rec. WHO, 228, Annex 2, Geneva, p. 23.

²Ibid, p. 25.

ceptibility to disease, high infant mortality and short-life expectancy. These deficiencies appear in urban areas of the country as well, but they are not as severe and frequent as in the rural areas.

Life expectancy was 35 to 40 years, with only about 20 percent of the population living more than 40 years and only 4 percent reaching old age. The rate of still births and death in childbirth was very high. In Tehran (the capitol city) in 1955, infant mortality was estimated at 71 per 1000 live births; and in villages near Tehran, infant mortality was 217 per 1000.

Gastrointestinal diseases were prevalent, and tuberculosis, venereal diseases and trachoma were common. Until 1950, malaria was Iran's most serious disease, with an estimated 5 million cases annually. After that the principal of total eradication was adopted as a national policy. Through extensive DDT spraying carried out by W.H.O., malaria was almost wiped out.

In the past, opium addiction also was a major health problem. In 1956 it was estimated that about 1.5 million addicts, mainly between 15 and 40 years of age, were consuming about 2 million grams of opium daily. Since then the cultivation of opium poppies was forbidden by the government and the number of addicts reduced gradually.

In 1952, public health was introduced as a function of the Ministry of Health, and at the same time, a program of construction for hospitals, clinics and health facilities was initiated. A few years later, two large charitable organizations, supported to some degree by the government, were established to provide more health services. One of them was the Red Lion and Sun Society (equivalent to the Red Cross) which began its activities primarily to combat disaster, but very soon spread a wide variety of charitable and health fields, including the operation of hospitals, clinics and nursing schools. Another organization was The Mothers' and Childrens'

Protection Association, a semi-autonomous government organization, assisted and yet assists, needy expectant mothers and conducts maternity wards and prenatal centers.

The tradition of the Ministry of Health has been medical care (curative medicine) since its establishment. For the remote areas of the country, there are units ready to attend at emergency outbreaks. They can rush to any spot in the country and immunize the population. School children are protected against smallpox, typhoid fever, and diphtheria and are given instructions in dental care and personal hygiene. But this does not show that the general health condition of the country is satisfactory. There still exist many deficiencies.

Lack of adequate personnel for health services in the rural areas and villages is still one of the most important problems of the country. In Iran about 98% of the physicians work in the cities and small towns; and almost all of the hospitals (well-equipped ones) are located in the cities.

There are at present 12,000 physicians in the country, 50 percent of them living in the city of Tehran and almost all of the remainder scattered in other large towns and cities. Consequently, rural areas, which contain much more than half the population, suffer a serious shortage of doctors and other medical personnel, while various diseases such as diarrhea, trachoma, typhoid and paratyphoid fever, poliomyelitis, venereal diseases, parasitic infestations, dysentery, influenza and many other diseases are still very common in the rural areas and account for nearly half the causes of death in the country.

So the rural people, in spite of the poor conditions of roads and absence of transportation facilities, have to travel rather long distances to have access to health centers to receive needed services. This problem

of access to, and availability of, health care, is one of the most important problems of the villagers of the country, so much so that most of them have preferred to leave their villages and farms and live on the fringe of the cities, which creates slum areas, unemployment, and many other related problems for the country.

Table 1 - Health Facilities and Personnel (1972)

Service	Number Available	Per/1000 Pop. ¹
Hospitals	520	0.017
Maternity Hospitals	490	0.016
Sanitoriums	20	0.0006
Dispensaries	2,100	0.070
Laboratories	190	0.006
Pharmacies	1,490	0.049
Family Health and Planning Clinics	1,378	0.045
Physicians	10,053	0.335
Dentists	1,750	0.058
Pharmacists	3,478	0.115
Nurses	12,949	0.431
Midwives	1,677	0.056
Beds	42,000	1.4

¹1972 Population was approximately 30 million

Source: Demographic Year Book, United Nations, 1977, p. 208

Chapter 2

IRAN-GENERAL DESCRIPTION

ITS GEOGRAPHY

Iran or Persia is a vast table-land mounting from the shores of the low-lying Caspian Sea to flat elevations of 3,000 to 5,000 feet and descending again to the Persian Gulf coast. The country, ribbed by mountain ranges in almost all directions, covers two-thirds of the great Iranian plateau stretching from the Indus River to the valley of the Tigris and the steppes of Russia to the Persia Gulf. The fourth largest country in Asia, with 1,645,000 square kilometers (628,000 square miles), Iran is equal to the combined area of England, France, Germany, Italy, Belgium, Holland and Denmark, extending approximately 2,300 kilometers (1,400 miles) from northwest to southeast, and 1,450 kilometers (875 miles) from north to south. Iran is bordered on the north by the Soviet Union; on the south by the Persian Gulf and the Gulf of Oman; on the west by Afganistan and Pakistan, and on the east by Turkey and Iraq.

Although the whole country lies in the north temperature zone, Iran's climate offers extremes of temperature, humidity, rainfall and frequency of high winds. Compared to the average for the latitude, the Iranian temperature is much colder in winter -- reaching -18°F in certain parts of the northwest, and hotter in summer -- reaching as high as 130°F in parts of the central deserts and sometimes in the Persia Gulf ports. Heavy snowfalls and frost occur all over the country between November and early March except for southern Khuzestan and the Persian Gulf region. Steady summer winds and persistent high pressure systems creating winter winds are also a climatic feature in many parts of Iran. Prolonged high winds -- reaching 70 miles per hour -- occur in southeastern parts of the

country between May and September, shifting the desert sand and eroding the fertile soil.

On the whole Iran's natural climate may be characterized as semi-arid and continental, punctuated with marked contrasts. The overall average precipitation is about 10-12 inches (25-30 centimeters) a year. Four distinct climatic regions may be easily identified:

1. The Caspian littoral which has mild, mediteranian-like weather and abundant rainfall -- average 40 inches a year but varying from 60-100 inches in the west to hardly more than 15 inches in its eastern corner. Temperatures register 25-32°F in winter and 90-95°F in summer. Humidity is usually in the range of 75-90 percent.
2. The country's northern tier (flanking the Caspian Sea on both east and west, and comprising the northwestern and northeastern provinces) has a moderately cool climate, but experiences some high summer temperature in the valleys (e.g. Khorasan) and severe winters; at high elevations. The coldest spots in the country all year round are usually found in the west (Hamadan and Kordestan).
3. The central plateau comprising the desert areas in central and eastern Iran is generally dry, with sharp variations in temperature between summer and winter, as well as between daytime and night. With the exception of outlying fringes and basins, protected by isolated mountains, most of the Dasht-e-Lut and Kavir-e-Lut plateau has a dry desert climate -- with no more than two inches of rainfall a year and humidity hardly exceeding 20 percent. It is unsuited for large scale habitation. In some of the outlying cities around the Lut the annual rainfall is between 10-15 inches. Temperature reaches 90-110°F in summer and 25°F to a minus 5°F in winter.
4. The southern coastal region, characterized by a desert-like climate, with scorching summers, mild winters and a high degree of humidity for coastal towns generally has scant rainfall which reaches only 10 inches a year in certain parts of the region. The temperature varies between 104°F to 130°F in summer and 32°F to 46°F in winter. Day and night differences reach 30°F to 40°F. The hottest spots in the country all year round are located in this region.

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ITS GEOLOGY AND TOPOGRAPHY

Iran displays all systems from the Pre-Cambrian to the Quaternary, while from the beginning of the Palaeozoic era onwards fossils are rather abundant. In summary, after a turbulent start in the Pre-Cambrian there was a long lull until the Jurassic when the coal beds of the Alborz and the Kerman region were laid down. Geologic movements began in central Iran in the Jurassic and reached a climax in the Upper Cretaceous, when some folding took place with volcanic activity, northeast of the Zagros mountains. Volcanoes remained active throughout much of the Eocene. With some breakdown due to faulting, folding increased to a maximum in the Pliocene or Mio-Pliocene.

The Zagros and Alborz ranges, formed by the Mio-Pliocene, attain attitudes of over 11,000 feet. In several regions of the country the prominent cones of formerly active volcanoes are a dominant feature of the landscape. The principal volcanic peaks are Demavand, the highest peak in Iran, rising to 18,600 feet in the north; the other peaks are Sabalan (14,000 feet); Sahand (12,138 feet); Ararat in the northwest; and Bazman and Kuh-i-Taftan (13,262 feet) in the extreme southeast. Two of these cones still show some traces of activity; these two are Demavand and Taftan, which occasionally spew forth sulphur gases and for Taftan both gases and mud.

ITS DEMOGRAPHY

Iran's total population was estimated at nearly 19 million in the 1956 census¹, and at more than 25.7 million in 1966 -- the second census.

¹Prior to 1956 the only available population data on Iran consisted of a number of estimates by official and private sources. The first official estimate in 1935 put the total population of Iran at slightly more than 15 million.

The latest estimate of the country's population as of late 1976 stood at 33.5 million persons divided between 17 million males and 16.5 million females. The population growth between the two ten-year censuses represented an annual average rate of increase of 2.86 percent. According to the third national census carried out in November 1976, the average annual growth rate of population had dropped to 2.7 percent. At this rate the population will double in about 23 years. Given that percentage increase annually in the country's population, there will be about 60.7 million¹ Iranians in 2000 A.D. Other assumptions concerning birthrates and fertility rates yield a high of 68.4 million and a low of 56.2 million people in 2000.

"The population of Iran is comparatively young; the proportion of those under 15 years of age increased from 42 percent in 1956 to about 47 percent in 1972. This young age structure, together with a mortality rate that is expected to maintain its decline, will tend to sustain the high natural growth rate for at least 10 to 15 years, despite a possible reduction in fertility"² (Tables 1 and 2).

"The average distribution of the population per square kilometer was 11.5 in 1956; 15.6 in 1966, and over 20 in 1976. The highest concentration of population per square kilometer continues to be in the central Province (Tehran), followed by the northern and northwestern provinces of Gilan, East Azarbaijan, Kermanshahan and West Azarbaijan. Lowest concentration is in Baluchestan - Sistan, with Kerman and Khorasan appearing as the next lowest."

¹These forecasts are roughly in line with other projections, see for example, Past Population Trends and Future Forecast of Iran Population up to 1991 (Tehran: Iranian Statistical Center, 1971), mimeo. For 1991 the Center has a high forecast of 54.4 million and a low forecast of 46.2 million. Population and Manpower Bureau, Planning Division, Iran's Population - Past, Present and Future (Tehran: Plan and Budget Organization, 1973). For 1991 this study has a high forecast of 55.8 million and a low of 50.1 million people.

²Looney, Robert E., Iran at the End of the Century, Lexington Books D.C. Heath and Company, Lexington, Massachusetts, Toronto, 1977, p. 83.

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"Beginning in 1972 rural population was 17.3865 million or 52% of the total population of the country. This population were living in about 60,000 villages and small communities."¹

Table 2 - Population of Iran by Age and Sex

	Total	Male	Female
All ages	30,159,000	15,570,000	14,589,000
-1	5,568,000	2,854,000	2,714,000
1-4			
5-9	4,763,000	2,448,000	2,315,000
10-14	3,889,000	2,009,000	1,880,000
15-19	3,028,000	1,569,000	1,459,000
20-24	2,454,000	1,272,000	1,182,000
25-29	2,005,000	1,039,000	966,000
30-34	1,700,000	879,000	821,000
35-39	1,507,000	779,000	728,000
40-44	1,285,000	662,000	623,000
45-49	1,030,000	534,000	496,000
50-54	796,000	412,000	384,000
55-59	664,000	346,000	318,000
60-64	530,000	278,000	252,000
65 & over	940,000	489,000	451,000

Source: Demographic Year Book, United Nations, 1977, p. 206.

¹Amuzegar, Jahangir, Iran: An Economic Profile, The Middle East Institute, Washington, D. C., 1977, p. 11.

Table 3 - Population Change in Iran, 1966-1974¹

	1966	1967	1968	1969	1970	1971	1972	1973	1974
Mid year population	25.54	26.30	27.08	27.89	28.66	29.78	30.55	31.30	32.14
Annual crude rates of:									
Live births	42.0	40.1	38.7	39.0	39.6	42.4	36.7	45.3	38.9
Deaths	7.0	6.8	6.5	6.1	5.7	5.1	5.0	5.1	4.8
Crude Marriage rate	6.0	5.4	5.6	5.6	5.9	5.7	5.7	6.7	6.6
Crude Divorce rate	0.96	9.77	0.57	0.57	0.58	0.55	0.60	0.63	0.64

The general fertility of women (15-44 years old), was 6.12/1000 in 1975. In 1976, the live births by urban residence was 557,000 and by rural residence was 845,000. The crude birth rates in 1976 were higher in rural residences, 47.3% while they were 35.4% in urban residences.

Table 4 - Death Rates Specific for Age & Sex, 1973-1979¹

	Male	Female
All ages	12.8	12.3
-1	96.4	107.9
1-4	19.1	20.4
5-9	3.2	3.6
10-14	1.5	1.5
15-24	1.8	1.9
25-34	2.7	2.5
35-44	4.2	6.3
45-54	11.1	8.4
55-64	29.2	21.1
65-74	43.9	45.2
75-84	83.1	99.3
85 & over	206.6	137.3

¹Demographic Year Book, United Nations, 1977, p. 207

The infant mortality rate during the period 1974-76 was 61.3 in the urban areas of Iran and in its rural areas the rate was 127.1. The crude death rates during 1976 were 4.9 in urban areas for a total number of 77,000 deaths and in rural areas it was 4.4 and 78,000.

ITS SOCIO-ECONOMIC ASPECTS

The Industrial Sector

Industrial activities, defined as manufacturing and mining, construction and electric power, accounted for over 19 percent of the current domestic product in 1975-76; it absorbed some 35 percent of total employment. The real growth of the industrial sector was 22.6 percent in 1975-76, after rising steadily and averaging about 13 percent in the 1971-76 period. During 1960-76, industrial activity provided more than one-fifth of the increase in GNP. In the same period, the annual average growth rate of manufacturing and mining was 13 percent and that of power was 25 percent. Within the industrial sector in 1975-76, manufacturing and mining accounted for 63 percent of industrial value added, construction for 32 percent, and water and power for 5 percent.

Handcraft Industries

In 1968, 120,000 carpet stands in Iran weaves 4,000,000 square meters of carpet of different qualities. The price of each square meter ranges from between \$100 to \$5,000 or more, depending on its quality.

"Some 300 other crafts have been identified such as hand-blocked cottons, mosaic and tile-work in various mediums; silver work, jewelry-making, copper work, miniature paintings on paper, bone, ceramic, etc. Excellence in such crafts is promoted by special schools in Tehran and Isfahan."¹

¹Area Handbook For Iran, American University, Washington, D.C. May, 1963, p. 218.

Farming, Forestry & Fisheries

Farming, forestry and fisheries have been Iran's largest traditional sector. Until 1963 Iran was traditionally self-sufficient, but regretfully on the wrong assumptions of the government's plans that Iran's national comparative advantage was not in agriculture and cheap food could always be bought from the world's surplus countries against exports of higher value industrial wares. This weakened the agricultural sector very rapidly, so that during 1962 to 1972, the share of agriculture in the GNP fell from about 32 percent to 16 percent. The decline in the agricultural share of GNP continued, reaching 13 percent in 1973-74 and 9.8 percent in 1974-75. However, in 1974-75 agriculture still accounted for the highest proportion of the employed population -- 3.5 million persons, or about 35 percent of the economically active population.

The total value added in agriculture in current prices in 1975-76 was about \$5 billion. About 64 percent of this originated in farming and 33 percent in livestock production, while forestry and fisheries accounted for the remaining 3 percent.

Petroleum

Oil has been a "deus ex machina" for Iran's economic prosperity and growth. By providing an assured and steady inflow of foreign exchange, the oil sector has supplied the lifeblood and driving force of the economy.

In 1976, Iran was the second largest oil producer in the Middle East, and fourth in the world, accounting for about 27 percent of the Middle East and more than 10 percent of global production. It was also the second largest world oil exporter after Saudi Arabia.

In 1975-76, oil accounted for 36.9 percent of the GNP, 76.7 percent of government revenues and 87.3 percent of current foreign exchange receipts. In 1976-77 the export level reached to 5.4 million b/d.

Table 5 - Arable Land, Pastures & Forest Land (1974)

	Hectares ¹
Arable land	15,700,000
Irrigated arable land and land under permanent crop	5,350,000
Permanent meadows & pastures	11,000,000
Forested land (natural)	18,000,000
Other areas	119,520,000

Table 6 - Area Under Principal Crops (1974)

	Hectares
Rice	400,000
Wheat	5,200,000
Barley	1,281,000
Potatoes	50,000
Dry beans	82,000
Chick peas	100,000
Lentils	35,000
Tea	27,000
Tobacco	11,000

Source: Statistical Year Book for Asia and the Pacific, United Nations,
1976, p. 1979

¹Hectare = 2.2 acres

Transportation

Iran's transportation network in 1976 included some 56,000 kilometers of roads (primary, asphalted, secondary feeder, gravel and dirt roads); 4,525 kilometers of main rail lines; 3,980 kilometers of pipeline; six major cargo ports with a total throughput capacity of more than 12 million tons, and 18 airports (including two international airports, in Tehran and Abadan). Utilizing the road network in 1976 there were 830,000 motor vehicles. Some 272 diesel locomotives were hauling 400 passenger and 7,000 freight cars. An all jet fleet of 23 aircraft (including B747SP) carried an ever increasing flow of people and goods in and out of the country.¹

The natural and physical characteristics of the country, and the concentration of people and industries in certain regions, have greatly influenced the development pattern of Iran's transportation network. Major arteries linking the industrial northwest to the northeastern and Caspian areas and major Persian Gulf ports converge on the capital city of Tehran, giving the network a distinct T-shaped pattern. The southern leg of the network is by far the most intensively used corridor in the country, accommodating about half of all road traffic and two-thirds of all rail traffic. However, with the development of northern routes, and relatively easier access to Europe via Turkey and the Soviet Union, the heavy dependence on the southern arteries may gradually diminish.

Manpower

In 1973, 30 to 35 percent of the population of the country have been economically active. This figure, however, clearly underestimates the participation of women. The Institute of Social Studies and Research

¹Amuzegar, Jahangir, Iran: An Economic Profile, The Middle East Institute, Washington, D.C., 1977, p. 111.

of Tehran University has estimated the country's economically active women at about 40 percent of the labor force.¹

Table 7 - Occupational Pattern of Employment 1956-72 (percentage)

Occupation	1956	1966	1972
Professional, technical and related	1.6	2.9	3.5
Administrative, managerial, and clerical	3.1	3.0	4.3
Sales	5.8	7.1	8.5
Service	7.7	7.2	6.3
Agriculture	55.6	47.1	48.5
Production	22.6	29.0	28.7
Other	3.6	3.7	0.2

Source: F. Aminzadeh, "Human Resource Development: Problems and Prospects," in ed. Jane W. Jacqz, Iran: Past, Present and Future, New York: Aspen Institute of Humanistic Studies, 1976, p. 180.

Wages

Ministry of Labor figures indicate that the average daily wage in 1971 for skilled and semi-skilled workers in manufacturing in Tehran (where wages are highest) was about 170 rials (\$2.2) plus 19 percent in overtime

¹Looney, Robert E., A Development Strategy for Iran Through the 1980's, Praeger Publishers, New York London, 1977, p. 40.

pay, and 17 rials representing any profit sharing. This amounts to 220 rials a day, or 66,000 rials a year (\$870).¹ In executive positions in large private firms and in the upper ranges of the government service, annual salaries of over one million rials (\$12,000) a year were not uncommon.

Since then, wages have increased dramatically -- by 17 percent in 1974 and over 20 percent in 1975. Secretaries can now make \$900 per month, and truck drivers up to \$180 per week. These dramatic changes are reflected in the wage index, which increased from 100.0 in 1970 (1970=100.0) to 336.4 in 1975. The index of consumer prices increased from 100.0 in 1970 to only 156.9 in 1975.²

Education

Iran's elementary and intermediate education is under the direction of the Ministry of Education. The universities, colleges and similar institutions are supervised by the Ministry of Higher Education.

In 1975-76 educational facilities in Iran numbered more than 46,500 -- consisting mainly of kindergartens, primary schools, secondary schools and vocational schools. There were 16 functioning universities and three in the formative stage. There were also 11 autonomous public institutions of higher learning, and 93 others affiliated with the Ministry of Education, and another 74 attached to other ministries and public agencies. Some 17 institutions of higher education were run by the private

¹International Labor Office, Employment and Income Policies, p. 81.

²International Monetary Fund, International Financial Statistics (December 1976), p. 197.

sector. Of more than 150,000 students enrolled in the post-high school institutions, some 65,000 were in full fledged universities and 85,000 in other higher education facilities.¹

"In the 1976-77 school year, the national student body reportedly reached 7.7 million, of which less than 70 percent were elementary school pupils (6-12 years of age). In the same year only 10 percent of high school graduates were admitted to the country's universities and 20 percent in vocational schools. The imbalance between the technical and skilled needs of the country and the supply of academic graduates from the nation's schools and universities was still badly felt."²

Housing

In 1965, the total number of houses in the country was 4,068,000³. Houses in Iran had traditionally been constructed from indigenous materials such as mud, wood, straw, sun-dried bricks and stone by hand processes, which remained basically unchanged over centuries. In 1966, about 97 percent of all rural dwellings fell into this traditional category. By 1956 modern houses accounted for 44 percent of urban dwellings, and the proportion had increased to 56 percent by 1966.⁴

The size for traditional houses, particularly in the rural areas was (and is) usually constrained by the type of materials available. The average size of these structures is about 58 square meters and, in 1966,

¹For some interesting breakdowns of those institutes, see Kayhan (Weekly International Edition), December 4, 1976. According to official estimates, the total educational facilities included 22,000 primary schools, 15,000 literacy corps schools, 4,300 junior high schools, 1,610 senior high schools, and 530 vocational schools.

²Amuzegar, Jahangir, Iran: An Economic Profile, The Middle East Institute, Washington, D.C., 1977, p. 183.

³Bharier, Julian, Economic Development in Iran 1900-1970, Oxford University Press, London, New York Toronto, 1971, p. 226.

⁴Ibid, p. 227.

77 percent comprised three rooms or less.¹ Usually built on one level those houses are easily destroyed by floods, minor earth tremors, and even seasonal rains. Overcrowding has always been common. In 1966 it was estimated that 1.18 families, consisting of five persons per family, shared each house on an average -- that is, there were about six people living in each dwelling -- in the rural areas.²

Facilities such as internal water and electricity supplies were still not common in 1966. At that date under 1 percent possessed piped water supplies and under 4 percent possessed electricity.³

In 1966, 46 percent of the "modern" houses were located in Tehran, and a further 29 percent were in the next ten largest cities.⁴ The average size of urban structures was greater than that of rural types, and was estimated at 110-115 square meters in 1966-67. The average costs of construction were also much higher than that of rural types; about 230,000 rials (about 6 times more than that of rural houses in the same period⁵). Costs of modern buildings were generally 50 percent higher than the average building cost in 1967.⁶

At the present time the average cost of construction of a 3 bedroom ordinary house in urban areas is \$45,000, and in rural areas about one third to one fourth of this amount.

¹Planning Organization of Iran, National Census 1966, Vol. 168, p. 188.

²Ibid, p. 187-88

³Ibid, p. 189

⁴Ibid, Volume for eleven largest cities

⁵Ibid, p. 229

⁶Bank Markazi Iran Bulletin, No. 40, p. 457

Religion

About 98 percent of Iran's people are Shiite Moslems. They believe that the Prophet Mohammad (P.B.H.) designated Ali, who was his cousin and son-in-law, as his legitimate successor. They also believe that, apart from what is revealed in the Holy Koran and Hadith, there exists a body of true and esoteric knowledge which passed from Mohammad (P.B.H.) to Ali and those of his descendents who succeeded Ali as the divinely guided leaders (Imams) of Islam. The Imams, therefore, are in a position to reveal the "true" meaning of the Koran according to their inner light.

According to Imami Shiites, upon the murder of the eleventh Imam in 873, the imamate passed to his 5-year-old son, who occupies an extraordinary position in the Shiite doctrine. According to traditional accounts, learning of the wicked plans of the caliph on his life, the Imam went into hiding from where he is expected to return to abolish all religions, take revenge on the wicked and fill the world with equity and justice.

Chapter 3

THEORETICAL ADMINISTRATIVE SYSTEM FOR PLANNING
AND DESCRIPTION OF CASE STUDY AREA

THE ADMINISTRATIVE SYSTEM

Professor R. P. Misra in his book (Spatial Framework for Multi-level Perspective Planning in Iran) has divided the country into the following growth foci:

<u>Growth Foci</u>	<u>Number</u>	<u>Minimum Population</u>
Growth Poles (big cities)	10	500,000
Growth Centers (cities)	100	100,000
Growth Points (Small cities & towns)	500	25,000
Service Centers (large villages)	4,000	2,000
Central villages	20,000	500

Rural areas of the country contain service centers, central villages and villages. Service centers should provide the basic health services for the villages under their jurisdiction and get the precise or complex health services from above levels which are growth points, growth centers, and growth poles respectively (Figure 1).

The general health conditions in most parts of the rural areas of Iran are nearly the same, and the service center of Beyza-Dehestan of Shiraz Shahrestan is selected as representative of the service centers (Figures 2-5).

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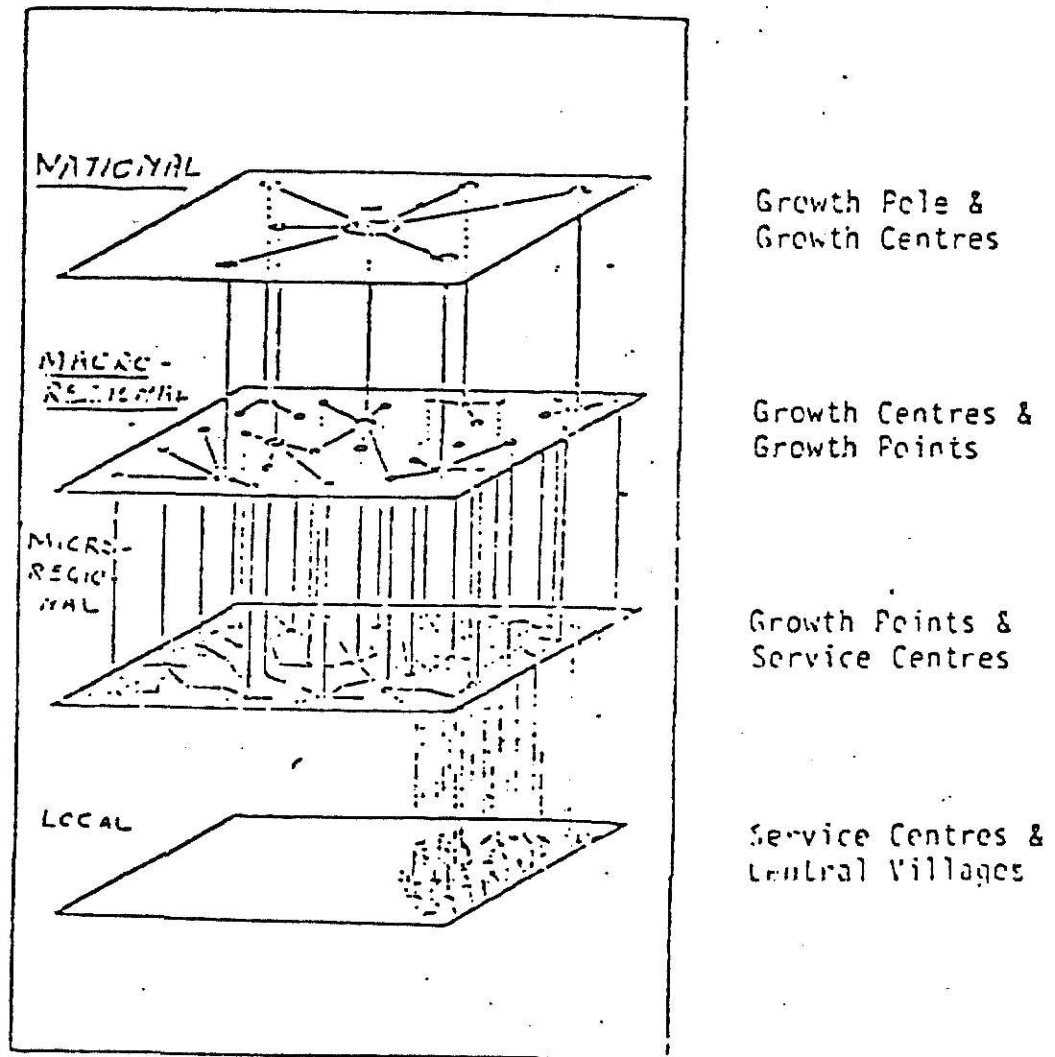


Figure 1

The relation between the different levels of growth foci.

Key: R.P. Misra, spatial Framework for Multi-level Perspective Planning in Iran (with particular reference to Fars Province), University of Shiraz, Iran, 1973.

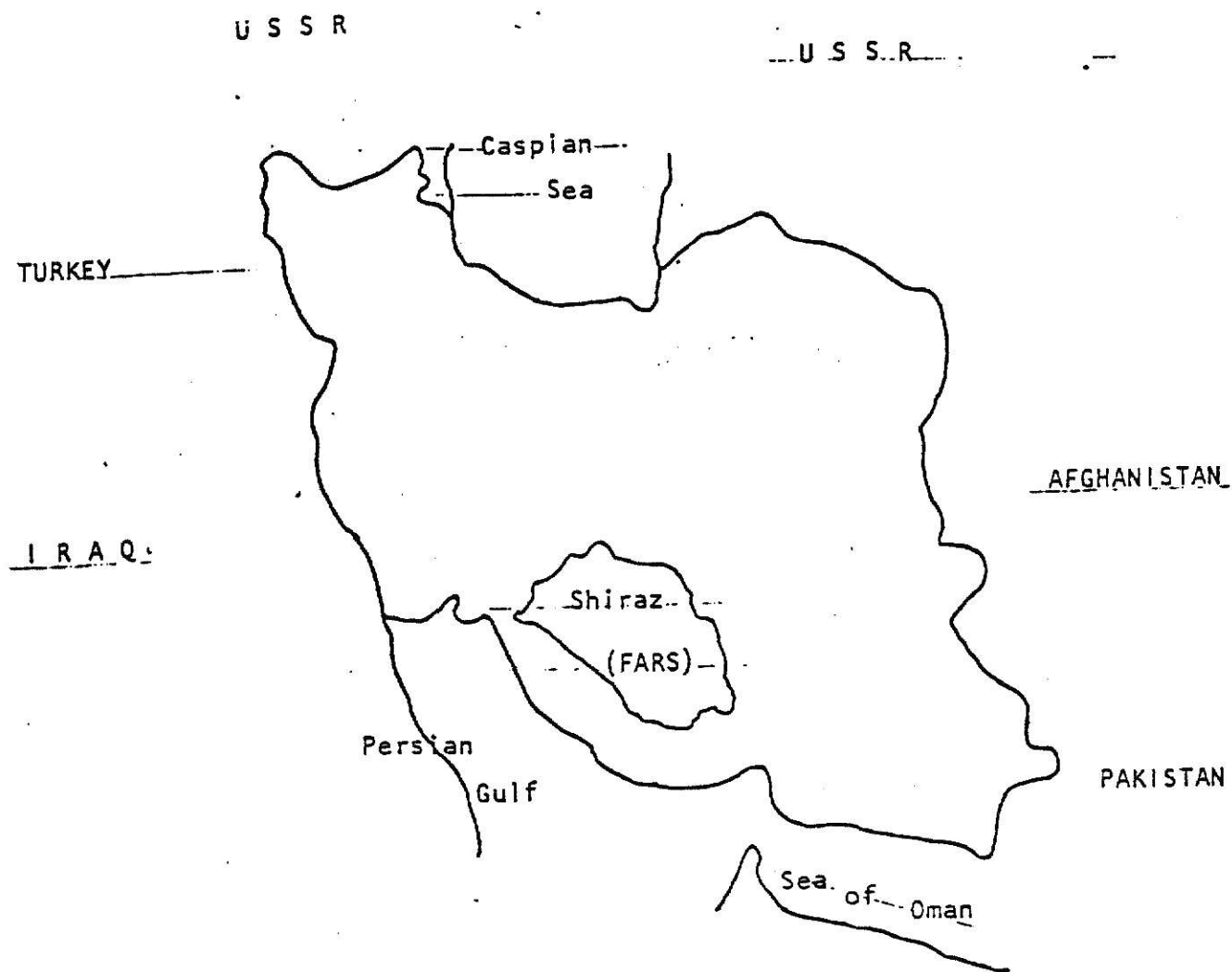


Figure 2

Location of Fars Province, Iran

Ref. World Atlas

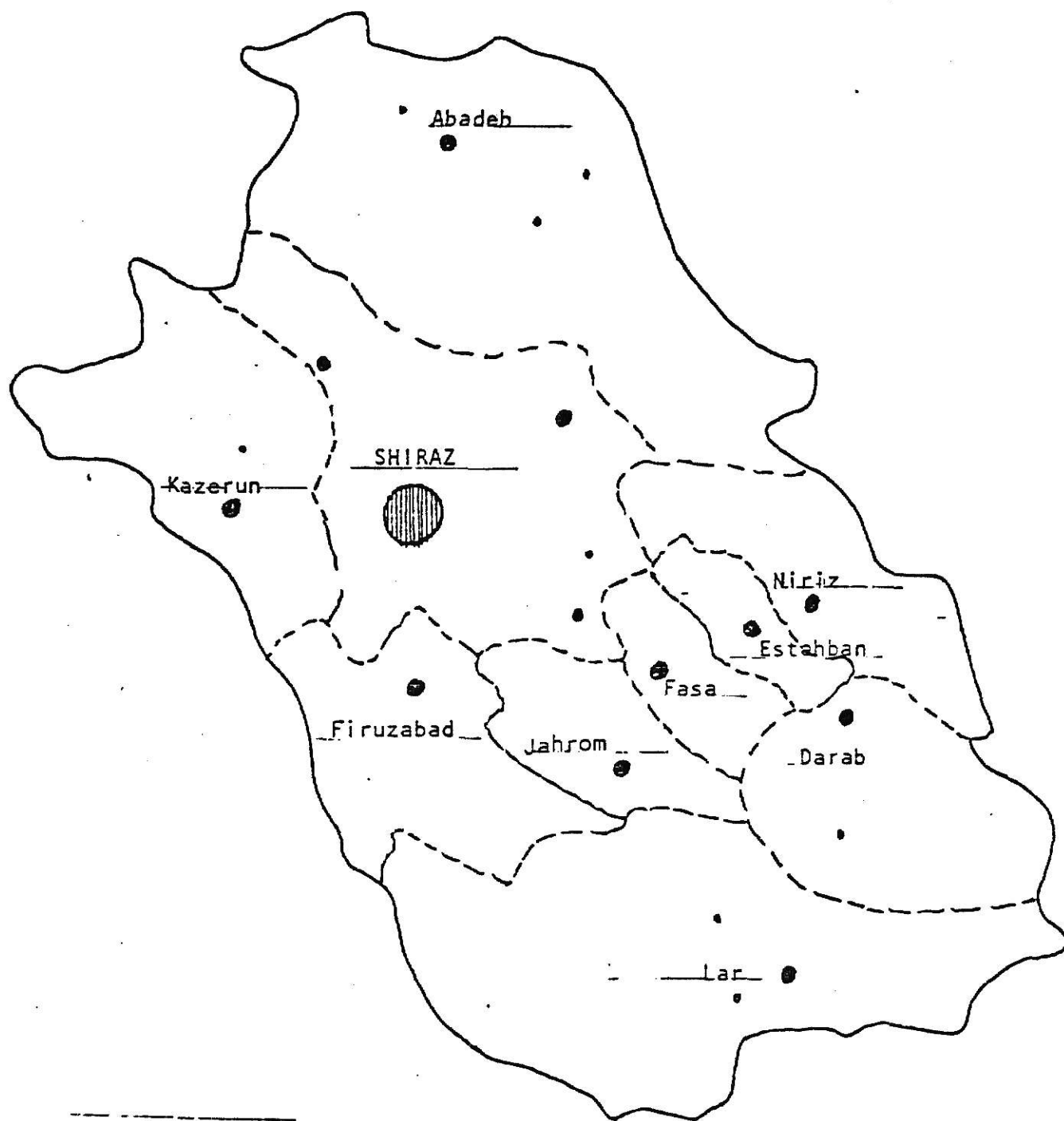


Figure 3

A map of Fars Province and the location of Shiraz Shahrestan

Key: As in Figure 1

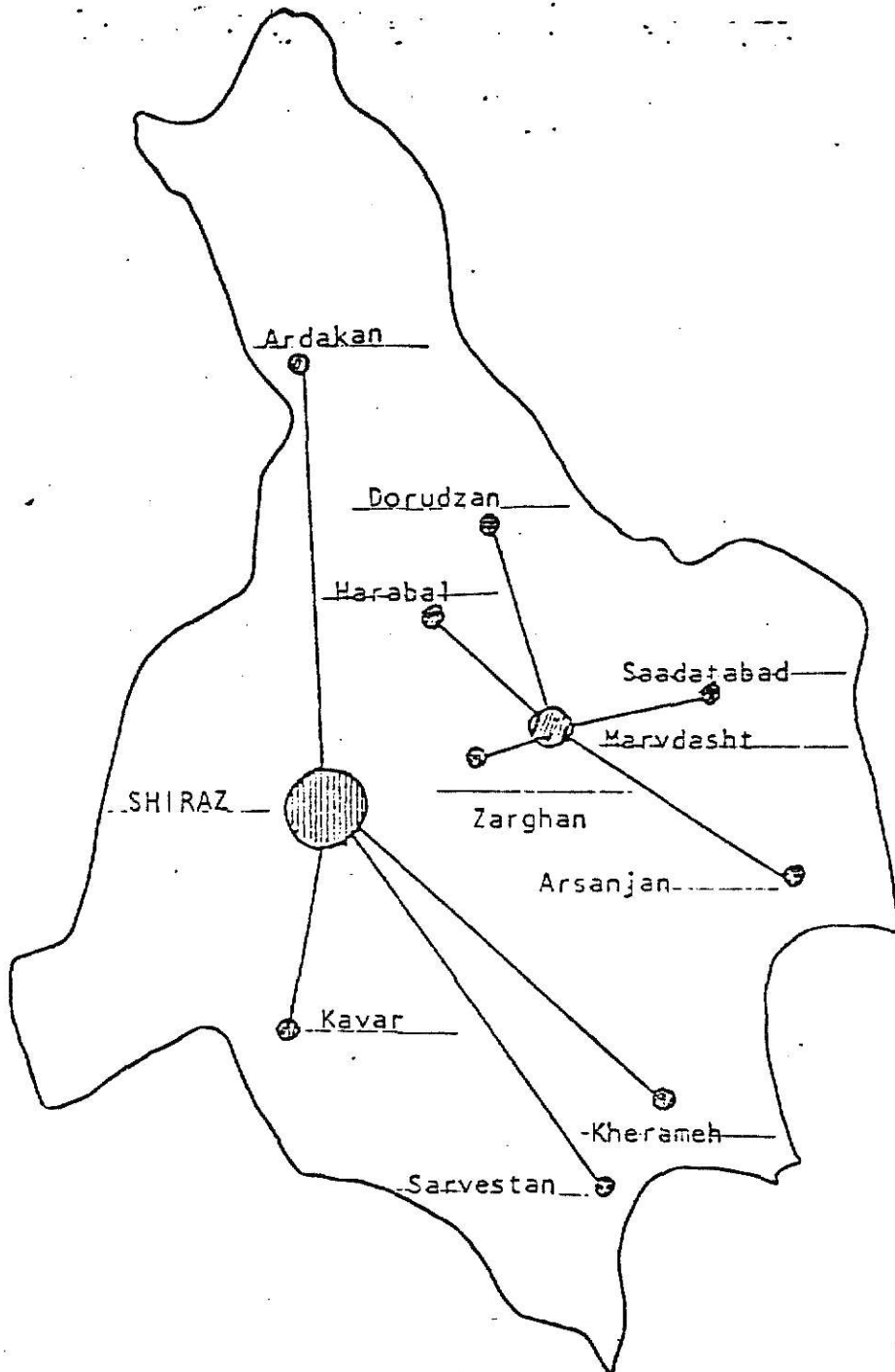


Figure 4

The map of the Shiraz Shahrestan and the locations of the small towns around it.



Growth Pole



Growth Center



Growth Point

Key: As in Figure 1

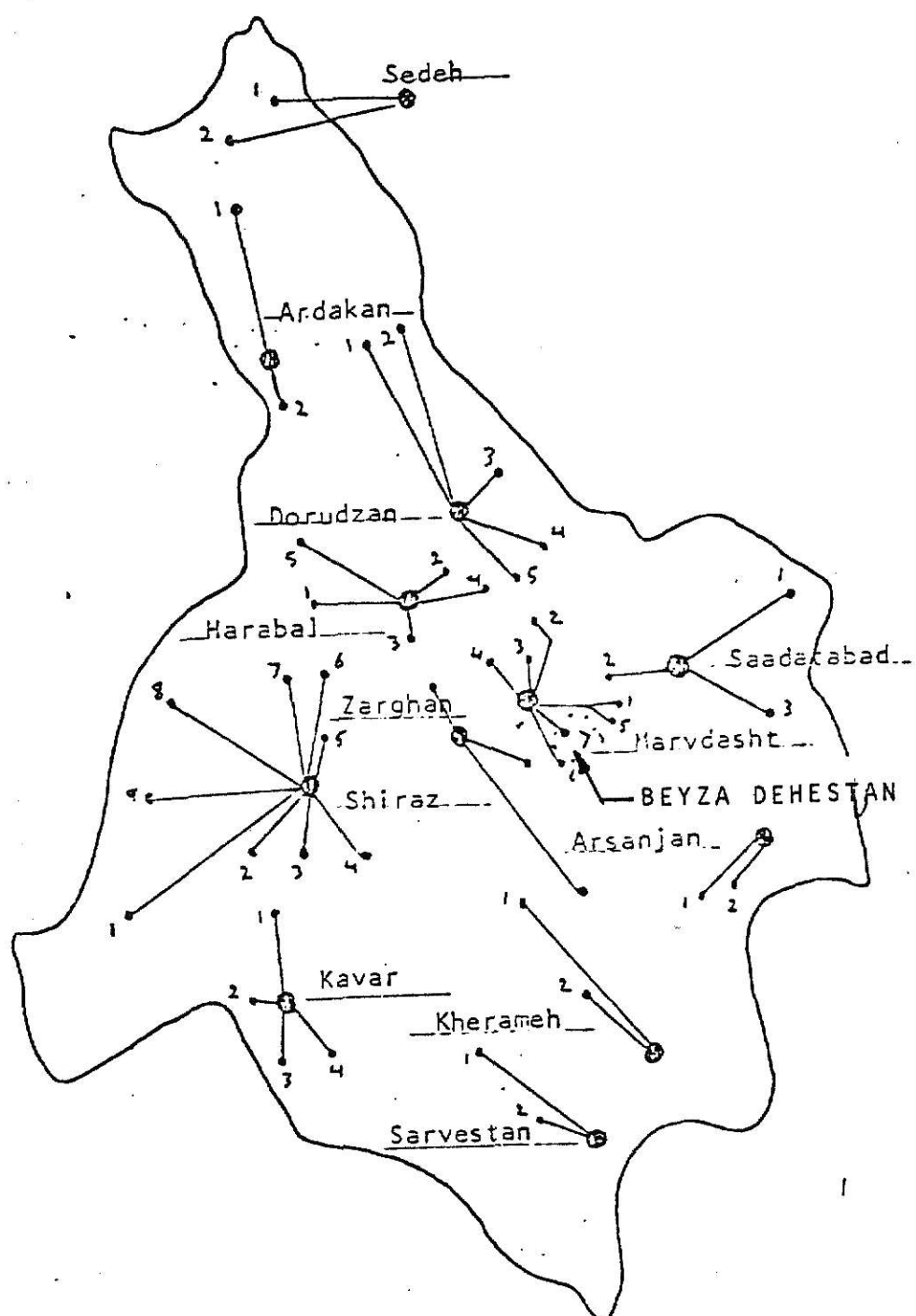


Figure 5

The map of the Shiraz Shahrestan with the locations of small towns and villages.

Key: As in Figure 1

DESCRIPTION OF CASE STUDY AREA

Beyza-Dehestan is one of the Dehestans of Shiraz Shahrestan with an area of about 96 square kilometers (41 square miles) and a population of about 16,500. There are 75 settlements and villages in this area. The average arable land for each village is 700 hectares* (1,540 acres). These lands which are mainly under wheat sugar beets, barley and melons are irrigated by village water pumps (which are installed on semi-deep wells) and the stream which is branched from Doroudzan Dam-Irrigation Canal. The amount of yield per hectare is 1,000 to 1,500 kilograms** wheat, 1,200 to 20,000 kilograms sugar beets, 800 to 1,200 kilograms barley and 15,000 to 30,000 kilograms melons.

The main job of the villagers in this area is farming, though in some of the houses there can be seen some carpet weaving stocks with the women and girls working on them.

Per capita income at this area is less than \$2,000 and the majority of the people are poor. Most of them live in traditional small houses. These houses usually are constructed on 100 to 150 lots of land with 3 to 4 rooms on it; one living room, one storage and the third one is some type of room or shelter for their animals. These rooms are usually made of a mixture of clay and straw and sun-dried bricks. Instead of windows there may be one or two holes on the walls of the rooms. At a corner of the yard there may be a small unsanitary toilet. No part of the houses are sanitary at all.

There is not clean and hygienic drinking water in most of the villages; though when the water pumps are working to irrigate the crops,

*1 hectare = 2.2 acres

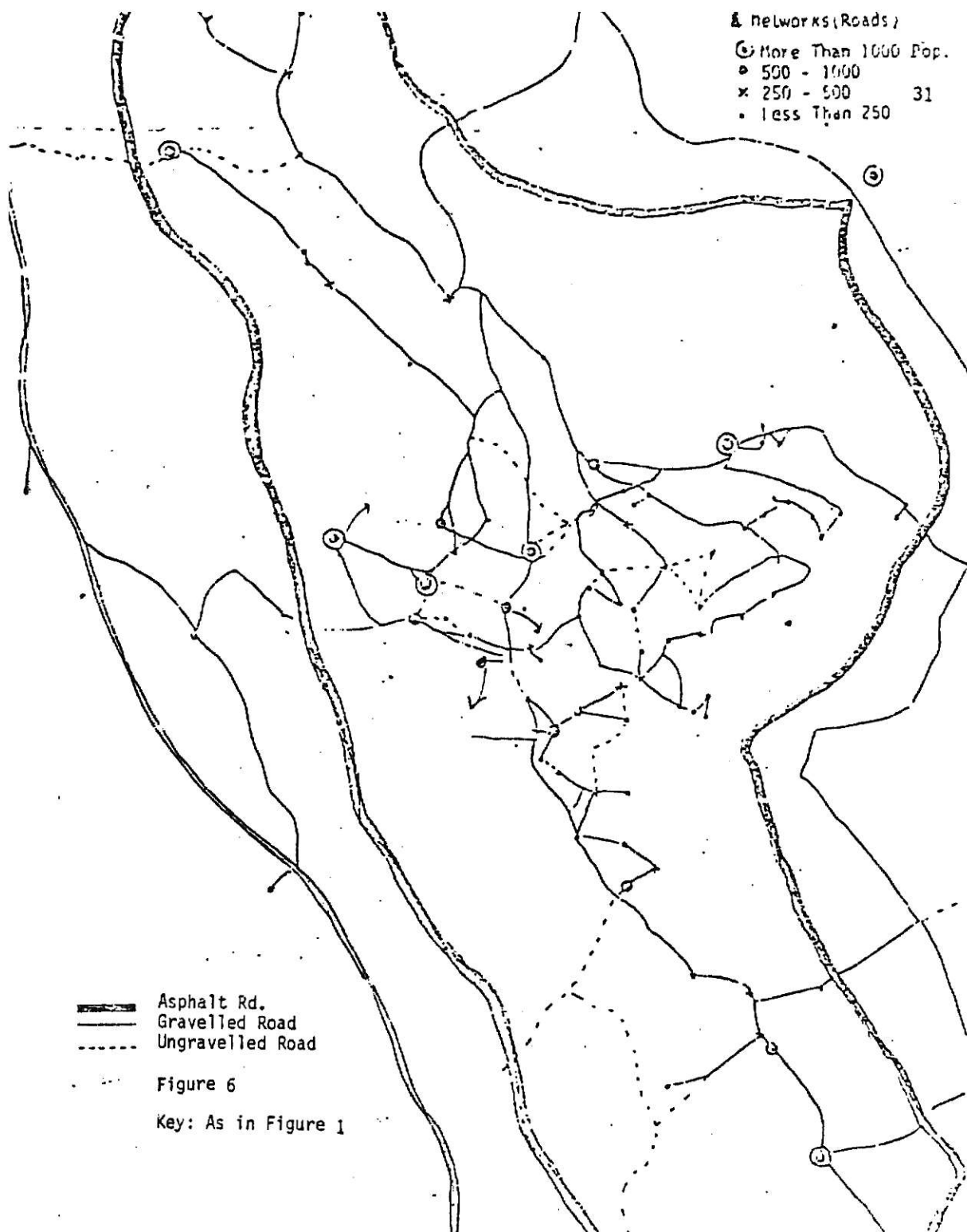
**1 kilogram = 2.2 pounds

people can get rather clean water. In some of the settlements and villages there is not any water pump and the only source of their drinking water is the stream which comes to the villages from irrigation canals of Doroudzan Dam for irrigation purposes. This water is polluted and the main source of diarrhea in the area.

There cannot be seen any type of health care facilities in these villages. Those who get sick and are not cured by the traditional drugs and herbs at their homes, have to go to Marvdasht (a small town located about 40 kilometers from the area under discussion). In Marvdasht there is a small Red Lion and Sun hospital with a doctor and one or two nurses aides. This place is always so crowded that most of the patients prefer to go to one of the other two private doctors' offices which are in the town, or to Shiraz which is about 70 kilometers from their villages.

The common diseases of the area are: common cold, pneumonia, diarrhea, trachoma, common fever, venereal diseases, influenza, parasitic infestation, dysentery, whooping cough, small pox, eye diseases, ear diseases, nutritional diseases, etc. Every year a few people may be bitten by snakes and die because there is not fast transportation to take the person to Marvdasht or Shiraz.

A minibus and a few private cars and some motorcycles and bicycles are the transportation facilities of the villagers of Beyza-Dehestan. The roads which link the villages to each other in some parts are gravelled and some parts are ungravelled, usually covered by clay after a rather heavy rain. The area is joined to the asphaltic Doroudzan Road by 6 or 7 kilometers of gravelled road at a point 34 kilometers from Shiraz-Isfahan highway.



Chapter 4

THE PROPOSED MODEL OF A RURAL HEALTH DELIVERY SYSTEM IN IRAN

THE IMPORTANCE OF RURAL AREAS

Outmigration from the villages and rural areas which are the centers of agricultural produces is so important that any type of effort would be worthy to retard its continuance to enable rural people to increase agricultural production. Work incentives, agricultural aids and subsidies should be accompanied by effective delivery of public services, especially public health services, for the rural areas of Iran. It is supposed that minimal services will have some impact on the social and economic inequities which are consistently found in the rural areas of the country.

PURPOSE

The purpose of this report is to introduce a simple and practical method of delivering basic health care and medical services for the settlements and small villages of Iran. Such basic health care is envisioned to include early diagnosis and prevention of diseases, minor illnesses and simple disorders as well as primary medical services such as dispensation of medicine, short term rehabilitation, minor surgery, ambulatory care or simple first aid, and to promote wellness.

GOALS

The goals of this delivery system for health care and medical services are: (1) to increase availability of and access to the care and

services for the individual, family and village; (2) upgrade and maintain the knowledge and skills of paramedical aids in the home and clinic; (3) provide precision and coordination in response to varying continuous and emergency conditions. Ultimately, this home/clinic system in settlements and small villages becomes the embryo for more comprehensive area-wide services and facilities.

OBJECTIVES

The subsequent objectives for: (1) the identification and determination of needs, (2) the needs and requirements of personnel, (3) the specifications of facilities and equipment and (4) the provisions of health services delivered to the settlement and village recipients, were determined to be minimal for the development of the health care and medical services' system in Beyza-Dehestan.

Determination of Needs

1. Identify the general health problems of the people and environment of the rural areas.
2. Identify the availability, status, conditions and accessibility of basic health services facilities.
3. Identify the type of health care and basic medical services for settlements and small villages.
4. Identify the condition of transportation system of the area under study.
5. Locating and assigning areas for suitable maintenance of environmental health.
6. Identify the type and number of personnel for administering and dispensing direct health services and those for the support system

of the health service.

7. Project needs inventory of health services facilities, manpower and transportation for continual updating, analysis and evaluation of the rural area health system.

The Needs and Requirements of Health System Personnel

The characteristics, qualifications and duties prescribed for each type of health personnel will be differentiated by training and location of assignment.

The Family Health Worker

1. Characteristics - A Family Health Worker is one of the adult members of any family of the villagers who is elected by the members of his family based on the following qualifications:
 - a. Literacy (optional factor)
 - b. Being able to handle the common and usual as well as unusual problems and difficulties of daily life
 - c. Personal interest in accepting the responsibility of family health worker
2. Functions and Duties
 - a. He (or she) is responsible for the health care of the family members. In this regard he (or she) should encourage the family members to keep themselves and their house as clean and neat as possible
 - b. He (or she) is responsible for mobilization of the vaccination of his family members.
 - c. He (or she) is responsible to introduce the sick member to the village health worker

Village Health Worker

1. Characteristics - A Village Health Worker is one of the villagers who is elected by the people of his village based on the following qualifications:
 - a. Literacy (a required factor)
 - b. Age (old people are more respected by the people traditionally, though he should not be so old that he has lost his physical strength)
 - c. Sex - Men have the priority to occupy such a position not because of religious or social values but because of his more physical and psychological strength and vigor to handle problems such as carrying a patient member to the village clinic and also to be able to make the patient obey when the medicine tastes bad
 - d. To be of a cool temper and known as a trusted person by the public
2. Functions and Duties
 - a. To train the family health workers
 - b. To encourage the villagers to keep their village clean
 - c. To arrange monthly public meetings with the villagers and ask them for their participation and contributions in doing small projects for improving the general health and sanitary conditions of their villages, such as building public bath houses, sanitary toilets, clean and good drinking water supply, etc.
 - d. To do first aid services. In cases where the villagers get sick, the village health worker should try to treat

them by the simple pills and drugs (which exist in the village medicine box). But if the patients need treatment by a more qualified person, he should inform the central village health worker to treat him or to take him to the rural clinic.

Central Village Health Worker

1. Characteristics

- a. Must have the 2-year degree of Rural Health and Basic Medical Care Practitioner or the equivalent degree
- b. Age (he should not be so young that he loses his composure in natural disasters such as earthquakes or other similar events.
- c. Sex (men are in priority because of the same reasons mentioned previously)
- d. Must have the characteristics of a good teacher for the Village Health Workers and as the health leader of the central village
- e. He should have been born in rural areas or be interested in working in rural areas
- f. Be able to communicate with the rural people as a villager

2. Functions and Duties

- a. To train the Village Health Workers
 - b. To improve the living conditions by promoting the environmental sanitation
 - c. To supervise the work of Village Health Workers
 - d. To treat simple diseases according to his knowledge.
- In cases where the patient needs treatment by a more

qualified person, he should introduce him or her to the rural clinic. He can ask for the ambulance from the medical service center in emergency cases

- e. Organize a filing information system (each member of the family of villagers and the family as a whole, should have its own file covering all health events).

Rural Physician

1. Characteristics

- a. Must have the degree of Rural Health Physician or the equivalent degree
- b. Must have been born in a village and/or be interested in working in rural areas
- c. Be a simple and kind person to be liked and trusted by the rural people
- d. Sex and age are not important factors for the Rural Physician as it is not for any other types of physicians, though men are in the priority in some cases such as diagnosis of venereal diseases which need to be examined by the physician.

2. Duties and Functions

- a. Treatment of the patients who could not be treated by the Central Village Health Workers
- b. To send the patients (of the area) who need more precise or important type of treatment or operation to the nearest hospital
- c. Supervises and evaluates the health, sanitary and curative works of the Central Village Health Workers; makes frequent visits to the villages and holds periodic meetings

with those responsible for the health and sanitation of the villages to be sure that their work is not below the norms laid down

- d. Organize a filing information system for the central villages
- e. Adequate distribution of drugs, both new and traditional ones and encourage the villagers to plant herbs for treatment of the common diseases
- f. Supervision of maternal and child health services; pregnancy, delivery and family planning; perform regular examination during pregnancy, manage normal deliveries and refer all difficult cases to the nearest hospital

The proposed number of personnel in each category of health services to be provided in Beyza-Dehestan is as follows:

<u>Category</u>	<u>Number</u>
Family Health Worker	2,750
Village Health Worker	75
Central Village Health Worker	6
Rural Physician	1
Support Personnel	
Midwife	2
Statistician	$\frac{1}{2}$
Typist	$\frac{1}{2}$
Driver	2
Janitor	1

The personnel will be selected, trained and assigned by the professional members of the health system and government officials at the

various administrative levels.

Specifications of Health Facilities and Equipment

1. Home

- a. Facilities - the home should provide space of a small room and bed in which to care for the infirmed member of the family, at least in the case of highly communicable diseases or short-term minor surgery and other illnesses

- b. Equipment - Medicines, prescription or packaged, thermometers, bandages, first-aid kits, etc. should be available and stored in a special cabinet. Provisions for sterilization particularly hot water, laundry, etc. are to be included.

Transportation of the family members to the village center or service center is provided by the health services of Beyza-Dehestan.

2. Village Clinic

- a. Facilities - One of the rooms of the elementary school of the village. If the village did not have an elementary school, or any other public place to locate the village clinic in it, a simple room has to be built with the help of the villagers. This type of activity is a common social activity in Iranian villages and as experience has shown, almost all the villagers are interested in participating in such work by their work or their money, or both

- b. Equipment - sterilizing equipment, first aid equipment, including minor surgical supplies, a dry storage to keep

those types of medicine and first aid items which need to be kept in dry air such as bands, tablets, etc.

Any type of equipment which can be used as a cool place for those types of medicine items that should be kept cool.

For the (C.V.C.) the above items are needed plus some type of transportation facility to take the patients who cannot walk to the C.V.C.s from the villages under their jurisdiction

3. Central Village Clinic

- a. Facilities - The clinic should be located in the central village mosque or in its elementary school
- b. Equipment - The equipment of this clinic is more advanced and complicated than that of village clinics, such as injection and vaccination tools and equipment, a small refrigerator for keeping some types of drugs that have to be kept cool, some elementary laboratory equipment, etc.

4. Beyza Medical Service Center

- a. Facilities - The center should have space to accommodate 6 rooms for beds, and the necessary health aids and equipment. The facility should make provisions for 24 hour monitoring of patients by health personnel.

Other considerations of space needs are:

Waiting room

Physician-patient visiting room

delivery & minor surgical room

Pharmacy

Filing room

Storage, restrooms, garage, etc.

- b. Equipment - Surgical and sterilization equipment requiring special technicians will be provided such as anesthesia, x-ray, amputation, etc. Testing equipment for blood samples, urinalysis, etc. should be included. In other words the equipment provided here should facilitate the utilization of the Rural Physician's expertise in monitoring short-term and long-term rehabilitation and recuperation.

- c. Other equipment

Refrigerator

Dry storage

An ambulance

A jeep

Provisions of Services for the Recipients

The provision of services is composed of two parts:

- a. Continuous services - the services that should be delivered to the people permanently such as:
 - 1. Prenatal and child care
 - 2. Health education
 - Prevention
 - Nutrition
 - Personal hygiene
 - Family planning
 - 3. Short-term rehabilitation and recuperation
 - 4. Immunization

5. Diagnostic (physical examination)

6. Environmental health

- Sanitation
- Waste disposal
- Drinking water
- Pest control
- Maintenance

b. Emergency Services - the services that should be delivered occasionally such as:

1. Trauma
2. First aid
3. Disaster
4. Accident

These objectives specified above will be accomplished through a scheduled plan of implementation at the various administrative levels. The proposed model for this accelerated health delivery system is depicted in Figure 8.

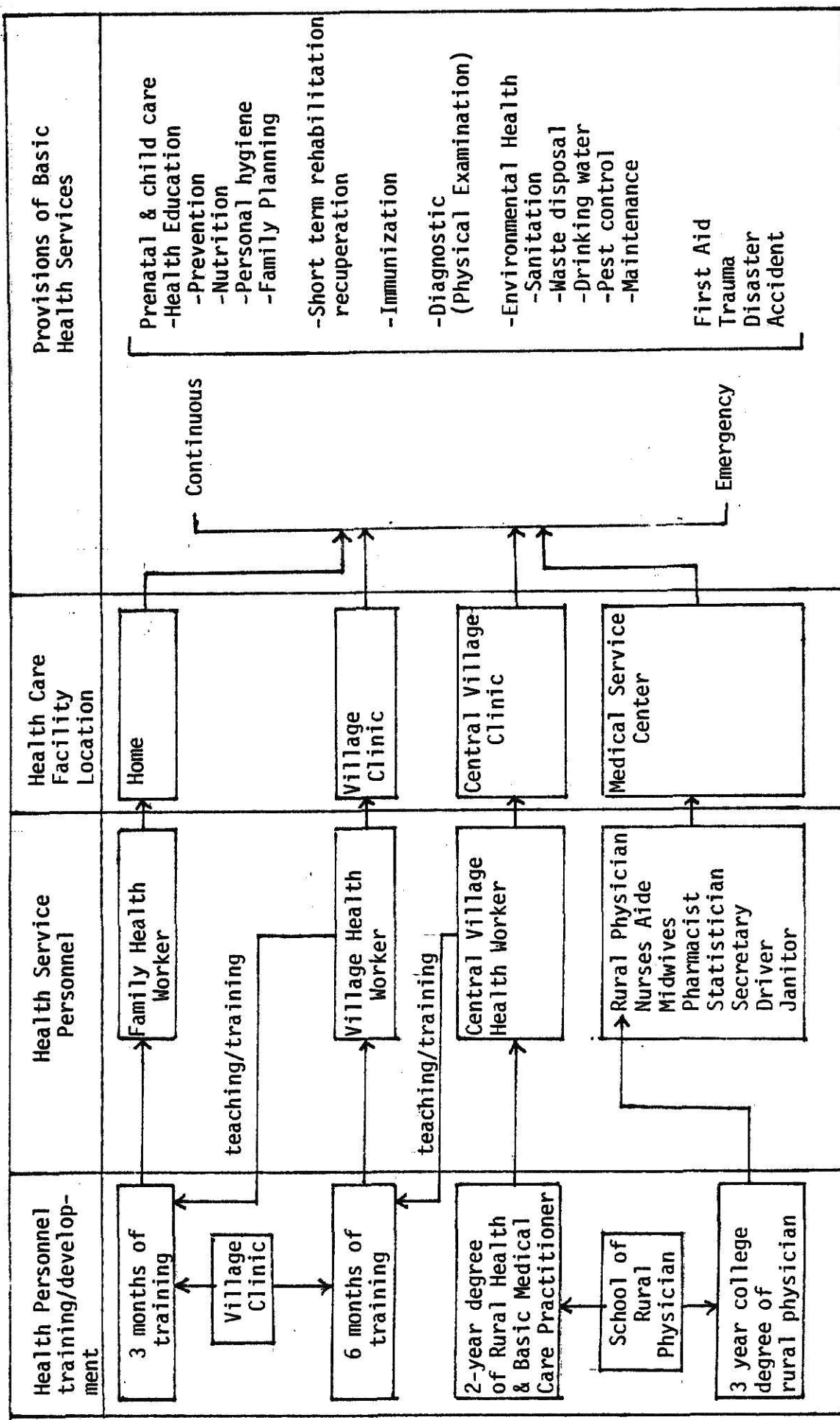


Figure 8 - Basic Health Care and Medical Services for Beyza-Dehestan of Shiraz, Iran

Chapter 5

THE IMPLEMENTATION OF THE PROPOSED HEALTH DELIVERY SYSTEM AND ITS BUDGET

INTRODUCTION

As the program is an accelerated one and also the possibilities of the country are very limited, the implementation should be done on the basis of simplicity and practicability.

In China when the government wanted to deliver health services to the rural people, the problem of lack of money and educated personnel was so serious that the government had to invent a special way to solve the problem. The problem was solved by training "barefoot physicians". These physicians were simple farmers who went to the special rural health schools which were established for this purpose and received training for a few months. After training they went back to their villages and continued their work on the land as well as treating the patients of their villages.

New Guinea and the Philippines followed models similar to that of China, and the Democratic Republic of Vietnam has developed cooperative health services for the rural areas. Each cooperative selects persons to be trained as nurses from among their members. The training including refresher courses, is undertaken at the district and communal health centers. These nurses receive a total of up to 18 months training. They perform various tasks in health-care delivery, health education, simple environmental sanitation, first aid of minor and common diseases. They are elected by the people and are obliged to return to their cooperatives after finishing their training courses. They are part-time health and

manual workers and get paid for their work, which is closely related to the work of the communal health center.

For the rural areas of Iran, a new model of basic health care and medical services has been suggested. This model has some similarities to those of the countries mentioned previously. The implementation of this model includes: (1) Survey and analysis, (2) Selection, Training and Assignment of Personnel (Workers), (3) Purchase Operation and maintenance of facilities and equipment, and (4) Provisions of services.

APPROACH

Survey and Analysis

Survey and research is done by the community development specialist or by professional planning analysts who are designated by the Planning and Budgeting Organization of the Province.

In Fars Province the survey and research will be done by the research group of the Department of Regional Planning of Shiraz University that usually assists the Planning and Budgeting Organization of Shiraz in designing and implementing developmental plans and projects.

The Steps for Survey and Analysis

1. The research group of the Regional Planning Department will conduct a general survey of the area under study (Beyza-Dehestan) with the help of the volunteer villagers of the area.
2. The results of the survey in the form of a proposal will be submitted to the Planning and Budgeting Organization by the research group.
3. The Planning and Budgeting Organization will approve the budget for the implementation of the project (Basic Health Care and Medi-

cal Services Delivery System).

4. The general survey by the University professional planners and student interns will be conducted through on-site interview using questionnaires. The survey will include the (75) villages in Beyza-Dehestan.
5. The general survey will be made annually and interim surveys (three-months) will be made by the Village Health Workers.
6. All results of the survey will be maintained at the various levels in the health services delivery system.
7. The analysis of survey data will be accomplished at the University of Shiraz and disseminated on the authority of the national government.

Evaluation

The evaluation of the project will be done by the Planners of the Department of Regional Planning of Shiraz University once a year. The results of this evaluation will be sent to the Planning and Budgeting Organization of the Province and reported to the central or main office of the Planning and Budgeting organization of the country which is located in Tehran (the capital city).

The evaluation will be based on the following criteria:

1. People's (consumers') satisfaction
2. Health workers' satisfaction
3. Number of people who have been served listed by the name and type of services delivered
4. Environmental health and sanitary improvement by checking the general condition and physical condition of the villages' houses, the toilets, waste water and solid material disposal

system and the quality of drinking water

5. Reduction in the number of cases of communicable and other types of diseases
6. The extent of people's participation by type and time
7. How well the system responds to providing the necessary care and services

Selection, Training and Assignment of Health Workers

Selection

1. The Family and Village Health Workers must be adult and should have received a basic education in reading, writing, etc. through adult learning centers or in a more formal school system.
2. The Family and Village Health Workers are selected by the villages with the assistance of the village representatives.
3. The Central Village Health Workers should have received at least nine years of formal education.
4. The Service Center Health Workers must have a 12 year pre-college education.
5. All training recruits must pass a preliminary test for assessing their mental and physical capabilities prior to selection for training at the School of Rural Physicians.
6. These health workers will be selected each year or as the need arises.
7. The selection of health services recruits will be assisted extensively by the Red Lion and Sun Society with the final approval of the Planning and Budgeting Organization.

Training

Family Health Worker

1. The training of the Family Health Worker will be accomplished by the Village Health Worker in the village clinic.
2. The training will include basic health education and skills in elementary medical care such as pre-natal and post-natal care, first-aid, caring for the sick at home, dispensing medicines, etc.
3. The Family Health Worker will receive a certificate at the end of 3 months.
4. The Family Health Worker will receive continuing education and skills training every year or as the need arises, such as new techniques or health equipment..

Village Health Worker

1. Teaching and training of Village Health Workers will be done in the central village clinic under the supervision of the Central Village Health Worker.
2. The training will include delivering basic health and medical care such as those which were mentioned above for Family Health Workers, plus some more advanced services such as dispensing pharmaceutical prescriptions made at the central village clinic, inject some simple types of antibiotics or taking blood samples, set broken bones, etc.
3. The Village Health Worker will receive a certificate at the end of 6 months.
4. The Village Health Worker will receive continuing education and skills training every year at the central village clinic.

Central Village Health Worker

1. Teaching and training of Central Village Health Workers will be done in the School of Rural Physicians.
2. The training will include health education and skills development comparable to those required by physician assistants.
3. The training period for the Central Village Health Worker is two year. The degree that the Central Village Health Worker will receive is the Certificate of Basic Health Care and Medical Services Practitioner.

Rural Physician

1. Teaching and training of Rural Physicians is done in the School of Rural Physicians.
2. The training includes health and medical skills and education that is required for a normal physician.
3. The training period is 3 years and the Rural Physician will become certified upon successful completion of this training.

PURCHASE, OPERATION AND MAINTENANCE OF FACILITIES AND EQUIPMENT

Acquisition of Facilities

1. The location of the village clinics, central village clinics and the Rural Medical Service Center will be determined by the village committees and the research group.
2. The building construction for the Medical Service Center and central village clinics and village clinics will be done by contractors who will be designated by the Planning and Budgeting Organization. For those villages which have mosques or elementary schools, one of the rooms in those places will be determined for

use by the clinic with the permission of the village committees.

3. Purchasing of facilities for the clinics and Medical Service Center will be funded by the Planning and Budgeting Organization.

The Operation of Health Facilities

The dispensation of health care and medical services at the various clinics will normally be scheduled for 8 hours. At other times the Health Worker will be on call. The exception to the 24-hour schedule will be feasts and holidays during religious seasons. Each of these clinics will be supervised by the assigned health worker for such activities as patient appointments, education and training programs, etc.

Maintenance of Health Facilities

The hygienic maintenance of the various clinics will be performed by person/persons with proper training given by the clinic supervisor.

The services maintenance of the various clinics will be performed by trained village workers or contracted services from private businesses in Marvdasht or Shiraz.

PROVISIONS OF HEALTH SERVICES

Clinic Visits

The provisions of services will be offered for continuous health care and medical needs on appointed schedules for families and individuals. Emergency services will be handled as the need arises and will be subject to the judgement of the clinic supervisor.

Environmental Health and Maintenance

Central Village Health Workers are responsible for teaching and training the Village Health Workers the basic knowledge and techniques of

environmental health and sanitation, as well as the maintenance, information and activities which should be performed in order to have a progressive environmental improvement.

Sanitation

Personal hygiene, i.e., maintenance of physical and clothing sanitation in the home is obviously left to the individual and families in the settlements and villages. Sanitation in the exterior environment for such things as pest control, clean passageways, contaminated water supply, flood control or those things which affect the whole community, is the responsibility of the Village Worker who will be assisted by the villagers in scheduled sanitation maintenance or in emergency situation.

Solid Waste Disposal

The disposal of human waste can be accomplished through the use of portable, chemical toilets for each home. Food and animal waste can be transported to a communal compost area and collected periodically by private companies or this waste can be recycled as fertilizer. Recycling food and animal waste for creating heat energy for cooking or comfort should be considered.

Transportation

Most villagers use public conveyance for regular clinic visits to the central village clinic or Medical Service Center. At other times private transportation is usually available.

The distance between the home and the village clinic is usually within walking distance.

For emergencies vehicles provided by the government will be available. All public vehicles will be maintained by the assigned drivers.

Replacement of transportation, especially during emergencies, will be made by using vehicles from other assigned routes or other back-up units. In very critical emergency cases, such as earthquakes, rare disease or illness, supplying rare drugs or antibiotics, helicopters may be used.

Communications

Communications for emergency situations will be accomplished through mobile messenger service. More rapid communications systems, of course, will have to be employed in the future.

THE PROPOSED PROJECT BUDGET

The Budget of the Project

Ninety to 95 percent of the funding of the project should be paid by the government and the remaining 10 or 5 percent by the villagers of the area. This small amount should be paid by the villagers so they might feel more responsibility in taking care of the project. Paying this money will make them think that this is not just the government who should work for them, but the government is working with them. If the villagers are very poor they can pay less amounts of money, even if each family pays \$1 it will be better than paying nothing and as a result they would feel a responsibility toward the social activities that are done in their village.

The fund will be spent for the following estimated items.

1. Personnel

<u>Occupation</u>	<u>No.</u>	<u>Salary per* month (RLS)</u>	<u>Total RLS</u>
Rural Physician	1	60,000	60,000
C.V.H.W.	6	28,000	168,000
V.H.W.	75	7,000	525,000
F.H.W.	2750	3,000	8,250,000

Midwives	2	28,000	56,000
Statistician (part-time)	1	15,000	15,000
Secretary (part-time)	1	12,000	12,000
Drivers	2	25,000	50,000
Janitor	<u>1</u>	<u>14,000</u>	<u>14,000</u>
	2839	192,000	9,150,000

Personnel salary per year = 9,150,000 x 12 months = 109,800,000

2.	Building & Equipment	10,000,000
3.	Maintenance per year	200,000
4.	Miscellaneous	<u>100,000</u>

ESTIMATE OF TOTAL BUDGET

RLS 120,100,000
\$1,715,714 (US)

Chapter 6

CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

CONCLUSIONS

The need for basic health care and medical services for the rural areas of Iran as one of the Third World countries needs more accelerated solutions than those traditionally offered by western medicine. Many of the Third World countries have stressed the need to find alternative approaches to the problems of bridging the gap between needs and resources in the provision of basic health care and medical services to their rural areas. A strong and growing emphasis has been placed upon the training and utilization of family and village health workers as typified by the "barefoot doctor" of the Chinese system.

Papua New Guinea has had its barefoot doctors for 27 years, aid post orderlies, as they are called, whose role developed largely out of the urgent need for some care to be given to the village people after the last world war. A system of aid posts supervised by medical assistants from sub-district hospitals provided the basic pattern of health care and medical services for the rural population of New Guinea during the 1950's and 60's.

The Democratic Republic of Vietnam has developed cooperative health services for the rural people all over the country. These cooperatives deliver basic health care and medical services and have been very successful.

For the rural areas of Iran the proposed accelerated model of delivering basic health care and medical services, hopefully, will be an effective

model through delivering the traditional and western type of health care and medical services by family health workers, village health workers, central village health workers and Medical Service Center personnel.

RECOMMENDATIONS

1. Basic health care and medical services should be recognized as forming part of the overall rural development
2. All other levels of the health care and medical services system (of growth poles and growth points) should be reoriented to support (referral, training, advisory, supervisory, and logistic) the basic health care and medical services level of rural areas
3. Rural people should be involved in the designing, staffing, and functioning of their local primary health care and medical services centers
4. The basic health care workers of the rural areas should be selected by the villagers and rural people -- acceptability of such workers is, in fact, a crucial factor of success
5. There should be special emphasis on (i) preventive measures; (ii) utilization of simplified forms of medical and health technology; (iii) health care needs of mothers and children; (iv) health and nutrition; (v) health and sanitation; (vi) association with some traditional forms of health care and medical services; and (vii) respect for the cultural patterns and desired needs in health care and medical services and community development of the consumers.

This system has the potentiality to be a national health program if it can be funded by the government. For this purpose the project (model)

should be publicized and demonstrated by T.V. and other communication means to the nation for the people's suggestions and recommendations.

SUMMARY

1. The model which is designed in this report aims to meet the total basic health care and medical services needs of the rural people of Beyza-Dehestan of Shiraz Shahrestan of Iran through the functions and activities of family health workers, village health workers, central village health workers and medical service centers.
2. This accelerated model creates decentralization of basic health and medical care decision-making and the promotion of involvement of the rural people in participating in the planning, provision and organization of their own health care and improvement services.
3. The proposed model will be very effective, hopefully, in controlling diseases arising from a defective environment through the provision of inspection and advisory services which equitably distribute care and services to all the villages of the area under discussion, and which will promote constant and continuous environmental improvement.
4. This proposed health care and medical services system, if adopted, will provide personal and family care, including the treatment of common illnesses, promotion of self-care, immunization, child care, maternal care, family planning, and disease surveillance.
5. This model of the system can be adapted for most of Iran's rural areas and is based on the cultural and traditional values of the

country. Wherever possible the useful elements of traditional medicine are to be integrated with this health and medical system, so the model can be generalized for the rural areas and villages all over the country.

6. The model is preliminary to the development of a regionalized system in the province which can enhance the administration and coordination for the implementation of rural health services.

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A MODEL FOR ACCELERATED BASIC HEALTH CARE AND MEDICAL SERVICES
PROGRAM FOR RURAL AREAS OF IRAN

With Particular Reference to Some of Shiraz's
Rural Areas and Villages

by

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AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF REGIONAL AND COMMUNITY PLANNING

Department of Regional and Community Planning

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1980

ABSTRACT

A great number of the people of the world are living in rural areas. These areas, generally, lack many public facilities services and facilities that can be found in urban areas.

"Two-thirds of all of the seriously poor (with income at \$100 a year) live in rural areas of the world. This is approximately 140 million in Africa, 30 million in Latin America, and 525 million in Asia."¹

The rural people of developed countries, generally, have less problems than those of LDCs in all areas. In developed countries the majority of rural people of developed countries, generally, have less transportation facilities, having an access to the health care and medical services facilities, etc.; while in LDCs the situation is not so. They don't have a satisfactory type of transportation facilities while they have to go to the cities for any type of their basic needs such as basic health care and medical services.

"The number of rural people served by one doctor in 1973 was 1,100 in England; 60,000 in Brundi; 57,000 in Iran; 22,000 in the Philippines and 18,000 in New Guinea."²

In Iran, the rural areas have similar problems as the rural areas of other less technologically developed countries. Almost all of its 60,000 small and large villages scattered all over the country

¹A New Strategy for Development, The Tripartite World Conference on Employment, Income Distribution and Social Progress and The International Division of Labor, Geneva, June, 1976.

²UNICEF/WHO Joint Committee on Health Policy (1975). Report of the twentieth session, Off. Rec. WHO, 228, Annex 2, Geneva, p. 23.

are in dire need of the basic health care, medical and sanitary services. This is one of the important reasons why most of the villagers have preferred to leave their villages and farms (which are the centers of agricultural products of the country) and live on the fringe of the cities which creates slum areas, unemployment, and many other related problems for the country.

The purpose is to introduce a simple and practical method of delivering basic health care and medical services for the settlements and villages of Iran. Such services are envisioned to include early diagnosis and prevention of diseases, minor illnesses and simple disorders as well as primary medical services, such as dispensation of medicine, short term rehabilitation of minor surgery, ambulatory care or simple first-aid.

These services will be delivered by trained Family Health Workers (F.H.W.s), Village Health Workers (V.H.W.s), Central Village Health Workers (C.V.H.W.s) and Rural Medical Service Center (R.M.S.C.)