

APPRAISAL OF MEDICAL CARE SERVICES IN KUWAIT

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THESIS

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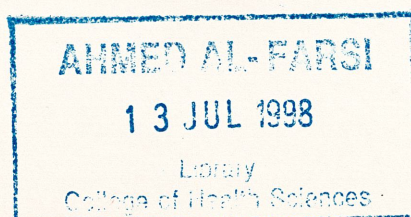
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INTRODUCTION

INTRODUCTION

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KUWAIT HEALTH SECTOR ASSESSMENT

In the field of health services within the same context but in a broader term, Morris (1967) defined operational research as "the systematic study of health services with a view of its improvement" .

Cost effectiveness, cost efficiency and cost benefit :

These are financial measures applied to evaluate medical health care services. Cost effectiveness is the method that search for the least costly way of achieving a defined result and therefore does not deal with the resolution with certainty as such, but with choice among possible actions when the effects likely to result and the values to be placed on these effects are understood .

Cost efficiency on the other hand, is considered as the search for improvement given a defined means as of meeting a defined objective. Cost benefit attempt to determine and select actions or in programs by comparing benefits with costs (WHO/Pub. H. Paper 55, 1974; Abel-Smith, 1978) .

Kuwait Health Sector Assessment

1. General information on Kuwait

1.1. Geography

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1. General Information on Kuwait :

1.1. Geography :

The State of Kuwait, an Arab Islamic country lies in the Arab Peninsula on the north west corner of the Arabian Gulf, bounded to the east by the Arabian Gulf, in the south-west by the Kingdom of Saudi Arabia and in the north and west by the republic of Iraq. It lies between 28° and 30° north to the Equator and between 46° and 48° to the Greenwich Meridian. The Arabian Gulf, which is 240 thousand Square Kilometers is only of 25 meters mean depth, its coast extends for 195 kilometers forming the east border of Kuwait. The total length of frontiers of Kuwait is 685 Kilometers, including 250 kilometers with the Kingdom of Saudi Arabia and 240 kilometers with Republic of Iraq (Map of Kuwait, Appendix I) .

The total surface area of the State of Kuwait is about 17 thousand square kilometers, i.e. seven thousand square miles, of which one thousand kilometers represents the off-shore islands (French and Hill, 1971; Faizallah, 1974) .

1.2. Climate :

The Geographic location of Kuwait presents a dry hot sahari climate. While the temperature may reach up to 50°C in hot summer, it could approach the freezing point in

winter. Clouds and rainfall are occasional in winter and spring, maximally in December and January. The number of days with 0.1 millimeter or more rainfall was estimated to be 33.7 days per year in Kuwait international airport during the period 1968 to 1977, with the average total rainfall of 132.1 millimeters per year. The mean relative humidity ranges between 10° to 36° . Sand storms occur occasionally around the year mostly from April to August and maximally in June and July. Thunderstorms occur specially during March, April and May. The four seasons are considered to be mainly two seasons of a short winter and long summer with two intervening periods of climatic transition i.e. Spring and Autumn .

1.3. Water sources, plants and agriculture :

There are two sources of water in Kuwait :

- a) Distillation plants: i.e. desalination of sea water which constitute the source for potable water in Kuwait. In 1977 the total installed capacity of distillation plants was about 62 million gallons per day. The average consumption per capita per day was estimated to be 41 gallons. It is connected to the buildings through pipe systems, although still a considerable amount of

buildings depend on tanker lorries for carrying water from public sources to be pumped to the water tanks over the buildings of less developed suburbs .

- b) Brackish Water: This is the underground source in the south western part of the State used for irrigation and part of it is added to the distilled sea water in the distillation plants. The average daily consumption per capita of brackish water was estimated to 23 gallons during the year 1977 .
- In Kuwait, the desert uncultivable land constitutes 91.4% of the total area. The rest which is 8.6% is utilized to produce vegetables and crops (0.07%), fruits and wood trees (0.13%), pastures (7.5%), and 0.9% is still unused cultivable land. There are great efforts to develop agriculture in Kuwait within the present constraints of scarcity of cultivateable land and irrigation water, unsuitable climatic conditions, and limited skilled agricultural labourers. These efforts achieved during the year 1977 the fact that local production of vegetables represented 46%

of the total domestic consumption, milk 41%, eggs 18%, poultry 34%, and fish 99% (Annual statistical Abstract, 1978) .

1.4. Historical development :

Excavations of Failakah island in Kuwait revealed Bronze age dwellings suggesting the Ancient existence of Sumarian Civilization 3000 years ago. Before the oil era , the inhabitants lived mainly on seafaring occupations such as fishing, pearl diving and coasting trade. The Kuwait Emirate was established in 1757 by Sheikh Sabah the first who was elected by leaders of the tribes. In 1961 Kuwait gained its full independency according to a treaty with Great Britain, in 1961 Kuwait Joined the Arab League, and in 1963 it joined the United Nations .

1.5. Economic development :

Oil production started after the end of the Second World War where the first Cargo of oil left Kuwait in June 1946. Further exploration and production of oil developed soon, putting Kuwait in a new era of socio-economic development. The recent period of Kuwait development changed the Kuwaiti community to an urban one depending on oil production as the main source of national income .

Khouja and Sadler (1978), estimated the share of oil in the Gross Domestic product of Kuwait to be 70% in 1976, compared to 59.9% in 1966, and constituting 92.3% of total exports and 85.7% of total government revenues. Accordingly marked rapid changes occurred based on introduction of modern services, construction of buildings and roads, and technology with increasing public expenditures by the government supplied through the rapidly increasing revenues of oil production . . Table 1 presents some features of socio-economic development during the population census years 1957 to 1975 .

It is obvious that in the last twenty years the government revenues increased more than 24 folds, governmental expenditures increased about 11 folds and the population growth increased about four times .

This created an influx of workers from other countries in the region participating in the new infrastructure projects and staffing jobs created by the increase of public services. Again the gross domestic product enabled the percapita G.N.P. to be the highest one in the world. The world bank (1978) estimated the percapita G.N.P. in Kuwait to be 13,960 U.S. Dollars in 1976 which is considered the highest one among all countries compared to e.g. Switzerland (9,160 U.S. \$) ,

United states (7,880 \$), Libya (5,970 \$), Japan (5,090 \$) , Saudi Arabia (4,420 \$), United Kingdom (4,180 \$), Iran (2,060 \$) and Iraq (1,390 \$) .

T A B L E 1

Some Basic Data on Kuwait in the Census Years 1957
to 1975 and the Rate of Increase

I T E M	1957		1965		1975	
	No.	%	No.	%	No.	%
1. Total population in thousands	206	-	367,3	78.3	994.8	382.9
2. Population density per Sq. Km.	12.9	-	29.2	126.4	56.3	336.4
3. Annual population growth rate	-	-	10	-	6.1	-
4. Total labour force in thousands	80.3	-	184,3	129	304.6	279.3
5. Total labour force as percent of total population (1)	42.1	-	39.4	-	30.6	-
6. Total gross domestic product in million K.D. (2)	N.A.	-	749	-	3279	
7. Government revenues in million K.D.	116.	-	245	111.2	2908	2407
8. Government expenditures in million K.D.	91	-	241	164.8	1137	1149

Source: Annual statistical abstract, 1978; Khouja, 1978

(1) KD (Kuwaiti Dinnar) = 3.5 U.S. Dollars as Prices of 1975.

(2) The Number of Labour force was calculated as 12 years and over 15 years

1.6. Population of Kuwait :

1.6.1. Population growth :

Rapid economic development of Kuwait caused marked change in population growth and structure. This is best illustrated in table (2) .

The growth rate of Kuwaiti population was 8.6% to 9.5% in the period 1957 to 1970 due to nationalization mainly of bedouins (nomads) who were living in Kuwait Badia and settled around the city seeking for governmental jobs as drivers , gaurds and soldiers .

The non Kuwaiti population on the other hand attained higher growth rates (9.6% to 13.61) during the same period due to influx of emigrants especially after 1948 and during 1967 . (Table 3)

Populations projection is estimated according to three variants, estimating the population at the year 2000 to be 2,134.4, or 2,878.7 or 2,433.6 thousands .

These variants were based on the assumption that the annual increase for Kuwaitis will be ranging from 4-6.3% and for Non-Kuwaitis 3-6% .

Table 2. Population of Kuwait in Thousands by Nationality and Sex During the Period 1904 - 1978 .

Year	Kuwaities			Non Kuwaities			Total Population		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1904	-	-	NA	-	-	-	-	-	35
1916	-	-	NA	-	-	-	-	-	30-40
1944	-	-	NA	-	-	-	-	-	70
1952	-	-	NA	-	-	-	-	-	160
1957	59.2	54.4	113.6	72.8	20.0	92.8	132	74.4	206
1965	112.6	107.5	220.1	173.7	73.5	247.2	286.3	181	467
1975	236.6	235.5	472.1	307.2	215.6	522.8	543.8	451.1	944
1976	253.9	252.8	506.7	327.4	229.7	577.1	581.3	482.5	1063
1977	270.3	269.	539.3	346.6	243.3	589.9	616.9	512.3	1129
1978	287.6	286.2	573.8	367.1	257.6	624.7	654.7	543.8	1198

Sources: Annual Statistical Abstract, 1978

- French and Hill, 1971 .

N.B.: Population in 1957, 1965 and 1975 are census data, the rest are mid year population estimates .

Table 3. Annual Growth Rate per Thousand Population of Kuwait According to Sex and Nationality (1957-1975)

Period	S e x	Annual Growth rate per thousand		
		Kuwaities	Non Kuwaities	Total
1957 -	Male	87	116	104
	Female	66	201	121
	Total	66	136	110
1961 -	Male	76	108	95
	Female	87	144	109
	Total	81	118	100
1966 -	Male	93	71	80
	Female	98	148	120
	Total	95	96	96
1971-75	Male	62	47	53
	Female	65	80	72
	Total	63	59	61

Source: Population Census, Part I (1976)

1.6.2. Sex ratio and Nationality groups :

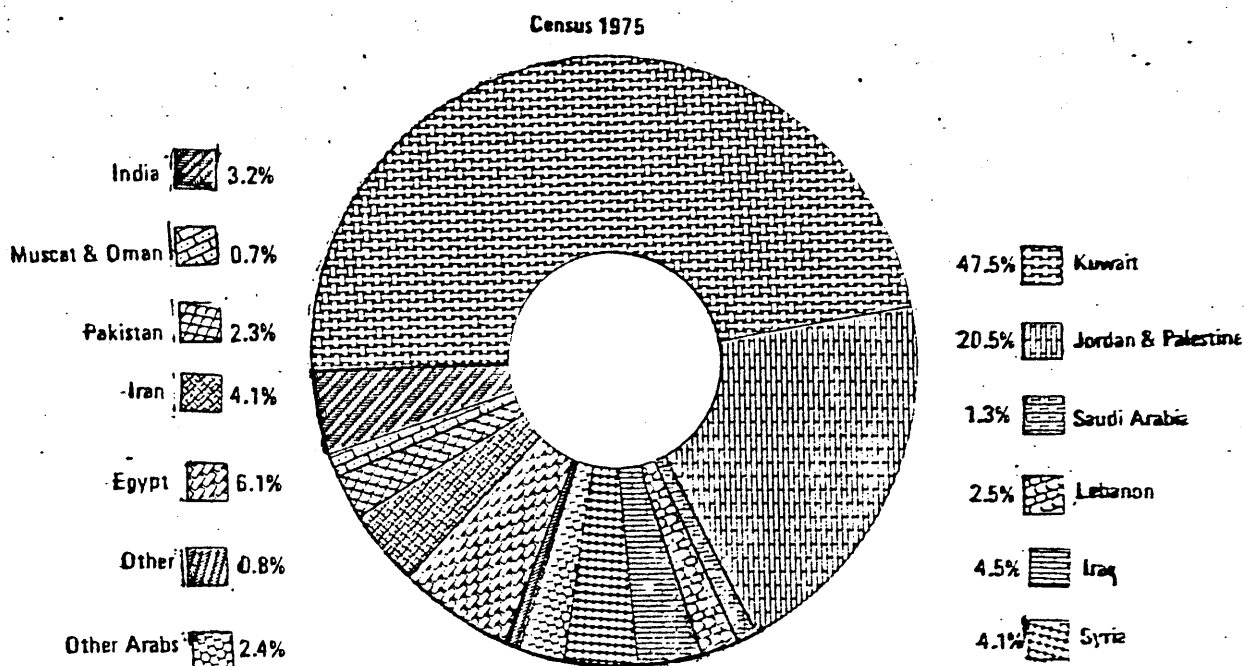
A population census is regularly conducted every five years. The population structure as regards percentage of Kuwaiti population was 55%, 50.4%, 47.1%, 47% and 47.5% of the total population in the census years 1957 to 1975 respectively .

On the other hand the male to female ratio was markedly varying between the Kuwaitis and non Kuwaitis. For Kuwaitis it was ranging between 100.5 to 108.1 males: 100 females in these census years. For the non Kuwaitis while the ratio of males for every 100 females was 365.5 in the year 1957, it dropped to 267.4 in the year 1961, then 236.3 in the year 1965. In 1970 the ratio was 166.2, in 1975 it became 142.5. This phenomenon shows that in the beginning of the oil production phase after the second World War, labourers moved to Kuwait mostly unmarried or unaccompanied by their families. Later on, the non Kuwaitis began to settle in Kuwait especially from Arab Countries with their families after development of housing and public services.

1.6.3. Population structure by age and sex :

The age and sex structure presents a young population pattern with an even pyramid for Kuwaitis and uneven pyramid for non Kuwaitis showing a marked increase in the age groups 20-49 years especially for males which is the working age.

FIGURE 5: Nationality Groups of Kuwait Population 72.
in the Census Year 1975



SOURCE: Annual Statistical Abstract (1976).

FIGURE 6: Population Pyramid of Kuwaitis and Non-Kuwaitis
(1975)

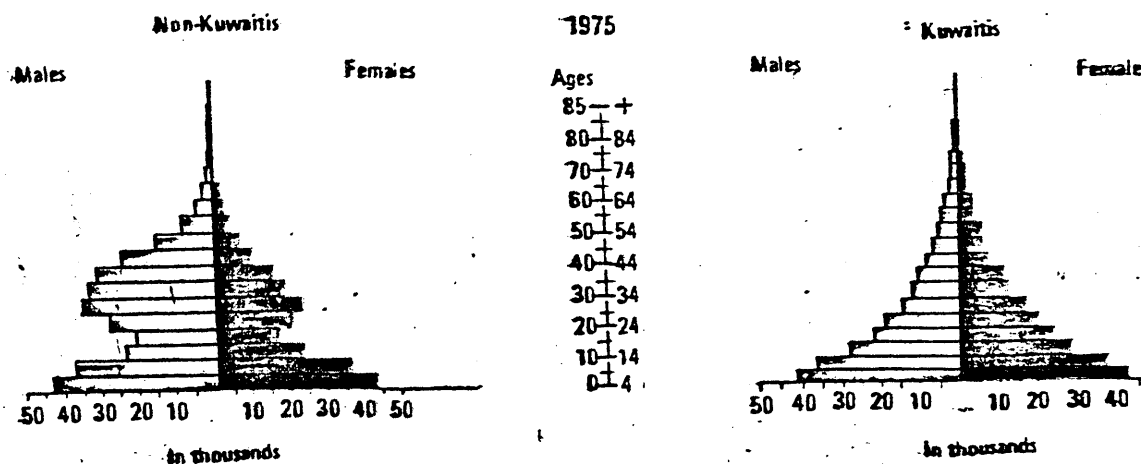


Table 4. Percentage Distribution of Population by
Age groups and Sex in Census years 1965 and 1975

Age group in years	S e x	Census 1965			Census 1975		
		Kuwaiti	Non K.	Total	Kuwaiti	Non K.	Total
Less than one	Male	4	2.5	3.1	4.1	3	3.5
	Female	3.9	5.5	4.6	4	4.1	4
	Total	3.9	3.4	3.7	4.1	3.4	3.7
1 - 4	Male	15.9	8.1	11.2	15.6	11.5	13.8
	Female	16.4	18.7	17.3	15.2	15.8	15.5
	Total	16.1	11.2	13.5	15.4	13.2	14.3
5 -14	Male	29.1	10.4	17.7	30.2	20.1	24.6
	Female	28.9	20.9	25.7	29.8	27.2	28.6
	Total	29	13.5	20.8	30	23	26.3
15 -19	Male	8.5	7.8	8.1	9.9	6.9	8.2
	Female	9.9	7.7	9	10.8	7.6	9.3
	Total	9.2	7.8	8.4	10.4	7.2	8.7
20 -29	Male	15.7	35.2	27.6	15.2	20.1	18
	Female	16.5	25.5	20.2	16.9	19.2	18
	Total	16.1	32.4	24.7	16.1	19.8	18
30 -39	Male	10.9	23	18.2	10.4	20.8	16.3
	Female	9.6	12.6	10.8	10.1	15	12.4
	Total	10.3	19.9	15.4	10.3	18.4	14.5
40 -49	Male	7	8.9	8.1	6.8	12.2	9.8
	Female	5.8	4.6	5.3	5.8	6.8	6.3
	Total	6.4	7.6	7	6.2	10	8.2
50 -59	Male	4.2	3	3.5	4	4.1	4
	Female	4.1	2.4	3.4	3.7	2.5	3.1
	Total	4.2	2.8	3.4	3.8	3.4	3.8
60 +	Male	4.7	1	2.4	3.8	1.3	2.4
	Female	4.9	2.1	3.7	3.7	1.8	2.8
	Total	4.8	1.3	2.9	3.7	1.6	2.6

Source: Population census of Kuwait. Part I (1976)

The non Kuwaiti inhabitants are mostly Arabs who are constituting a percentage of 40.2 to 42.1 of the total population. The non Arabs who are: Asian mostly from Iran, India and Pakistan; Europeans and Americans. They were 10.4% to 12.7% of the total population during the census period 1957-1975. The nationality groups as percentage of population is illustrated in figure (4) based on data of the population census (1975) .

It is shown in table (4) that the elderly population 60 years and over were only 2.6% of the total population in 1975 compared to 2.9% in 1965. The Kuwaiti elderlies were 3.7% and the non Kuwaiti were 1.6% group in 1975. Infants were 3.7% (4.1% for Kuwaitis and 3.4% for non Kuwaitis). Population below 5 years were 18%, below 15 years 44.3%, and below 20 years were 53% in the year 1975 .

Sex and nationality differences were marked in the working age groups 20-49 years as illustrated in the population pyramid with increase of percentage of non Kuwaiti males which was almost double the Kuwaitis in the age groups 30-49 years while this marked variation is not manifested among females .

It is clear that the population structure presents a rapidly growing, markedly changing and young patterns. These patterns create difficulty in projection since growth is not affected only by natural increase which by itself is high, but also by the added increase of net migration .

1.6.4. Education :

The great efforts of developing education as a free right for citizens changed the patterns of illiteracy in the community together with achieving educational development for the new generations. These efforts resulted in the fact that during the scholar year 1977/1978 the number of enrollments in governmental schools was 253,212 students, other than 55,777 students in private education and 9318 university students. This represented about 28% of the total population of Kuwait, and about 80% of the age groups 5-20 years .

The educational system in Kuwait consists of three levels for general education, each one is a four year program: primary, intermediate and secondary schools .

Post secondary education consists of technical and vocational institutes of two year programs leading to an associate degree in commerce, education, technology, religion or health.

Table 5. Number of Students Enrolled in Governmental Schools and Kuwait University by Type of Education and Sex (1969 - 1978)

Year & Sex	Kindergarten	Primary	Intermediate	Secondary	Technical & Vocational	Total	University
1969/70	M 6,777	30,476	24,860	8,187	2,552	73,262	875
	F 6,065	23,942	18,177	5,236	2,553	55,783	838
	T 12,842	54,418	43,037	13,423	5,325	129,045	1,713
1973/74	M 6,209	41,369	30,016	12,779	5,498	93,371	1,596
	F 5,750	34,130	23,370	11,328	4,468	76,046	2,240
	T 11,959	75,499	53,386	24,107	4,966	159,417	3,836
1977/78	M 7,992	60,936	43,325	20,605	3,053	136,714	4,278
	F 7,420	52,573	35,306	19,030	2,169	116,498	5,045
	T 15,412	113,509	78,631	39,635	6,023	253,212	9,318

Source: Annual report, Ministry of Education, 1978

Table 6. Percentage of Educational Level of the Population over 10 Years by Nationality and Sex (1975)

The Educational Level		Kuwaiti	Non Kuwaiti
Illiterate	M	30.0	27.5
	F	59.1	31.3
	T	44.6	28.9
Read and Write	M	20.9	24.7
	F	8.4	16.1
	T	14.7	21.5
Primary certificate	M	26.7	17.5
	F	17.5	21.4
	T	22.1	18.9
Intermediate	M	14.0	11.6
	F	9.7	13.7
	T	11.8	12.4
Secondary	M	6.6	11.2
	F	4.5	13.1
	T	5.5	11.9
University	M	1.8	7.7
	F	0.8	4.7
	T	1.3	6.4

Source: Population Census part I (1975)

Special educational programs for handicapped is provided through infirmaries for rehabilitative special educational programs. Students enrolled in these institutes are 2321 students in the year 1977/78 .

The University of Kuwait was established in 1968/69 starting by four faculties for science, arts, law and Shariaa, and Commerce and economics .

In 1975/76 the Faculty of Engineering and Oil was opened, then in 1976/77 the Faculty of Medicine started its program. Other than these programs there are adult educational programs for combating of illiteracy as well as ordinary school programs with a total enrollment of 17,808 participants. Kindergartens for children of the age group 3-6 years are also available. Fellowships abroad for Kuwaiti students was awarded in the year 1977/78 to 2983 students both for undergraduate and post graduate studies in Arab, European, American and other Universities .

On the whole, while Kuwait which had 111 schools in 1958/59 with 1,842 teacher and 1,157 class rooms in which 34,425 students were enrolled, the corresponding figures of 1977/78 were 384 schools, 19,774 teachers, 8,663 classrooms with a total enrollment of 253,212 students . The annual

increase in education during the period 1969 to 1978 is ranging between 21.5% to 29.5% compared to the population growth rate which is ranging between 6.1 to 10% in the same period .

The census of 1975, showed that illiterates were 44.6% of Kuwaitis and 29.9% of non Kuwaitis and the difference between males and females was higher in the Kuwaiti population. This is attributed to the fact that the non Kuwaiti population are mostly a specific and not a natural community since most of them are selected to fill certain jobs . (Table 6)

1.6.5. Distribution :

There are three governorates in Kuwait (Appendix 1)

- 1- The Capital governorate representing old Kuwait city and the surrounding suburbs in north east region .
- 2- Hawalli governorate representing the extended suburbs south to the capital governorate .
- 3- Ahmadi governorate including the old Ahmadi city which lies in the southern region and its construction started and grew in the oil period early in the fifties where most of oil companies, workers, housing and oil port of Ahmadi lies. Table (7) represents a summary of the three governorates.

Table 7. Population Distribution in Governorates of Kuwait by Nationality, Sex and Density (1975)

Governorates	Capital	Hawalli	Ahmadi	Total
Total population	276.356	576.589	141.256	994.837
Percentage of total population	27.8	58	14.2	100
Number of suburbs	23	25	20	68
Surface area of inhabited region (Sq.Km)	265.6	401.2	208.1	874.9
Surface area of desert region	10,954.4	148.8	4,929.9	16,043.1
Total surface area	11,230	550	5,138	16,918
Population density 1 Km.sq.	25	1,048	59	56.3
Number of Kuwaiti households (1)	20,155	30,195	10,362	60,712
Number of Non Kuwaiti households	14,913	71,32 ^A	8,313	81,861
Total number of households	35,068	88,829	18,675	142,572
Mean size for Kuwaiti households	8.18	7.98	8.54	8.1
Mean size of Non-Kuwaiti households	4.7	5.34	5.28	5.23
Mean size of all households	6.7	6.2	7.1	6.47

(1) The household is defined in the census as "group of individuals sharing one residency, sharing eating and other living conditions."

Source: Calculated from Population Census of Kuwait Part I (1975) Annual statistical abstract (1978) .

It can be noticed in table (7) that the density of population differs from one governorate to the other according to the involvement of desert regions within the governorate which are characterized by scarcity of population. The surface area of most inhabited regions constitute only 5.17% of the total surface area of Kuwait .

Certain suburbs have lower population number, less density, newly constructed houses, and are mostly Kuwaiti areas. Dwellings in these areas are single villas or traditional single houses. Others are composed of multistory buildings with apartments which are inhabited usually by non Kuwaitis with higher population density. Some peripheral suburbs are mostly inhabited by bedouins as settlements or temporary houses in which lower income classes of non Kuwaitis also live. These unorganized areas are strongly looked after by the government, and a target was put to remove all shacks and temporary dwellings within the next few years, by building large projects of limited income houses for bedouins, and large sanitary collective dwellings for low income workers .

1.7. Natality, Mortality and Morbidity :

1.7.1. Births and deaths :

The high growth rate of Kuwait's population is partly due to the natural increase since the crude birth rate is high compared to the crude death rate. In this aspect, the striking fact of Kuwait, is that while it has the pattern of high birth rate of the developing countries, it has the crude death rate much lower than these countries (Table 8) . The fertility rate, like developing countries is high. In the census year 1975, 38.7% of Kuwaiti males over 15 years, and 24% of Kuwaiti females over 15 years were not married, the rest were either married (63%), divorced (2.6%), or widowed (10.4%). For the non Kuwaitis, only 33% of males over 15 years and 19% of females over 15 years were not married (Population census, Part I, 1976). The child woman ratio was calculated in 1965 to be 980 in Kuwait which is almost the highest ratio in the world as compared with e.g. Egypt (702), U.S.A. (488), U.S.S.R. (695), Iraq (936) and India (659) (French & Hill, 1971) .

The economic status of Kuwait reflects a situation of birth control different from other developing countries. The high national income and the use of great number of expatriates

Table 8. Comparison of Vital and Demographic Characteristics of Kuwait compared with Some Countries of the World (1978)

Country	Crude Birth rate	Crude death rate	Natural increase %	No. of years to double population	Popul. under 15 years %	Popul. over 64 yrs %	Infant mortality rate	Life expectancy
Kuwait	43	4.4	4	18	44	2	34.3	69
Saudi Arabia	49	19	3	23	45	3	152	45
Qatar	44	14	3	23	-	-	138	-
Ybia	48	9	3.9	18	49	4	130	53
Egypt	38	12	2.5	28	41	3	103	53
Iran	45	14	3.1	22	47	3	104	57
India	34	14	2	29	40	3	129	44
Turkey	34	11	2.3	30	40	4	119	45
USSR	18	9	0.9	77	25	9	28	69
Sweden	12	11	0.1	693	21	15	9	75
U.K.	12	12	0	-	23	14	14	72
U.S.A.	15	9	0.6	116	24	11	15	73

Source : World population data sheet (1978)

to work in development projects and services, resulted in the fact that neither the government nor the community focus on family planning programs to lower the fertility or birth rates.

The crude death rate as shown in table (8), is lower than many countries. This is partly due to low infant mortality and due to the young structure of the population. Another cause is that more than half of Kuwait's inhabitants are non Kuwaitis with a specific higher percentage in the age group 20-49 years which is the working age. Alawady (1965), French and Hill (1971) demonstrated under registration of deaths during 1965 & 66. This is unlikely to occur now due to compulsory notification, settlement of bedouins, and registration in many civil registers as schools, banks, jobs and so forth.

1.7.2. Causes of death :

Like the demographic pattern of Kuwait, causes of death bears a mixed character of both developed and developing countries. Cardiovascular diseases and motor vehicle accidents started to be prominent causes of death as shown in table (10). At the same time infant mortality constitutes about one third of the total deaths mainly as diarrhoeal diseases and pneumonia.

Table 9. Distribution of Birth, Death, Infant Mortality and Foetal Death Rates 1958 - 1976 in Kuwait

Year	Crude birth rate	Crude death rate	Infant mortality rate	Foetal death rate ⁽¹⁾
1960	46.2	4.3	33	11
1965	51.3	5.3	49.5	15.1
1970	45.5	5	39.5	13.4
1975 Total	43.4	4.8	39.3	14.9
1976 Kuwaiti	49.2	5.4	38.1	13.9
Non Kuwaiti	36.6	3.2	29.8	13.6
Total	43.3	4.4	34.3	13.8

(1) Foetal deaths include fetal losses regardless the period of gestation .

Source : Annual bulletin for vital statistics (1977)

Annual reports 1962-1976, Health and vital statistics .

It can be observed that there is no evident change in infant mortality or foetal death rates in the last sixteen years .

Table 10. Percentage of the First Ten Causes of Death⁽¹⁾
to Total Deaths in Kuwait (1971-1977)

Causes of Deaths	1977 %	1975 %	1973 %	1971 %
Ischaemic heart diseases	10.5	9.6	6.1	4.9
Enteritis & Other diarrhoeal diseases	9.7	10.7	11.8	10.7
Other pneumonia	8.7	10.5	6.9	8.0
Motor vehicle accidents	7.6	7.8	6.6	7.1
Anoxic and hypoxic conditions not elsewhere classified	6.2	4.8	3.9	-
Symptoms and other ill-defined conditions	5.6	5.0	4.9	5.7
All other congenital anomalies	4.0	3.6	3.8	2.6
Cerebrovascular diseases	3.9	4.1	3.8	2.8
Senility without mention of psychosis	3.7	3.3	4.3	5.8
Other causes of perinatal morbidity and mortality	3.0	-	4.6	9.2
Malignant neoplasm of other and unspecified sites	-	4.2	-	-
Hypertensive disease	-	-	-	2.7
Diabetes mellitus	-	-	-	-
Total percentage of deaths due to the first ten causes	62.7	63.5	56.6	59.4

(1) Classification according to I.C.D.-8 (List A)

(-) Figures were not among the first ten causes of death in three years 75, 73 & 71 .

Source: Calculated from the Annual reports, Vital and health statistics (1971-1977)

The total number of deaths during 1976 were 4661 deaths, the major causes of death were as follows :

<u>Disease groups</u>	<u>Rate/100,000</u>
- Diseases of circulatory system	101,2
- Infective and parasitic diseases	63,3
- Accidents, poisoning and violence	52,4
- Diseases of the respiratory system	46,4
- Causes of perinatal morbidity and mortality	39,8

In the last 8 years, the percentage of deaths due to ischaemic heart diseases was doubled and reached the top of the list. Enteritis and diarrhoeal diseases were the second cause, and pneumonia was the third cause of death in 1977. Motor vehicle accidents stands for the fourth cause of death in Kuwait, knowing that the motor vehicle: population ratio in Kuwait in 1977 arrived to about 1:3 .

During 1976, infant mortalities constituted 33.9% of all deaths. Its rate was 34.3 per thousand live births as shown in table (9). Deaths below 5 years were 39.7% of all deaths .

Table 11. The Five Major Causes of Infant Mortality in Kuwait (1976)

Diseases	Kuwaitis		Non Kuwaitis	
	No.	%	No.	%
Enteritis and other diarrhoeal diseases	271	28.5	118	18.7
Other pneumonia	172	18.1	94	14.9
Anoxic and hypoxic conditions	165	17.4	140	22.2
Other causes of perinatal morbidity and mortality	75	7.9	38	6.0
All other congenital anomalies	66	6.9	64	10.2
Other causes	201	21.2	176	28
T o t a l	950	100	630	100

(1) Classification according to I.C.D.-8 (List A)

On the other hand the causes of fetal mortality were mainly due to unknown causes (75%). Congenital abnormalities, immaturity, difficult labor or other causes contributed for 25% of the fatal deaths .

(Source: Annual report, division of health and Biostatistics, 1977) .

1.7.3. Causes of morbidity :

Causes of visits to the primary care units :

Diagnosis of cases attending the primary care units are not comprehensively recorded, presented or analysed. A pilot record was conducted during 1978 for attendants of the general practitioner clinic in five clinics for two months. These clinics deal with both sexes over the age of five years. According to these records, the following diseases were the main causes for visiting primary care units .

(Table 12-a) .

It is clear that these figures represent the causes of morbidity among those who visited the G.P. clinics and not the health profile of the population. Children below 5 years usually attend child clinics as a primary contact .

Table 12-a. Causes of Visits to the Primary Care Units,
1978

C a u s e s	Percent
Specific infectious and parasitic diseases	1.80
Neoplasms (malignant and benign)	0.05
Diabetes mellitus	0.34
Diseases of the central nervous system	0.45
Diseases of the eye	4.65
Diseases of the ear, nose and throat	1.95
Hypertension	2.12
Other diseases of the circulatory system	1.16
Diseases of the digestive system	13.60
Diseases of the respiratory system (including upper respiratory tract infection)	26.44
Diseases of genito-urinary system	2.33
Diseases of the skin and subcutaneous tissue	8.21
Allergy	4.40
All accidents	3.98
Other symptoms and ill defined conditions	9.57
Other diseases	18.95
Total	100

(Calculated from registers of the division of dispensaries,
Kuwait)

Table 12-b. Causes for Admissions in Kuwait Hospitals
by specialty (1976)

Speciality	No.	%
General surgery (including specialties)	15617	16.07
Orthopaedic surgery	2729	2.81
Internal medicine	11737	12.07
Pediatric diseases	15337	15.78
Gynecology and abortions	9267	9.53
Obstetrics (deliveries)	22300	22.95
E. N. T.	3767	3.87
Dermatology	42	0.04
Ophthalmology	2070	2.13
Psychiatrics	3336	3.43
Infectious diseases (specific diseases other than tuberculosis)	3980	4.09
Tuberculosis	766	0.79
Other chest diseases	3780	3.89
Chronic diseases and geriatrics	58	0.06
Radiotherapy and isotopes	740	0.77
Others	1671	1.72
Total	97196	100

(Calculated from the Annual report, Health and vital
statistics Divisions, 1977)

Table 12-c. The Most Frequent Groups of Diseases for Admission in Sabah Hospital (1976)

Code No.	Disease	No. of admissions	Percent
000-009	Intestinal, infectious diseases	1117	3.3
460-466	Acute respiratory infections (except influenza)	2294	6.8
500-508	Other disease of the upper respiratory tract	1748	5.2
540-543	Appendicitis	956	2.8
550-553	Hernia of abdominal cavity	706	2.1
560-569	Other diseases of intestine and peritonium	6612	19.6
340-349	Other diseases of C.N.S.	447	1.3
410-414	Ischaemic heart diseases	711	2.1
400-404	Hypertensive diseases	388	1.1
280-289	Diseases of blood and blood forming organs	862	2.6
580-584	Nephritis and nephrosis	308	0.9
590-599	Other diseases of urinary system	1048	3.1
B810-999	Accidents, poisoning and violence (External cause)	2068	6.1
N800-809 N927-999	Accidents, poisoning and violence (nature of injury)	643	1.9
140-239	Malignant neoplasms	619	1.8
	All major causes	20527	60.3
	Other diseases	13287	39.3
	Total admissions	33814	100

Source: Calculated from: Annual report Sabah hospital, 1977
Annual report Health and vital statistics, 1976

Special Health Problems :

a) Infectious diseases :

Infectious diseases are notifiable in Kuwait since 1960. The Amiri act in 1969 extended the number of notifiable diseases and defined the compulsory isolation and surveillance of certain reportable diseases .

Table (13) represents the diseases which were reported in some countries and hence comparison is of limited value, depending on the validity of data and the accuracy of reporting systems in each country. Also countries have other categories of infectious diseases as leprosy, venereal diseases and malaria which are not included since their prevalence is negligible in Kuwait .

Yet it is obvious that Kuwait has a high incidence of infectious hepatitis, enteric fevers, chicken pox and tuberculosis. Control of infectious diseases in Kuwait is difficult due to its demographic nature. More than half of the population are non Kuwaitis who are dynamically changing through migration and emigration. Moreover Kuwaitis are frequently travelling abroad especially during summer vacations. The new settlements of Bedouins increased the incidence rate of some infectious diseases

Table 13. Incidence Rate of Some Notifiable Infectious Diseases in Kuwait per 100,000 Population (1976) compared to some countries of the world .

Diseases	Kuwait	Sudan	Turkey	Saudi	U.S.A.	U.K.	Sweden
Typhoid and paratyphoid	23	20	2.8	4	10.8	0.5	0.3
Other salmonella infection	10	N.A.	N.A.	N.A.	10.6	N.A.	26
T.B. (All types)	81	86	N.A.	633.2	14.9	2	-
Diphtheria	1	4	0.4	3.4	0.06	-	-
Whooping cough	20	289	6	103.7	0.5	6.9	14
Meningococcal infection	2	7	4	31.8	0.7	33	2
Chicken pox	184	87	N.A.	66.4	85.5	N.A.	N.A.
Measles	86	152	53	308.1	19.1	99	106
Infections hepatitis	123	188	39.6	24.7	15.4	11	12
Mumps	180	158	N.A.	101	17.8	N.A.	130
Acute poliomyelities	4	2	1.2	2	0.01	-	-

Source: calculated from:

- Number of cases: WHO statistics annual vol. II 1978
Annual report division of Health and
biostatics, 1976
- Midyear Population 1976 for countries:
World Bank Atlas, 1978 .

Because of their previous non exposure during childhood, they catch infection of diseases like measles, chickenpox and mumps in their adult life when they join the urban community. Great efforts controlled the prevalence of tuberculosis and most of the new reported cases are among bedouins (25%), and expatriates (54%) newly coming to Kuwait. These efforts caused the incidence rate of tuberculosis to drop steadily from 14.8/10,000 population in 1968 to 8.1 in 1977 (Annual statistical abstract, 1978) .

b) Allergy :

It is observed that allergy is a prominent cause of morbidity, presenting multiple clinical pictures. Al Awady (1973), based on his studies, concluded that the prevalence of allergy is increasing due to dust, pollens, fungi, noxious gases and the effect of recent plantation especially Prosopus trees. He outlined a relation between allergy and the affect of Prosopus trees, pollen grains, air conditioning and the duration of stay in Kuwait. The clinical manifestations of allergy as shown by this study were :

- 38.7% chest diseases
- 35% nose diseases
- 23.2% skin manifestations
- 3.1% other manifestations

The high seasonal incidence of allergic manifestations occurred from April to August reaching the highest incidence in June and July. Prevalence was higher among Kuwaitis, and markedly higher in urban than rural areas. A positive family history was elicited in about 40% of the cases .

c) Diabetes mellitus :

Urbanization and consanguineous marriages seem to raise the incidence of Diabetes mellitus.

There are four diabetic clinics in which there were about 25,000 patients registered in 1978 i.e. the prevalence rate is 2.1%. There is no significant difference in attack rates between Kuwaitis and non Kuwaitis. This rate obviously represents discovered and recorded cases under treatment. One can expect higher prevalence due to undiscovered cases (Diabetes in Kuwait, 1978) .

d) Cardiovascular diseases :

Mortality causes show ischaemic heart diseases as the first cause of death (Table 10). Among causes of hospitalization in Sabah hospital 1976, ischaemic heart diseases constituted 2.1% and hypertensive diseases 1.1% of all admissions .

e) Genetic diseases :

Hemoglobinopathies and some other genetic diseases, especially sickling trait and glucose-6-phosphate dehydrogenase are observed to be prominent. The latter is strikingly accompanied by other congenital or genetic diseases in 20% of cases (Pffrench & Hill, 1971). Diseases of blood and blood forming organs constitute 2.6% of the admissions to Sabah hospital in 1976, which were mainly hemoglobinopathies.

Congenital anomalies caused 10% of all infant mortalities while the fetal mortality rate was 13.8 during 1976 of which 75% were of unknown cause .

2. Development of medical care :

2.1. Facilities :

The Ministry of Public Health is the major provider of medical care in Kuwait. Modern medical care started in Kuwait in 1939 by one dispensary with one physician and one pharmacist. Soon the services developed with the socio-economic development and population growth. In 1940 another female dispensary was opened. In 1946 an ophthalmological clinic was established and in 1949 the Amiri hospital was opened as the first general hospital with 110 beds. During the period of 1950-1960 six

hospitals and three sanatoria were opened. Other dispensaries, combined units, school clinics, preventive clinics, health education, radiology laboratory, maternity and child care divisions were introduced in this period. In 1961, the Ministry of Public Health was established replacing the previous department of Health. In 1962 the health registration system was introduced and the Sabah hospital was opened with a bed complement of 731 beds and in 1968 the maternity hospital was built with a bed complement of 500 beds.

Table (14) represents the development of medical care facilities in Kuwait .

Table 14. Development of Medical Care Facilities,
Ministry of Public Health, Kuwait 1949-1978

Year	Hospitals & Sanatoria	Total beds	Dispensaries & combined units	Maternal clinics	Child clinics	School clinics	Dental clinics	Prev. clinics	Beds/1000 population
1949	2	110	2	-	-	23	-	-	N.A.
1957	7	1322	17	4	4	74	9	3	6.4
1965	10	2831	38	11	10	150	36	11	6.1
1970	11	3448	40	10	6	203	45	11	4.6
1975	11	4056	43	14	19	316	49	12	4.1
1977	11	4210	49	15	22	378	65	16	3.7

Source: Annual report Health and vital statistics division
1965-1977 .

Referring to population growth (Table 2) it is noticed that the growth rate of medical care facilities is not coinciding with the rate of population growth. No hospital have been established since 1968 and so the number of beds per thousand population is steadily diminishing since 1965 where it was 6.1 till it reached the rate of 3.7 in 1977 .

On the other hand, ambulatory care units which are dispensaries and combined units increased in the last 10 years by about 29% whereas the population increase was almost double. The same applies to the rate of growth of maternity clinics, child clinics and preventive clinics. School clinics retained the same growth rate of population since in every newly established school, a clinic is provided in the school building .

2.2. Health man power :

Kuwait depends on expatriates for most of its physicians, nurses and health allied personnel. Kuwaiti physicians and dentists were 12.7% of all physicians in 1977 and a lower percentage apply to nurses and technicians. The medical education started by a medical school in 1976 the first batch is supposed to graduate on 1983. Nursing education started by a nursing institute in 1962 with two

different programs, one for assistant nurses and the other for nurses. Assistant nurses join a two year program after the 6th year of general education. Nurses join a four year program after the 8th year of general education. Another institute was opened in 1974 to graduate school health nurses with a two year program after the secondary school certificate. Moreover it is planned to start programs for health allied personnel on 1979/80 by Kuwait University for nurses, record librarians and technicians (Annual report, Kuwait University, 1978).

All health personnel in the Ministry of Public Health are full time employees remunerated on salary basis according to the Civil Service Law. Private practicing is not allowed to them .

From tables 15 and 16, it is obvious that, the bed population rate declined since 1961. The physician population rate was increasing till 1965, then dropped till 1970, then increased till 1977. The nursing staff rate diminished from 1961 to 1970 and tends to rise till 1977. Health allied personnel were about the same rate with a variable degree .

Table 15. Development of Health Manpower in Kuwait
(1949 - 1977)

Y e a r	Physicians	Dentists	Pharmacists	Ass. Pharmacists	Physiotherapist	Lab. & Tech. Assistant	Dental Tech. & Assistant	X-ray Tech. & Assistant	Female nurses	Assist. Female Nurses	Male nurses & Assistant
1949	4	-	1	5	-	1	-	-	17	2	10
1957	145	17	27	85	-	32	18	17	144	174	402
1965	450	40	68	199	-	113	28	62	88	455	844
1970	540	45	83	208	43	151	50	88	1051	530	861
1975	932	85	113	268	55	280	49	128	2088	575	997
1977	1245	114	154	321	59	241	56	157	2831	522	1013

Source: Annual report, Health and vital statistics 1965 & 1977

Table 16. Hospital Beds and Categories of Manpower/10,000 population in Kuwait (1949 - 1977)

Year	Population in thousands	Bed/ 10,000	Physicians/ 10,000	Nursing staff/ 10,000	Health allied/ 10,000
1957	206.4	64	7	34.9	7.4
1961	321.6	67	7.8	44.4	7.1
1965	467.3	61	9.6	43.4	8.6
1970	738.6	46	7.3	33	7.3
1975	944.9	41	9.9	38.7	8.2
1977	1129.2	37	11	38.7	7.3

Source: Calculated from tables 2, 14 & 15 .

2.3. Expenditure on Health :

Health services are availed free of charge to every inhabitant in Kuwait through total coverage by the government. Only nominal charges are taken in few cases as private hospital bed rooms and some dentures and appliances constituting a revenue of 1.1% of the total budget. This budget was about 16 milli Dinnars in the fiscal year 1969/1970, increasing gradually to 29 million in 1974/1975, and reached about 53 million in 1976/1977 .

This represents the current annual budget excluding capital investment and maintenance of buildings which is included in the budget of the Ministry of Public works. The following table represent the expenditure on health related to other services.

Table 17. Percentage of Expenditure on Health of the Total National Budget Compared to Other Public Services 1965-1977 .

Fiscal year	Health	Education	Social welfare	Defence
1965-1966	8.4	12.3	2.7	8.1
1970-1971	6.8	12.9	2.3	10.1
1975-1976	8.1	15.7	2.6	11.9
1976-1977	6.4	11.4	3.2	9.6

The percentage on expenditure on health was between 6.4-8.4% in the last fifteen years and is less than expenditure on education or defence. In 1976/1977 .

The percapita expenditure on health was about 46.8 K.D., the percentage expenditure on wages was about 74%, and on drugs and medical equipments 9.7% of the total budget. As regards facilities, the percentage of expenditure were as follows :

Hospitals	37.5%
Ambulatory care centers	21.6%
Other health facilities	22.5%
Supportive services	13.6%
Central administration	4.8%

AIM OF THE STUDY

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The aim of this study is to investigate:

1. The organization of the present system as regards facilities, manpower and referral patterns.
2. Availability, accessibility and adequacy of medical care services including ambulance services.
3. Quality of services provided.

Questions to be answered:

1. Is there a defined plan for medical care services in kuwait, with definite goals, objectives and programs?
2. Are medical care services available and accessible for the whole population?
3. What is the quality of services provided by the medical care system?
4. Does the organization of services assure proper continuity of care?
5. How efficient, in view of the available resources, the medical care system of Kuwait is?
6. Are there any organizational or operational factors interfering with the system's efficiency?
7. Are the manpower resources in the medical care system planned to meet the needs as regards supply and training and continuous education?

Justification of the problem:

The recent development of Kuwait facilitated fast socio-economic advancement in all sectors. The medical care system, parallel with this development and with the population growth, has gone a very rapid rate of development. Resources are availed to the system and the concept of providing the best medical care is a goal stated in almost every occasion. The constitution of Kuwait is dealing with health in four articles:

Article 9:

The family is the corner stone of society. It is founded on religion, morality, and patriotism. Law shall preserve integrity of the family, strengthen its ties and protect under its auspicious motherhood and childhood.

Article 10:

The state cares for the young and protects them from exploitation and from moral, physical and spiritual neglect.

Article 11:

The state ensures aid for citizens in old age, sickness or inability to work. It also provides them

with services of social security, social aid and medical care.

Article 15:

The state cares for public health and for means of prevention and treatment of diseases and epidemics.

As in all countries, medical care services are always under continuous evaluation by the government, the consumers, and the providers in an attempt to improve the services and assure provision of the best medical care.

Kuwait economically is considered as a developed country enjoying the highest percapita income in the world. On the other hand due to the striking fast development, it is socially still categorized as a developing country. This character is reflected on its medical care system. Developing countries suffer from major health problems, mainly nutrition, environmental sanitation, infectious diseases, high mortality rates especially infant mortality, rapid population growth and scarcity of resources. Developed countries on the other hand suffer from other health problems such as high demand on medical care, rising cost, environmental pollution, traffic accidents, and cardiovascular diseases. Kuwait seems to have a mix of health problems of both categories.

The medical care system has grown and is growing as a rapid response to demands with the other sectors in the country. Alawady, (1965) in his study on replanning of Health Services in Kuwait stated that: "The attempt to study replanning has been spurred by the degrees of dissatisfaction among the people of Kuwait on the present system. This must be very surprising to the observer who notices the large amount of money spent on health services in Kuwait. The health system at the present time has many shortcomings. To me, it seems that the inadequate delineation of the scope of health services is the most important one."

In 1976, Al Awady, as the Minister of Health eleven years later feeling the same perspective states:

"In the last fifteen years we did not build developed comprehensive services with proper planning or organizational patterns. Now we start jumping to correct the defect of our health services."

So it seems that planning of services was rather reactive project plans and hence was not based on scientific planning through determination of needs and demands and continuous evaluation of the existing services.

The pattern of utilization changed very rapidly in the community. The international experience of the citizens through their travels and observation reflect the high ambitious demand on modern services. It is occasionally reflecting a sense of dissatisfaction among both consumers and providers who are striving for the best. This is not an unattainable goal since Kuwait with its limited territories, limited population, and extremely high financial resources, should theoretically achieve this goal.

There was no comprehensive scientific appraisal for the medical care system of Kuwait. Some intersectoral studies within the system have been carried out by its medical staff and visiting consultants. These were mostly based on personal observation and/or assignment reports in certain areas of activities. These studies and observations together with the public view expressed on the services provided, stimulate the need for appraisal of the medical care system as a whole. It was more emphasized by the fact that many developing countries which are economically rich countries have similar models of medical care systems that need to be studied.

The researcher who joined the system in 1974 and had the chance to work within the system, feels the need for conducting an appraisal study on a wide systems' approach, in an attempt to define its organization, intersectoral relations, and shortcomings. In view of the results of this study the researcher hopes to develop a base for future evaluation, a source of information for planning and management, and recommendations to strengthen the present medical care services.

MATERIALS AND METHODS

MATERIALS AND METHODS

1. Collection of data on background information and health system of Kuwait.
2. Collection of data on medical care facilities:
 - 2.1 Dispensaries and combined units.
 - 2.2 Hospitals.
 - 2.3 Ambulance services.
 - 2.4 Questionnaires.
3. Study of health records in primary care units.
4. Study of the referral pattern for maternity cases.
5. Household interviewing survey on utilization of the available medical care services.
6. Administrative techniques.
7. Sampling techniques and pilot studies.
8. Analysis and presentation of data.

MATERIALS AND METHODS

The following are the main materials used and methodologies followed in this study:

1. Collection of data as regards background information and health system.
2. Collection of data on medical care facilities through visits and questionnaires.
3. Study of the health records in primary care units.
4. Study of the referral pattern for maternity cases.
5. Household interviewing survey on utilization of the available medical care services.

1. Collection of data on the background information and health system in Kuwait

Personal visits to agencies concerned in Kuwait were carried out for collection of data related to Kuwait's history, ecology, geography, demography, economy and housing. Several meetings were held with the assistant undersecretary of the Ministry of Planning to explore data available, to collect publications and annual abstracts, and for clarification on the general set-up of the socio-economic development and planning in Kuwait. Similar meetings with responsables were carried out in the Ministry of Education, Information, Social Welfare, Housing and the

Munisipality of Kuwait.

As regards the Ministry of Public Health, each department, division and unit of the central administration was visited. In every agency the director or his deputy and the responsables were interviewed and information was gathered from the responsables, annual reports, records and registers on:-

- functions and activities of agency.
- internal organization and present standing orders and regulations.
- relation with other agencies inside and outside the Ministry of Health.
- manpower working in the agency by categories numbers and major responsibilities.
- utilization and performance.
- problems and shortcomings encountered and the existence of studies or information dealing with these problems.

2. Collection of data on medical care facilities

2.1 Dispensaries and combined units:

Thirty six dispensaries and thirteen combined units

which form all the primary care facilities in Kuwait were visited for two purposes:

a. Data collection on these facilities by a form designed for this purpose (appendix 2). It included the following data:

- Area served.
- Population registered by number, households, sex and age.
- Working hours and types of services.
- Manpower by type of workers, numbers, shifts.
- Services as regards pharmacy, laboratory, health education, sterilization, ambulance and transportation cars, and medical equipments.

These resources and services were classified as: not existing, adequate and not adequate. Adequacy was considered through observation of crowding in the area, asking the personnel working in activity, and personal judgement of the researcher based on observation and number of population served.

- Health registration and Health records.
- Utilization in the last year including number of visits per year, per day, per physician, referral to specialties, home visits, drug dispensing and deliveries.

- b. Exploratory study for conducting of questionnaires of the health manpower in the facilities chosen for this purpose.

2.2 Hospitals:

Excluding the 21-bed Leprosy Hospital which is an extension to the infectious diseases hospital, and the police hospital which is a specific 40-bed hospital, the rest which were nine hospitals were visited. Interviews were held with the director or deputy director for technical affairs, deputy director for administrative affairs, and the director of nursing services or her deputy.

Two purposes were fulfilled in these meetings:

- a. Collection of available data about the hospital as regards the hospital capacity, facilities, manpower and utilization. During these meetings, discussions were made with the responsables to complete and clarify difficulties encountered and specific problems in the hospital and to check differences encountered or gaps on data collected from the central administration and reports of the Ministry of Public Health.
- b. Explanatory studies for conducting the questionnaires with health personnel.

Moreover, the Maternity Hospital was chosen as a model to study the following:

- Referral pattern between hospitals and primary care units.
- Internal organization activities and outcome of the hospital board.

2.3 Ambulance Services:

Interviewing the director of this department, information was collected on the internal organization communication, staff, vehicles, utilization, shortcomings and studies on adequacy and efficiency of the service.

2.4 Questionnaires:

Four categories of workers were chosen to conduct this study: who were primary care physicians, hospital physicians, nursing staff and paramedical staff. Four forms were designed for this purpose:

- one form to be filled by physicians and dentists working in primary care units i.e. dispensaries and combined units (appendix 4).
- One form was formulated for hospital physicians (appendix 5).

- One form for the nursing staff both in primary care units and hospitals (appendix 6).
- One form for paramedical personnel in direct relation with the patient including pharmacists, assistant pharmacists, laboratory and x-ray technicians, nutritionists, physiotherapists, social workers both in units and hospitals. It also included secretaries of units or their deputies, medical record officers in the primary care units and information clerks in hospitals (appendix 7).

Contents of the questionnaires:

Generally, the four forms included questions on the following:

- Personal and social information.
- Education, qualifications, training, continuous education and experience before and during employment by the Ministry of Public Health.
- The present post and specialty, and attitude towards this job.
- Administrative relations and supervision of work.
- Opinion towards the efficiency of other members of the health team.

- Availability of resources and equipments.
- Opinion about existence of some listed shortcomings.
- An open ended question on further comments or suggestions to improve the services.

Certain other questions were included for each category. Primary care physicians were asked about:

- causes for referring patients to hospital, consultations with and feedback from hospitals.
- physician-patient relationship and behavior.
- pattern of utilization by consumers.
- load of work.
- activities in primary care routine check up, vaccination, health education, follow up and continuity of care, home visits, emergency care.
- medical audit and medical records.

Hospital physicians were asked about:

- organization and referral to the out patient department and emergency rooms.
- relation, consultation and feedback with primary care physicians.
- supervision, consultation and medical audit in the hospital.

- function and existence of hospital board and medical committees.
- the hospital medical record system, function and utilization of records.
- conduction of medical research.

The nursing and paramedical staff were inquired as well about command on Arabic and English languages, performance and attitudes towards some nursing activities and relationships with the consumers, visitors, and other health teams.

3. Study of the health records in primary care facilities

Health registration is applied in Kuwait since 1962 by keeping a house hold folder for every family with a page or pages as a personal health record for each member of the household. Since this folder is kept in the primary care facilities it was decided to conduct a survey on these health records aiming to study the following:

- Utilization of health records.
- The type and quality of data recorded to be used as an indicator for the quality of care provided in the primary care facilities.
- Assessment of the continuity of care and referral pattern within the primary care clinics, and between it

and hospitals and other medical care facilities.

A form was designed (appendix 8) to collect the data on the health record including personal data on age, sex and nationality. Since the health record used do not have data on the date of issuing the record, so the date of the first visit recorded was collected in the form to indicate the length of utilization of the record.

In this form also the number of visits recorded in the health record in the last five years (April or May 1973-1978) were recorded.

The first part of the form contain personal data, medical history, clinical and laboratory check up and vaccination. These items were coinsiding with the items printed in the health record to be filled.

The data of physicians visits collected were on; diagnosis, clinical finding, medication, laboratory and X-ray results, follow up visits, referral to specialty clinics or hospitals and feedback from these facilities. Since the other primary care clinics are receiving patients without referral which are the pediatric clinics 0-5 years and the obstetric clinics during pregnancy, so for children over 5 years or females who had children, the researcher

investigated whether or not the special forms used in these clinics were transferred and included in the G.P. health record folder.

Data recorded in the health record were studied and recorded in the form as a table ranked: complete, incomplete, illegible or missed.

Ranking as complete for each item was considered when more than 75% of all visits were recorded in a legible hand writing and having data necessary for continuity of care e.g. for medication the drug, name, form, dose, duration of treatment; for clinical findings, the positive findings relevant to the diagnosis.

4. Study of referral pattern for maternity cases

Maternity centers are fifteen in number and in which gynecologists are working. To six centers are attached lay-in wards for normal deliveries covering all districts of Kuwait. Only difficult or abnormal deliveries are supposed to be referred to the maternity hospital which is the only hospital providing gynecological and obstetric in-patient care.

Since this is a classical model of referral and integration, it was decided to conduct a study on the

referral pattern between ambulatory care facilities and the Maternity Hospital. A form was designed (appendix 9) including personal data on age, sex, nationality and parity, the place referring the case, the primary diagnosis, the type of care provided for admitted cases, and place of referral by the hospital to those who were not admitted.

The researcher attended the reception room, studying all cases attending the hospital for maternity causes during the three working shifts for one week in each shift.

Classification of the primary diagnosis was following the classification adopted by the maternity centers. Hospital care was classified as normal labour, abnormal labour, by procedures or surgery with or without general anesthesia, evacuation and others. This grouping of care is used by the maternity hospital.

5. Household interviewing survey on utilization of the available medical care services

The aim of this survey was to study the utilization pattern of the medical care services in case of sickness, the attitude towards governmental facilities, and amount and type of services consumed. The total number of persons interviewed were 5491 persons. A form was designed

for this purpose (appendix 10 A) by the researcher, including 21 questions on:

- Family data as regards income, size, type of residence and the degree of crowding.
- For each number in the family personal data and health data as regards registration, number of times the individual gets sick in the last three months, his behavior in case of sickness and services utilized either ambulatory or hospital services.

The causes for using other non-governmental facilities of medical care inside and outside the country were studied for those who do not use governmental facilities regularly in case of sickness.

6. Administrative techniques

Study years and time frame:

The principal study year was 1977, on which most of the data were collected during 1977 and 1978. Data on natality, mortality and morbidity were those of 1976 which are the most recent available data. However, any major organizational information that emerged after these study years were utilized for updating the obtained data. The time frame for the study was as follows:-

- Background information data, October 1976 - December 1976.
- Data for health facilities, January 1977 - April 1977.
- Conduction of questionnaires, October 1977 - March 1978.
- Study of Medical records, April - May 1978.
- Study referral pattern in maternity hospital, June 1978.
- Household interviewing survey, October 1977 - July 1978.

However, information which was found needed for completion and up dating was collected throughout the study.

Techniques:

For collection of data on medical care facilities, the Minister of Public Health who is also supervisor of this study, passed a circular on December 1976, permitting release of any data needed for the study, facilitating field work and promoting co-operation with the researcher by all agencies in the Ministry of Public Health.

For primary care units, two forms were first designed, one for dispensaries and the other for combined units. These were tested through a pilot study in two dispensaries and two combined units. Modifications of the forms were decided and one form was designed for both dispensaries and combined units.

The following steps were followed to conduct questionnaires with health personnel :

1. A visit to the primary care unit or hospital was made, meeting director, deputy director and director of nursing services for administrative arrangement.
2. The questionnaire was handed out to worker chosen in the sample with a brief explanation. Whenever possible, explanations was made to groups of workers.
3. The person chosen was requested to fill in the questionnaire after careful reading and to handle it to the researcher or the head nurse within three days, following the instructions in the covering letter.
4. After one week the researcher visited the unit or hospital to collect completed questionnaires. Those who did not complete the questionnaire were given a second date, one week later. Occasionally telephone calls to individuals were used for follow-up.

Based on the findings of the pilot study it was decided that each form will be availed in Arabic and in English. The language to be used will be according to the preference of the respondent and his language command. The categories of workers also were modified to be primary care physicians including dentists, hospital physicians, nursing staff and

paramedical staff including administrative staff in direct contact with consumers.

The meantime to fill in the form was found to be 20 to 25 minutes. Forms were designed to be filled in by respondents and so a covering letter was enclosed (appendix 3).

In this letter the aim of the study was explained and absolute confidentiality was assured. Mentioning of names was avoided and the respondents assured and the procedure for answering questions was explained. Respondents were encouraged to contact the researcher for any explanation or special comment.

For study of health records in primary care units, exploratory studies were done by visits to the division of health registration, collecting information about methods of registration, forms used, catchment areas of primary care facilities and number of registered folders and persons registered in every facility.

For the household interviewing survey, an administrative design was then formulated to define areas, squares, blocks and households. Areas were classified in three regions mainly Kuwaiti, mainly non Kuwaiti, and bedouin areas. The Ministry of Planning participated in the study by providing interviewers.

Thirty four interviewers and six field supervisors were used for collection of data, by home interviewing of every member in the household over 18 years, or of his sponsor if below 18 years. Data were collected on January 15 to February 15, 1978. For cultural reasons in Kuwaiti areas, a male and female who were spouses, were chosen to conduct the interview. Interviewers were trained theoretically for one week by the reasearcher using a manual of procedures and definitions (appendix 10 C) and then were asked to test two household forms in the second week. At the end of that week a general meeting was held with them to clarify any difficulties encountered in interviewing or data recording.

Before field work a press conference was made to explain the aim of the study to the public and to promote cooperation with the interviewers.

The model time for the interview was found to take about 15 minutes for every individual and one to one and quarter hour for every family. During the interview period, field work was checked and supervised.

7. Sampling techniques and pilot studies

Questionnaires:

Five categories of health workers were first chosen namely general practice physicians, specialty physicians, nursing staff, paramedical staff and administrative staff. A form was designed for each category and a pilot study was performed on a purposive sample of five persons for each category. The choice was based on including different specialties, different qualifications and different nationalities in each category.

Forms were filled in the presence of the researcher to observe any difficulty, irrelevant or unclear questions. The time needed for filling the form was also recorded. Then categories were modified to be primary care physicians, hospital physicians, nursing, and paramedical staff.

A second pilot study was conducted on three persons of each category under observation of the researcher until the final forms were decided after few modifications.

For sampling in primary care units, a random sample was drawn of about one half of these facilities. This sample was seventeen dispensaries and six combined units. In each dispensary or unit a random sample of workers was

drawn for each category as follows:

50% of physicians and dentists.

25% of the nursing staff.

25% of the paramedical staff.

In dispensaries in which there was one to three workers in any category only one was chosen.

In hospitals, from each of the nine hospitals a random sample was drawn to include:

20% of physicians.

10% of the nursing staff.

10% of the paramedical staff.

Table 22 presents the sample size, number of respondents and response rate. The accurate number of the target population of the paramedical group was not determined since the group in this study included clerks and administrative personnel in direct relation to the patient. The population of this group in facilities chosen for sampling was calculated as the sum of persons on the line lists used for drawing the sample.

It can be noticed that the sample was about 30% of the primary care physicians and dentists, about 20% of hospital physicians and about 10% of nursing staff and

Table (18): Sample size, respondents, and percentage to the total population of workers in the medical care facilities.

	Primary care phy- sicians.	Hospital physic- ians.	Nursing staff.	Paramedical staff.
Number of personnel in all medical care facilities.	388	715	3687	about 2700
Number of personnel in facilities chosen for sampling.	211	702	3325	2312
Sample size	118	138	342	255
Percentage of the sample to the total population.	30.41	19.30	9.28	9.4
Number of respondents	105	111	312	209
Response rate percent	88.98	80.43	88.64	81.9

paramedical staff. The response rate was high (above 80%) but the least were hospital physicians (80.4%) paramedical (82%). The primary care physicians and the nursing staff were highly responding (about 89%).

For convenience in presenting and analysing the data

few questionnaires which were the latest received ones over a number of ^{of} hundreds were not used. These were five questionnaires ^x primary care physicians, eleven of hospital physicians, twelve for the nursing staff and nine of the paramedical staff.

Medical records:

A purposive sample of 10% of the primary care facilities was chosen to conduct this survey. It constitutes five facilities in five residential suburbs. In order to get better representation of the population these facilities were chosen based on the socio-economic nationality character of each suburb, these were :

1. Al Salmieh dispensary in which were 44,285 persons registered in 9,400 folders mainly non Kuwaitis of higher and middle socioeconomic classes.
2. Al Gahra combined unit in which were 18,264 person recorded in 3045 household folders. Residents of this area are mixed Kuwaiti and non Kuwaiti population of lower socio-economic class and bedouins.
3. Al Romeithia west dispensary in which 9,070 persons were recorded in 2,315 households. This suburb represents a mixed Kuwaiti and non Kuwaiti area of middle

socio-economic class.

4. Al Shoeikh dispensary with 2,285 persons registered in 346 folders.
5. Al Kadsia dispensary with 16,643 persons registered in 3896 folders of households. The above two suburbs are inhabited mainly by Kuwaitis of higher socio-economic level.

Field work was done in the five facilities by working in health records office drawing a systematic sample of 1% of the total family folders in the facility. Health records of all the members in the household folder drawn were studied. The total sample drawn was as follows:

- Number of all folders in the target population 19,281 folder
- Number of health records in target population 93,504 persons
- Number of folders in sample drawn 191 folder
- Number of individual health records in the sample drawn. 1112 persons

The percentage of the sample to the target population was about 1% of the folders, 1.19% of the health records of individuals in the target population and about one per thousand of the total population of Kuwait.

The referral pattern of maternity cases:

A pilot study was conducted to test a designed form on five cases attending the maternity reception room. The final form was decided and the researcher attended the maternity reception room to record the data in these forms using all attendants to the hospital for maternity causes in the three shifts as follows:

<u>Date</u>	<u>Shift</u>	<u>No. of cases</u>
June 1 - 7	10 PM - 7 AM	181
June 8 - 14	1 PM - 10 AM	159
June 15 - 21	7 AM - 1 PM	175
		<u>515</u>

All data were collected during the shift hours except data concerning the type of hospital care for admitted cases. These were completed on the third day of admission for each group studied in one day through following them to the wards in which they were admitted. Data were also collected from the lay-in wards of maternity centers as regards, causes for referral to the hospital, numbers referred, and the bed occupancy of these lay-in wards during the same study period i.e. June 1978. Since a daily census was not available, the daily list of dieting was used to represent the daily census.

The household interviewing survey:

A form was designed for each head of the family to include personal data, family size, income and environment sanitation data of the house. Another form was designed for every member of the family to include health data. The two forms were tested through a pilot study of 5 households by the researcher and questions reformulated till the final form was decided.

The sample design was based on a frame to choose 700 households (appendix 10 B). The frame of the national census of 1975 was used to draw a random sample of 120 squares out of the 1187 geographical squares of Kuwait. For each square sample of about 4% of the families listed in the square were drawn.

The response rate was 91.4% i.e. 640 households having 5491 persons which were about 5/1000 of the total population of Kuwait.

8. Analysis and presentation of data.

Data of the households interviewing survey were coded and tabulated by the statistical department of the Ministry of Planning. All other data of field work were collected,

coded and tabulated by the researcher. Punching and sorting of these data was assisted by the Department of statistics, the High Institute of Public Health, Alexandria University.

Results are presented, analysed and discussed.

RESULTS

1. Organization of the Present Medical Care System

1.1. Organizational structure

1.2. Medical care services

1.2.1. Ambulatory care

1.2.2. Referral pattern

1.2.3. Hospital care

1.2.4. Referral for treatment outside Kuwait

1.2.5. Ambulance services

1.2.6. Dental services

1.2.7. Preventive services

1.2.8. Other supportive services

1.2.9. The private sector and other governmental
medical care services .

1.3. Manpower, utilization and work load.

1.3.1. Manpower availability and distribution

1.3.2. Utilization and health manpower in primary
care units

1.3.3. Utilization and health manpower in hospitals .

1.4. Health planning in Kuwait

2. Responses to the Questionnaires

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attitudes towards medical care services .

- 2.2. Responses of physicians of primary care units on services in these units.
 - 2.3. Responses of hospital physicians on medical care services in hospitals.
 - 2.4 Responses of the nursing and paramedical staff on medical and nursing services.
- 3. Results of the Study of Medical Records in Primary Care Units
 - 3.1 Health registration
 - 3.2 Utilization of health records
 - 3.3 Type and completion of data recorded
 - 4. Study of the Referral Pattern for Maternity Cases
 - 4.1 Organizational issues
 - 4.2. Source of referral and presenting diagnosis of sample cases.
 - 4.3. Admission of cases and type of care provided by the hospital.
 - 5. House-hold Interviewing Survey on Utilization of the Available Medical Care Services

1. Organization of the present system :

1.1. Organizational structure :

The organizational structure of the Ministry of Health is presented in figure (7). This organization was adopted since 1975 with minor changes. Before that, the medical care facilities were divided into two general departments, preventive and curative which were replaced by the present seven technical departments.

It can be noticed that three general departments are existing headed by three assistant undersecretaries for: administrative, financial and technical affairs. Other divisions and committees are directly connected to the Minister or Undersecretary .

General department of administrative affairs :

Its responsibilities are: general services including building constructions and maintenance, administrative affairs including personnel affairs, legal affairs including a division for births and deaths registration and labourers department for unskilled labourers .

General department for financial affairs :

This is concerned with: Medical stores; financial department including supply, budgeting, costing, auditing; general stores; and a computer center .

General department for technical affairs :

Figure (7) presents the divisions supervised by the seven technical departments. It can be noticed that :

- a) The department of ambulatory services is including dispensaries and combined units, Maternal and child health, ambulance , diabetic clinics , police health services and health registration .
- b) The department of hospitals: This is supervising nine separate divisions other than the eleven hospitals of Kuwait. Tuberculosis control and tuberculosis clinic divisions are two separate divisions one for case finding and the other for treatment and follow-up of ambulatory cases. The sterilization division is centrally supplying the hospitals. The rest of the divisions which are cardiology, radiotherapy, radiodiagnosis, nutrition, and physiotherapy are located in one of the hospitals and at the same time supervising relevant activities in the other hospitals .
- c) Department of dental and paramedical services: It is concerned with dental, pharmacological, laboratory, and nursing services. It also supervises the nursing institute as well as a separate division for governmental pharmacies control ,

- d) Department of community health: this is supervising the division of school health, social services and family planning.
- e) Department of Public Health and Planning: This department is concerned with preventive health, occupational health, quarantine, radiation control, and health and biostatistics division. It also includes a division for training which is concerned with training of technical personnel and a division for planning which has not yet developed planning staff or activities .
- f) Department of central technical services: This department is responsible for commissioning and staffing of the new hospitals under construction .
- g) Department of health research: It is staffed by some senior part time physicians and acts as a secretariat for the board of research .

Central Committees:

Many permanent and temporary committees are headed by the Minister or the undersecretary. The main committees are the budget, training, drug, board of health research, and the planning committee. The board of research is newly established for approval on protocols and budget allocation of proposed

researches. The higher committee of planning was formed in 1978 for policy definition and decision making on health plans. The board of technical departments is formed by the heads of the seven technical departments and headed by the undersecretary. It is supposed to meet twice monthly for coordination of purposes, but only two meetings were held since its establishment in 1976 .

Other central divisions :

Some divisions or offices are attached directly to the Minister's office or the undersecretary's office. The most important are :

- International health: responsible for communications with World Health Organization .
- Health education: Its activities are mainly through mass media and mobile units .
- Treatment abroad: which is an administrative office responsible for referral of Kuwaiti patients for treatment outside Kuwait .
- The Blood bank: centrally supplying blood and its derivatives to all governmental and private medical care facilities in Kuwait .

- Medical board: which is responsible for pre-employment medical examinations and sick leaves .
- Drug factory: which is producing some forms of drugs its staff were 52 persons and its production amounted to about 7% of the total budget of drugs and medical equipments during 1977 .
- Drug control laboratory: which is responsible for testing specifications and efficacy of imported drugs .
- Division of health services in the South and Arabian Gulf, supervising aids for health programs in these areas which are now in Yemen and Bahrain .

1.2. Medical Care Services :

Medical care services are provided through two main types of facilities, i.e. ambulatory care facilities which provide primary care as well as some specialized outpatient clinics; and hospitals which are eleven hospitals. Other medical care services are provided namely ambulance, dental, preventive, supportive services as well as the private sector and other governmental agencies such as social welfare and education institutions .

1.2.1. Ambulatory Care :

The ambulatory care services in Kuwait are composed of :

- Primary care units which are the dispensaries and combined units, providing general practitioner services, Maternal and child health services, dental services and preventive services .
- Some specialized clinic located in primary care units .
- Hospital out-patient clinics .

Distribution of Primary Care Facilities :

Table (19) shows the ambulatory care facilities providing primary care in Kuwait. It can be seen that the dispensaries and combined units are distributed in five geographic regions .

Table 19. Regional Distribution of Ambulatory Care Facilities , Kuwait 1977

Region	Ahmadi	Salmieh and Hawalli	Algahra	Farwania	Al Madina
Population in thousands	185	305	145	280	322
No. of dispensaries	8	4	3	6	15
No. of comb. units	2	2	3	3	3
No. of maternity clinics	3	2	4	2	4
No. of child clinics	3	5	5	4	5
Population/primary care unit	18,500	50,830	24,170	31,110	17,880

The geographical boundaries of regions are shown in the map (appendix 1). It can be noticed that the five regions of ambulatory care are not coinciding with the administrative classification of the three governorates. Regions differ in number of facilities and population served. The population density was found to be variable in the different regions since the two regions of Gahra and Ahmadi are the least dense areas. The number of population served by one primary care unit ranged from 17,880 in Al Madina to 50,830 in Salmieh and Hawalli region.

The most far distant part of the catchment area from the dispensary was found to be ranging from 0.5 kilometer to 1.5 kilometers in the three regions of Madina, Salmieh and Farwania. In the region of Ahmadi and Gahra varies mostly from 2 to 5 kilometers.

Calculation of the G.P./population ratio in the different five regions of primary care was based on the assumption that 28% of population are below 5 years (table 4) and are seen by the pediatric clinics as the first contact and thus subtracted from the total population registered in the unit. This ratio was found to be 1:3240, a similar ratio was calculated for pediatricians and was found to be 1:3250.

For both clinics the highest ratios were in Farwania and Salmieh regions, the lowest were in Almadina and Algahra regions .

Services Provided in Dispensaries and Combined Units :

The following services are provided in primary care units:

The dispensary : The total number is 36, services provided are :

- G.P. services for all population registered in the areas served .
- emergency care during the working hours .
- drug dispensing
- dressing and treatment services and injections
- 9 dispensaries has pediatric clinics providing child health services
- 5 dispensaries has dental clinics for dental services .
- 2 dispensaries has maternity clinics for maternal care .

The combined units: The total number is 13, regular services are:

- G.P. for registered population as the dispensary services.
- Emergency care around the clock
- Maternity care
- Pediatric care
- Injection room and dressing room

- Small laboratory to perform simple hematology as blood count, sedimentation rate, urine and stool tests. It also takes samples for other tests to be send to Sabah or Amiri hospital laboratories .
- dental clinic
- Preventive section providing services for control of communicable diseases, vaccination whether periodic for children or contacts, and food control .

The number of dispensaries attached to every combined unit vary much from one area to the other as follows :

	No.	%
- Combined units attached to 6-7 dispensaries	3	23
- Combined units attached to 4-5 dispensaries	2	15.4
+ Combined units attached to 2-3 dispensaries	5	38.4
- Combined units attached to 1 dispensary	2	15.4
- Combined units not attached to dispensaries	1	7.7
	13	100

Specialized Clinics Located in Primary Care Units :

There are some specialized clinics located in some dispensaries or combined units other than the regular services, these are :

- 4 diabetic clinics

- 4 ophthalmology clinics
- 3 skin diseases clinics
- 1 X-ray unit in Failakah Island's combined unit
- 6 delivery centers with a total bed complement of 124 beds ranging from 15 to 34 beds in five centers and 4 beds in Failakah Islands unit .

Management of primary care units :

The Primary care unit either the dispensary or combined unit has multidisciplinary management pattern. The administrative activities and services are controlled by a layman who is the secretary of unit assisted by deputy secretaries and other administrative personnel .

The post of regional officer of a region or senior physician in the unit although existing, is not clearly governing the whole region or unit. Precised definition of supervision or responsibilities of these posts in relation to the other personnel working in MCH, dental or administrative posts are not stated and not clear to every worker. The inter-relations vertically and horizontally are varying from one facility to the other .

The working hours for G.P. clinics are :

- 10 units working 24 hours
 - 5 units working 17 hours
 - 30 units working 12-15 hours
 - 4 units working 7 hours
-

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Pediatric clinics are working 12-14 hours a day in the combined units. The maternity clinic, dental clinic, laboratory and preventive section work regular hours 7.30 A.M. to 1.30 P.M.

As regards adequacy of equipments, it was observed that medical equipments and service cars were adequately provided in all units. Drugs were also adequate within the list or type defined for general practitioners. It was observed that the attendant did not visit one particular physician regularly. If the unit had more than one physician which was usually the case, they were distributed in clinics for male adults and female adults and this pattern is changeable during the week. The same pattern was also occurring among pediatricians, gynecologists and dentists if the unit had more than one clinic of the specialty.

1.2.2. Referral Pattern :

The G.P. clinic receive patients registered in the dispensary or combined unit. Referral if indicated can be as follows :

a) For emergency cases, if the specialty required is covered by one of the two general hospitals in Kuwait, the patient is referred according to the catchment area of this hospital .

If the care required is by a specialized hospital , i.e. maternity, infectious diseases, chest, psychiatric or orthopedic, the patient is referred to one of these hospitals .

b) Specialty care: cases needed to be seen by specialists are referred to the hospital out-patient, whether it is a general or specialty hospital. If the specialty clinic required is within the dispensaries or units, e.g. gynaecology, diabetes, ophthalmology or skin diseases, the patient is referred to these clinics .

Most of the specialty clinics are following the appointment system through a quota predetermined by number of patients and specified days for every region by the corresponding clinic. The time spent on the waiting

list was found to be variable, usually from one to three weeks in 1977 according to the season of the year and the type of specialty.

The G.P. is allowed within certain limits to request laboratory tests not available in the combined unit laboratory and to ask for radiological examinations to be done by the responsible hospital .

The pediatric clinic provide care for children below five years. These clinics use special health records other than the ones included in the family folder and receive patients of this age group without referral. Pediatricians in these clinics refer patients when indicated to the pediatric department of the corresponding one of the two general hospitals i.e. Amiri or Sabah Hospital, or the pediatric units in the chest and infectious diseases hospitals.

Maternity clinics receive referred or unreferred cases. They can also refer cases when indicated to maternity outpatient or reception room for gynecology or obstetrical problems. Normal labours are referred to one of the six delivery centers for in-patient deliveries. Minor surgical procedures without general anesthesia are performed in the maternity clinics or delivery centers. Dental clinics refer

to the dental center or to any indicated specialty care .

The preventive section is responsible for all vaccinations including routine vaccination of children and thus vaccination is only available in combined units, and not in dispensaries .

1.2.3. Hospital Care :

Hospital Beds :

There are eleven hospitals in Kuwait, two general hospitals and nine specialized hospitals. Official records of the Ministry of Health and the Ministry of Planning (table 14) present the total number of beds to be 4210 beds in 1977 . These included 124 beds in six maternity lay-in centers attached to the combined units, and 391 baby cots in the Maternity Hospital. Thus the actual number of hospital beds in 1977 were 3695 beds of which 1223 beds were in general hospitals, i.e. 33.1%, and 2472 beds in specialized hospitals constituting 66.9% of the total hospital beds of Kuwait .

a) General Hospitals :

They are the Sabah and Amiri hospitals. Table (20-a) shows specialties and bed complement in the two hospitals .

Table 20-a. General Hospitals of Kuwait by Specialty and Number and Percentage of Beds 1977 .

Specialty	Number of beds			% of total hospital beds
	Sabah	Amiri	Total	
General surgery	194	168	362	9.8
Internal medicine	163	161	324	8.8
Pediatrics	201	51	252	6.8
Physiotherapy	82	-	82	2.2
Radiotherapy	64	-	64	1.7
Orthopedics	-	17	17	0.5
Pediatric surgery	30	-	30	0.8
Plastic surgery	-	19	19	0.5
Dermatology	-	10	10	0.3
E.N.T.	63	-	63	1.7
Total	797	426	1223	33.1

From table (20-a), it can be noticed that specialties were not identical in both hospitals. There were some other specialties in each hospital conducting an out-patient activity and admission of cases in these specialties is within the wards of general surgery or internal medicine. These are: in Sabah Hospital: cardiology, gastroentrology, allergy, neurology, endocrinology, vascular surgery and urology. In Amiri Hospital: neurology, diabetes, urology and nephrology where renal dialysis was available only in this hospital .

b) Specialized Hospitals :

It can be noticed that Soleibekhat hospital was including both ophthalmology and orthopedic beds. The total orthopedic beds in Kuwait were 6.4% considering 17 beds in Amiri general hospital. Tuberculosis beds were 10.2% both in the female sanatorium and the TB beds in the chest diseases hospital, Maternity beds were 14.4% of the total beds other than 124 beds in the labour centers of primary care units .

Table 20-b. Specialized Hospitals of Kuwait by
Specialty and Number and Percentage
of beds, 1977 .

Hospital	Number of beds	Percentage of total beds
<u>1. Maternity</u>		
Obstetrics	261	7.1
Gynacology	270	7.3
Premature	120	3.2
Total	651	17.6
<u>2. Soleibekhat</u>		
Orthopedic	219	5.9
Ophthalmology	111	3
Total	330	8.9
<u>3. Chest diseases</u>		
TB males	156	4.2
non TB diseases	170	4.6
(Chest surgery	74	2
(Heart surgery		
Total	400	10.8
<u>4. Female Sanatorium (TB)</u>	224	6
<u>5. Psychiatric</u>	472	12.8
<u>6. Infectious diseases</u>	210	5.7
<u>7. Chronic diseases</u>	124	3.4
<u>8. Leprosy</u>	21	0.6
<u>9. Police</u>	40	1.1
Total specialized Hospitals	2472	66.9

Organization of the Hospital

a) Clinical departments :

Hospital beds are classified as wards which form units. In some hospitals where more than one unit exist of the same specialty, these units constitute a department. This organization is followed in the general hospitals as well as in the maternity hospital and the orthopedic beds of Soleibeckhat hospitals. In the rest of the hospitals, classification is not strictly followed and is only an internal classification in each hospital where units are headed by assistant heads of units, or senior registrars .

In some departments like the radiology, physiotherapy, anesthesia, clinical pathology, nutrition and pediatrics, the head of the department in Sabah hospital is controlling the corresponding services in all other hospitals except the Amiri hospital .

b) Medical Staff Organization :

Physicians are classified as consultants, registrars and residents. Classically a consultant in Kuwait hospitals is a physician holding the highest specialty degree, usually a British fellowship, American board, M.D. from Egypt or

equivalent degree. He holds a post of assistant head of unit, head of unit, or head of department .

A senior registrar is a fresh holder of this high qualification, a registrar is specialized physician usually a diploma holder, while an assistant registrar is considered as a senior resident. This classification is mostly followed in the general hospitals and the Maternity Hospital .

There were exceptions to these specifications since some of the diploma holders who served a long time in Kuwait were senior registrars, or assistant head of units .

Consultants in every department are members of the department board which is concerned with internal organizational issues as well as scientific activities .

c) Hospital administration :

The hospital board : In 1976, a hospital board was established in each hospital headed by the hospital administrator, its members are the two deputy administrators, heads of clinical departments or units, and chiefs of pharmacy , laboratory and nursing .

The board is supposed to meet at least monthly and its stated responsibilities are: formulating plans to improve

the services, suggesting the hospital budget and defining resources required by the hospital including manpower. It also has the duties of promoting training and research , social care for patients and other items suggested by the chairman or members .

The minutes of the meeting during 1977 of the Maternity Hospital were chosen as a model and were analysed by the researcher and the following was observed :

The number of board members is 15, the meetings held were 7 out of 12 i.e. 58.3%. The average number of participants in each meeting were eleven out of the fifteen of the original members. The main items on the agenda discussed during the year were: Budget regulation of visiting, and planning to improve record keeping as well as some miscellaneous items.

Two subcommittees were formed by the board which were the Medical ethics committee, and medical record committee .

There were no documented meetings or activities for these two committees during 1977. There was no documented follow-up of the board proposals or recommendation. The board of the Maternity hospital is considered the most constructive and active board among hospitals as stated by the director of the hospitals department .

The Administrator :

He is always a physician, occasionally the chief of service in specialized hospitals or a senior physician in general hospitals, In this aspect no one received basic training in hospital administration, a situation recently recognised by the Ministry and thus administrators for the new hospitals are receiving intensive training courses in hospital administration, and at the same time there is a trend to appoint young physicians trained in administration as deputy directors to build up a second line of administrators .

Before 1976, the classical responsibilities for the administrator were day to day management as a chief of service. He was assisted by a deputy director for administrative affairs who is a layman and the director of nursing services. Usually these two assistants were directing their areas independently and occasionally were reporting and communicating to their chiefs in the central administration. Moreover, as it was explained before some specialties as the laboratory, radiology, pharmacy as well as some clinical specialties in the hospital were controlled directly by the head of the department in Sabah hospital. This situation created a sort of disintegration, lack of control by the

hospital administration and dual supervision and accountability for personnel in these departments. To avoid this, a decree was issued in 1976 defining unity of supervision of every worker to the hospital administrator, having the responsibilities of heading the board, supervising all workers through their technical chiefs, defining the hospital supply requirements and promoting maintenance, sound information and research. At the same time another post of deputy director for technical affairs was created .

This change of administrative concept in the hospital is being implemented gradually but slowly progressing against the prevailing pattern .

The Deputy Administrator for technical affairs :

He is a part timer regarding administration and has limited responsibilities mainly scientific activities and responsibilities delegated to him by the hospital administrator .

The Deputy Administrator for administrative affairs :

He is responsible for all personnel affairs, supplies, maintenance, medical records, kitchen, laundry and other non-medical services .

The nursing-staff :

Is headed by a director of nursing who has a number of assistants and is supervised by the hospital administrator. The assistant director of nursing supervises a number of patient wards in which a head nurse is supervising the nursing activities of staff nurses, and assistant nurses .

1.2.4. Referral for Treatment outside Kuwait :

Referred cases were usually chronic cases needing tertiary care which is not available in Kuwait. Abuse of this service were claimed and efforts were made to restrict it through introduction of new sub-specialties in the country, periodic invitation of specialists to Kuwait hospitals, and restricting referral except for cases recommended by an advisory medical committee for justification of referral. Occasionally, especially with children or female patients one of the relatives also accompanies the patient and all expenses for both are covered by the government .

Centers of referral :

During 1977 these were :

- 1- United Kingdom (London), for most of the cases including sub-specialty, surgical and medical cases constituting 95% of cases .

2- Other countries e.g. Yugoslavia where most referrals were for rehabilitation and physiotherapy 2%; Czechoslovakia mainly for rheumatoid diseases 1%; and France, Germany and Spain 2% .

Total cases referred were :

Year	No. of cases	No. of accompanies	Expenses in KD
1973	582	450	NA
1974	636	460	NA
1975	864	683	NA
1976	954	773	4,167,378
1977	614	500	2,877,844

It can be noticed that a reduction in 1977 occurred by 36% of cases and 31% of expenditures .

The total expenditure on treatment abroad constituted 5.4% of the budget of Ministry of Health during 1977, the average expenditure per patient was 4,687 KD (16,400 US \$)

1.2.5. Ambulance Services

Resources :

During 1977 resources existing in the ambulance division were :

	<u>No.</u>
- Vehicles situated in hospital	16
- Vehicles situated in primary establishment (usually combined units)	20
- Vehicles situated in emergency centers of borders	3
- Vehicles situated in quarantine centers	5
- Other vehicles standby or under maintenance in the garage	29
Total number of ambulance vehicles	73
 - Drivers	 131
- Male nurses	18

Male nurses were working in shifts in the remote emergency centers at the borders. Thus until late in 1978 personnel working in vehicles were only the drivers. Vehicles were equipped only by stretchers. If the clinical condition of the carried patient was critical, usually a nurse accompany him in between hospitals and primary care facilities .

Emergency calls through a common telephone number was not available to the public through a three-digit known number. Occasionally relatives of the victim call the secretary of the combined unit or may go to the unit to call an ambulance.

A wireless communication system is available between the ambulance center and all vehicles.

This situation started to change in 1978 by using new models of vehicles available in 1977, which were equipped with oxygen and emergency drugs. A new batch of 25 ambulance officers were trained through an intensive six months course plus a driving course so that on each vehicle two officers are working and one of them also drive the vehicle .

Traffic accidents and deaths were constituting a major problem in Kuwait. As shown in table (21) it was the fourth cause of death causing about 7.5% of all deaths in Kuwait in 1977 and the number of victims and the percentage of deaths among victims were increasing since 1960 .

Table 21. Distribution of Road and Traffic Accidents Victims in Kuwait 1960 - 1976

Year	Total traffic accidents	Total Victims	Injured		Dead	
			No.	%	No.	%
1960	5416	2014	1911	94.9	103	5.1
1964	6043	1838	1719	93.3	119	6.5
1968	10113	2890	2658	92.0	232	8.0
1972	14035	2497	2295	91.9	202	8.1
1976	16744	3852	3545	92.0	307	8

1.2.6. Dental Services :

These were distributed in primary care units, three hospitals and a dental center for specialized dental clinics as a referral center. The facilities and utilization of dental services were as follows in 1977 :

Facilities	No. of clinics	No. of dentists	Visits in 1977	
			No.	%
Dental center	16	19	54.525	10.8
Dispensaries and combined units	25	42	353.464	70
Hospitals	3	4	18.463	3.7
School health	20	23	78.359	15.5
Mobile clinic	1	-	-	-
Total	65	88	504.811	100

It is noticed that on the average, the consumption of dental services per year per inhabitant in Kuwait was about 0.5 visit. The visits to the school health dental clinics were 15.5% of the total visits .

1.2.7. Preventive Services :

Public health services were provided through the divisions of environmental control, control of radiation, food control,

occupational health and quarantine. Other preventive personal services are provided which are :

a) School health :

School health services in Kuwait started early in the fourties and is developing proportionally with the growth in the number of schools. The following were the resources in this division during 1977 :

	No.	Physi- cians	Nurses	School Health Supervisors	Students	No. of examina- tions by physician
School clinics	378	56	292	105	253,212	198,007
Central clinics	6	8	20	-	-	36,639
Total	384	64	312	105	253,212	234,646

The central clinics were internal medicine, dental, ophthalmology, E.N.T., dermatology and psychiatric clinics. These were referral clinics receiving patients from school clinics, through an appointment system. The school clinics also refer cases directly to the primary care units and/or to hospitals. Mostly a nurse or assistant nurse was working in the school clinic , occasionally one was working for two clinics. Physicians visit schools twice weekly. The nurse students ratio is 1:638 and the physicians student ratio is 1:4522. Usually school clinics

provide first aid, screening at the beginning of the scholar year, and routine vaccinations. A health card is kept for each student and is following him through the levels of education. In some schools, school health supervisors started working (25% of the total school nursing staff) in the school health clinics since 1976. These are holders of an associate degree of school health nursing i.e. two years after secondary certificate .

It can be noticed that physicians school health visits were about one visit/year for each student of which 16% were to the central specialty clinics, dental services were about one visit to the dentist for every four students .

b) Health Education :

It is centrally provided mainly through mobile units and field visits to health facilities periodically, using audio-visual aids and posters. The main activity of this division is performed through mass media by programs and conferences in the press, radio and television programs. No health educators are full time working in medical care facilities for planning, supervising or training of the medical team on health education.

c) Communicable Disease Control :

In table (13) the incidence of these diseases in Kuwait was presented. The most important diseases are compulsory notifiable and measures of control are taken, including surveillance and vaccination of contacts. Compulsory routine vaccination is provided to children before the school age in the preventive clinics of primary care units and in the schools by the school health division. Tuberculosis screening is done for newly appointed employees, students and food handlers . The chest diseases clinic provide care for ambulatory tuberculous patients. No home care program is provided for these patients .

d) Family Planning :

As mentioned before, family planning in Kuwait is confined to services provided for marital counselling, male sterility and venereal diseases. It is a central clinic in which three physicians, two nurses and seven social workers were providing the services. The number of marital counselling during 1977 were 65 males and seven females out of 5464 total marriages in the same year. The number of visits for treatment and follow-up were 41,045, the number of new attendants were 4,579 of which 25% were complaining of sterility, 4% of syphilis, 10% gonorrhea, and 41% other venereal diseases and 20% sexual problems .

1.2.8. Other Supportive Services :

The most important were :

Socio-medical services :

Social workers were providing social services in the following agencies :

- School health division
- Family planning division
- Chest clinic
- Hospitals

No social services were performed in the primary care units .

Blood Bank :

This is a central unit supporting all medical care facilities in Kuwait including the private hospitals. It was established in 1965 and since 1968 it was fully satisfying Kuwait needs. It supplies blood and blood derivatives in the form of total blood, packed cells, plasma, and platelets. Blood is supplied through donation to the central bank or one of its three branches or by the mobile unit .

Needs sometimes exceed supply and create shortcomings. The following are the number of pints of blood received in

the bank in the last 5 years :

<u>Year</u>	<u>No. of pints</u>
1973	15,512
1975	12,471
1977	16,182

12.9. The Private Sector and other Governmental Medical Care Services :

The private sector constitutes a small proportion of medical care facilities and manpower in Kuwait. Development of this sector in the last ten years is as follows :

Table 22. The private sector resources compared to the governmental sector, Kuwait 1977 .

	<u>1968</u>	<u>1977</u>	<u>% of M.P.H. resources</u>
Hospitals	5	8	-
Admissions	N.A.	19,038	19
Beds	300	596	14
Physicians	70	148	10
Dentists	14	32	34.4
Pharmacists	66	228	148
Nursing staff	274	434	10.7
Laboratory technicians and assistants	-	64	26.6
X-ray technicians and assistants	15	17	10

It is shown that the number of beds were about 14% of the governmental beds of the Ministry of Public Health in 1977 . Physicians and nursing staff were 10-15%. About 43% of the private sector beds, i.e. 260 beds were included in one hospital which is Ahmadi Hospital and is now considered as a public sector after nationalization of the company in 1976. The rest were small seven hospitals of 8 to 92 beds. In the year 1976, the total number of physicians and dentists in the private sector was 203 doctors, 45% of them were working in private offices, 45% in private hospitals, and 10% were working in offices of some companies. Pharmacists in the private sector were 148% of those in the governmental hospital working in private pharmacies, private hospitals, and drug agencies .

The governmental medical care services other than those provided by the Ministry of Public Health were :

- The Military Hospital and services provided to the military staff and not to their dependents .
- The Ministry of Education, running infirmary institutes for rehabilitative education of the handicapped in which 2321 students were enrolled in the scholar year 1977/1978 .

- The Ministry of social affairs and labour is running a complex of social institutions for the following persons in 1977 :

	No. of persons	%
Elderly care	83	8.1
Mentally retarded	383	37.3
Handicapped	100	9.7
Orphanage	148	14.4
Fosterage	243	23.7
Youth care	70	6.8
Total	1027	100

(annual reports Ministry of Education 1978, and Ministry of Social Affairs and Labor, 1978) .

1.3. Manpower, Utilization and Load of Work :

1.3.1. Manpower availability and distribution :

Types as well as quality of data available on manpower is very limited. Data presented were collected from registers or annual reports of the central departments as well as during field visits to facilities. Job descriptions and specifications were not defined, and categories of workers were presented according to the post and/or professional category and the financial grade they occupy. This occasionally

can not explain the qualification, length of experience, turn over, and other personal data. Detailed nationality groups of workers are not available except for physicians. The rest just were classified to Kuwaitis and non-Kuwaitis .

Table 23. Distribution of health manpower working in the Ministry of Public Health, by categories and nationality groups, Kuwait 1977

Category	Kuwaiti		Non-Kuwaiti		Total
	No.	%	No.	%	
Physicians	125	10	1120	90	1245
Dentists	48	42	66	58	114
Pharmacists	30	19.5	124	80.5	154
Qualified technical	65	57	49	43	114
Technical	24	43.6	31	56.4	55
Assistant technical	572	41.5	805	58.5	1377
Nursing staff	275	6.5	4091	93.7	4,366
Non-medical adm. staff	1112	61.4	700	38.6	1,812
Administrative employees	2062	48.0	2239	52.0	4,301
Workers	629	13.1	4161	86.9	4,790
Total Manpower	4942	27	13386	73	18,328

In table (23) the qualified technicians represent holders of a university degree as nutritionists, physiotherapists , lab. specialists. Technicians were holders of non University degree and assistant technicians were usually with experience. It can be noticed that Kuwaitis were constituting 27% of all workers, but only 6.3% of the nursing staff, 10% of the physicians, 19.5% of pharmacists and 42% of dentists .

For technical and administrative jobs, Kuwaiti personnel were more, i.e. 40-60%, but regarding employees and unskilled workers, the percentage of Kuwaitis is lower, i.e. 27% .

Table (24) presents nationality groups among physicians and dentists. It can be noticed that the highest percentage of nationality groups were the Egyptians 47.8%. Palestinians and Jordanians were 22.7%, then the Kuwaitis 12.7%. Other nationalities as Indians, Iraqis and Syrians were 4.7% , 3.8% and 1.6% respectively. Female physicians 18.8% of total physicians and female dentists form 46.5% of total dentists. The highest Kuwaiti percentage were female dentists who formed 64.6% of Kuwaiti dentists and 27% of all Kuwaiti and non Kuwaiti dentists. It was found that about 58 Kuwaiti physicians were enrolled in fellowships abroad i.e., about 46.4% of all Kuwaiti physicians were not in practice during 1977 .

Table 24. Distribution of physicians and dentists by Nationality and sex, Kuwait 1977

Nationality	Physicians		Dentists		Total	
	Male	Female	Male	Female	No.	%
Kuwaiti	101	24	17	31	173	12.7
Egyptian	483	147	10	10	650	47.8
Jordanian and Palastenian	257	21	21	9	308	22.7
Indian	48	14	1	1	64	4.7
Iraqi	41	5	4	2	52	3.8
Syrian	15	2	5	-	22	1.6
Sudanese	17	1	-	-	18	1.3
Lebanese	9	3	1	-	13	1
Bahrainian	2	1	-	-	3	-
British	13	2	-	-	15	1.1
Checkoslov	5	2	-	-	7	0.5
Yougoslavian	3	-	-	-	3	0
Pakistani	10	3	1	-	14	1
Poland	2	-	-	-	2	-
Cylon	-	3	-	-	3	-
USSR	-	2	-	-	2	-
Others	5	4	1	-	10	1.8
Total	1011	234	61	53	1359	100

The Nursing staff were distributed as follows :

	No.	%
- Female staff nurses	2831	64.8
- Female assistant nurses	522	12
- Male staff nurses	390	8.9
- Male assistant nurses	623	14.3
T O T A L	4366	100

Data on nationality groups among the nursing staff was not available. A study report of the nursing division in 1974 outlined the percentage of nursing staff nationality to be as follows :

	Percent
- Kuwaiti	3.7
- Egyptian	24.9
- Jordanian and Palestinian	26.4
- Indian	23.8
- Iraqi	3.0
- Syrian	4.8
- Lebanese	9.3
- Pakistani	1.7
- Others	2.4
T O T A L	100

This pattern is changing according to the availability of staff and number of new appointments through governmental agreements or availability of supply from these countries .

The attrition rate of health personnel was collected from registers for the year 1977, it was mostly due to resignations and the findings are presented in table (25) .

Table 25. Attrition rate for health manpower categories , Kuwait 1977

	No.	Total employees in 1977	% of total
Physicians, dentists, pharmacists	135	1513	8.9
Nursing and technical staff	290	5912	4.9
Non-medical administrative staff	110	1812	6.1
Non-medical employees	267	4301	6.2
Non-medical workers	349	4790	7.9
T O T A L	1151	18328	6.3

It is obvious that the highest attrition rate was among physicians dentists and pharmacists. The lowest was among the nursing and technical staff .

1.3.2. Utilization and health manpower in Primary
Care Units :

The following were numbers of the medical categories in primary care units :

Table 26-a. Numbers of Medical Personnel in Different Clinics of Primary Care Units, Kuwait 1977

Clinic Category	G.P. clinic	Pediatric	Obstetric & Gynecology	Dental	Total
Doctors	251	68	38	44	401
Nursing staff	480	102	262	55	899
Laboratory technicians	-	-	-	-	53

Table 26-b. Utilization of Services in Primary Care Units, Kuwait 1977

	G.P. clinic	Pediatric	Obstetric & gynacology	Dental	Total
No. of visits in thousands	5,765	1,991	521	353	8,630
Visits/physicians/day	78	97	46	27	-
% of cases referred to hosp.	1.2	N.A.	1.5	-	-
No. of lab. tests in thousands	-	-	-	-	744
Lab. tests/ technicians/day	-	-	-	-	47
Lab. test/visit	-	-	-	-	0.08

The daily load of work per physician is highest among pediatric physicians (97 patients), and the general practitioner (78 patients). The average daily cases seen by the dentist was 27 patients. Gynecologists treat a daily average of 46 cases including examinations, minor procedures, minor surgery and attendance of deliveries.

Clinics of first contact are G.P. and pediatric clinics. Cases visiting these clinics in 1977 were :

	No.	%
- Male adults (over 10 years)	2,639,909	34
- Female adults (over 10 years)	2,560,633	33
- Children (5-10 years)	565,221	7.3
- Children below 5 years	1,990,642	25.7
	7,756,405	100

It can be observed that the average number of visits per person to the primary care clinics including dental care was about 8 visits in 1977 excluding gynaecology and obstetrics since it is supposed to be a referral clinic .

As regards gynaecologists, the total cases examined and/or managed by physicians in the maternity centers were found to be as follows :

	No.	%
- Maternity examinations (anti postnatal)	288,705	53.8
- Gynaecology examinations	232,753	43.4
- Minor surgery (cautery insuflation, smears)	2,863	0.5
- In-patient deliveries in maternity centers	12,059	2.3
	536,380	100

The number of deliveries in Kuwait was calculated on the base of total live births and still births of Kuwait which was 46,675 births during 1977, and was found to be as follows.

	No.	%
- In-patient deliveries in the maternity centers	12,059	25.8
- Home deliveries assisted by nurses	1,630	3.5
- Hospital deliveries	22,831	48.9
- Others	10,155	21.8
Total	46,675	100

Cases classified as others were deliveries at private hospitals or home deliveries unattended by nurses. It can be noticed that the maternity hospital cared for about half of all deliveries, lay-in wards of maternity centers for about one fourth, and home deliveries only for 3.5% .

1.3.2. Utilization and Health manpower in hospitals:

As shown in table 19, there were two general hospitals, Sabah Hospital and Amiri Hospital. The following were categories of workers in these two hospitals :

Table 27-a. Manpower in General Hospitals,
Kuwait 1977 .

I t e m		Sabah	Amiri	Total
Total physicians		261	165	426
Consultants	No.	48	26	74
	%	18.3	15.7	17.4
Senior registrars	No.	16	12	28
	%	6.1	7.3	6.6
Registrars	No.	52	14	66
	%	20	8.5	15.5
Assistant registrars and residents	No.	145	113	258
	%	55.6	68.5	60.5
Nursing staff		820	433	1253
No. of lab. technicians and assistant technicians		49	76	125
No. of other technicians and assistant technicians		224	101	325
No. of administrative staff		977	803	1780
Physician/bed ratio		1:3	1:2.6	1:2.9
Nurse/bed ratio		1:1	1:1	1:1

The nine specialized hospitals had the following medical staff as shown in table 27-b .

Table 27-b. Manpower in specialized hospitals of Kuwait, 1977

Hospital	Physicians					Nur- sing staff	Techni- cians	Adminis- trative staff
	1	2	3	4	T			
1. Maternity	20	8	26	44	98	621	29	626
2. Soleibekhat								
Orthopedics	-	-	-	-	41	-	-	-
Ophthalmology	-	-	-	-	22	-	-	-
Total	13	2	14	34	63	303	79	550
3. Chest diseases	6	0	4	23	33	245	33	398
4. Female sanatorium	-	2	2	2	6	97	6	238
5. Psychiatric	7	4	4	7	22	249	8	369
6. Infectious diseases	-	5	4	7	16	140	11	240
7. Chronic diseases	-	-	3	2	5	85	1	175
8. Leprosy	-	-	-	-	-	6	-	25
9. Police	-	-	3	-	3	40	2	30
Total	46	21	60	119	246	1786	169	2651

Physicians in table 27-b were categorized: (1) consultants, (2) senior registrars, (3) registrars, (4) assistant registrars and residents, (T) total .

From tables 27-a & b it is shown that the percentage of consultants were 17.4%, senior registrars 28% of total physicians in general hospitals. In specialized hospitals there was marked variation between one hospital and the other, on the average the percentage was 18% for consultants and 24% for senior registrars. It is also noticed that the physician/bed ratio and the nurse/bed ratio were 1:3 and 1:1 in general hospitals while the same figures for specialized hospitals were 1:10 and 1:1.4 .

The number of administrative and non-medical staff was observed to be very high in both types of hospitals where the ratio of the medical to the non-medical staff was 1:1.1 in general hospitals, and 1:1.2 in specialized hospitals .

Utilization of hospitals :

Utilization of hospitals was varying between general hospitals and specialized hospitals. The difference was also observed among the specialized hospitals according to the specialty .

Table 27-c. Utilization of General Hospitals
in Kuwait, 1977

Services	Sabah	Amiri	Total
Total beds	797	426	1223
Total admissions	32,165	15,034	47,199
Total out-patient visits	305,359	162,638	468,492
Total operations	23,327	14,833	38,160
Major operations	4,981	1,549	6,530
Total emergency cases	68,080	46,712	114,792
Average daily admissions	88	41	129
Average daily O.P. visits	837	445	1282
Average daily major operations	14	7	21
Average length of stay	7.8	8.3	7.9
Bed occupancy rate	86	80	84.2
Bed turn over/year	40.4	35.3	38.6

Table 27-d. Utilization of Specialized Hospitals in Kuwait 1977

Hospital	No. of beds	Admissions	Emergency and O.P. visits	Operations	Bed occupancy	Turn over	Average length of stay
<u>Maternity</u>							
Obstetrics	261	22,711	52,193	20,842	77	87	4.5
Gynaecology	270	10,583				39	
Premature	120	1,031	-	-	80	15	21
Total	651	35,125	52,193	20,842	78	53	5.2
<u>Soleibekhat</u>							
Orthopedic	219	3,002	90,662	2,143	95	14	25
Ophthalmology	111	2,156	140,720	3,522	75	19	14
Total	330	5,158	231,382	5,665	88	16	21
<u>Chest diseases</u>							
TB (males)	156	494	-	-	90	3	104
Non-TB diseases	170	2066	6,708	-	60	12	18
Chest surgery	74	241	1,975	390	54	10	19
Heart surgery		524	7,370	170			
Total	400	3,325	16,053	497	71	8	31
<u>Female sanatorium</u>							
Female sanatorium	224	464	-	-	59	1.6	104
Psychiatric	472	3,455	29,718	-	90	7.3	45
Infectious diseases	210	5,471	8,632	-	65	26	9
Chronic diseases	124	60	-	-	96	0.5	(724)
Leprosy	21	4	-	-	48	0.1	(920)
Police	40	557	-	-	NA	14	NA
Total	2472	53,619	337,978	27,004	78.3	27.3	13.1

The occupancy rate can be observed to be high in the chronic diseases hospital, psychiatric hospital and orthopedic beds of Soleibekhat hospital. The lowest occupancy was observed in the female sanatorium (59%), heart and chest surgery (54%), the tuberculosis male beds (60%) and the infectious diseases hospital (65%). On the average the bed occupancy of all specialized hospitals together was 78.3% compared to general hospitals where it was 84.2%. Similarly the average length of stay was short for the maternity hospital and the general hospitals 7.9 and 4.5 days respectively. Tuberculosis hospitals showed an average length of stay of about 104 days, and for psychiatric hospitals the average length of stay was 45 days. The highest length of stay was seen in the leprosy and chronic diseases hospital (920 and 724 days respectively) .

In 1978, due to the low occupancy rate of the leprosy hospital of the female sanatorium and chest hospitals, certain changes occurred in bed allocation of hospitals .

- The leprosy hospital was closed since there were only 11 in-patients who were bacteriologically and clinically inactive cases. They were referred to the ambulatory care by the out-patient for skin diseases or admitted for social care by the Ministry of Social Affairs Institutions .

- In the chest female hospital, which is admitting female and children tuberculous cases, 60 beds were allocated to the orthopedic department as extended care wards.
- In the chest diseases hospital two wards (60 beds) were allocated to the Chinese Medicine and acupuncture center.

In conclusion while the general hospitals constituted about 33% of total beds, they cared for 46.8% of total admissions and 63.3% of out-patient and emergency visits in Kuwait hospitals .

1.4. Health Planning in Kuwait :

1.4.1. National Health Plans :

Health planning is still not yet developed in terms of comprehensive national health planning. Medical care facilities were usually established according to administrative decisions based on a felt need or reactive to a public demand. In 1968, the first national socio-economic five year plan was issued by the board of planning (later on it became a Ministry for Planning). The health sector goals in this plan draft were stated as: increasing the bed complement by adding 2740 beds till the year 1971/1972 to the 3544 beds which were present at the end of 1966. The national target bed population ratio was considered to be 10 beds/thousand population. These beds were suggested to be built as 1290 beds in two general hospitals; 350 beds as a maternity hospital, 600 beds as an extension to Sabah hospital, 200 beds as a chronic diseases hospital and 300 beds were estimated as expansions to the armed forces beds and the private sector. The plan draft did not justify the base for estimating the norm of 10 beds/1000population, its geographical distribution **nor** specialty allocation of the beds in the proposed hospital projects .

The second goal of the first 5 year plan was regionalization of primary care putting target of one physician for every 3000 population and construction of 20 delivery beds in each combined unit. The third goal was increasing productivity of local drugs, and the fourth goal was encouraging the private sector build more beds, but no detailed targets or programs were defined for these goals. The fifth goal of this plan draft was concerning with health manpower development. It assumed the need for 275 physicians, 25 dentists, 13 pharmacists and 700 nursing staff. This was based on a physician population ratio of 1:745, and the estimated manpower needed for the new establishments .

The plan suggested for manpower supply an establishment of a Health Institute for paramedical professions and the extension of the nursing institute. Broad goals like promotion of health education, research, statistics and information system, and environmental health services were also stated. It also recommended a nominal fee charging on prescriptions of 100 fils (0.1 KD) to overcome abuse of the free services (First Five year national socio-economic plan, 1976/68 - 1971/72) .

This plan was not legislated nationally as a binding plan, but was recommended as guidelines for ministries and sectors to follow .

Tables 14 and 15 show that most of the targets as regards establishments, manpower or organizational issues such as charging fee for drug dispensing, were not fulfilled at the end of this plan. It can be noticed also that policy statements, objectives, programs or projects were not clearly defined nor justified in the plan.

The draft of the second national health plan was established for 1975/76, 1980/81 with a gap of 4 years between the two national plans. In this second plan the health sector goals were defined as: provision of a high level of health care, control of endemic and communicable diseases, lowering infant mortality "to the minimum", control of health problems caused by urbanization and coordination of the governmental and private sector services and promoting their integration. Other broad goals were stated as stressing on public health education, proper supply of manpower needs, promotion of research and administrative competence and regionalization of services. Some targets were defined to be achieved at the end of the plan period to be :

Bed/population ratio 1:190 adding 3711 beds
 Physician/population ratio 1:600 recruiting 1443 physicians
 Nurse/beds ratio 1:1 recruiting 4362 nurses
 Increasing the No. of preventive centers to 36 by establishing
 26 centers,
 Increasing the No. of MCH centers to 26 by establishing 12 centers
 Increasing the No. of pharmacists by 107, assistant pharmacists
 258, and other paramedicals by 833 .

Again the base for defining these targets, standards, the detailed objectives, projects, were not justified by this plan draft .

The stated targets in this plan for bed population ratio and accordingly personnel population are being implemented to certain extent. There are several hospitals under construction, these are :

a. General Hospitals :

Mobarak hospital bed complement is	520
Adan hospital bed complement is	520
Farwania hospital bed complement is	507
Gahra hospital bed complement is	507
Total	2054

The geographical distribution of hospitals is shown in the map (appendix 1).

Bed allocation in each hospital is stated to be in the first two hospitals as: Medicine 120, surgery 120, obstetrics and gynecology 120, pediatric 120, intensive care 20, traumatology 20. Only in one hospital a department of 30 beds of the surgery beds will be allocated for ophthalmology deducted from the number of surgical beds. The other two hospitals are supposed to have the following bed distribution :

Medicine 120, surgery 120, obstetrics & gynecology 107, pediatrics 128, and 8 beds for each of the intensive care, recovery, traumatology and casualty .

The second and third hospitals are supposed to be opened on January 1980 and the other two within the same year. Mobarak hospital will as well be used as a teaching hospital for the faculty of medicine .

b. Amiri Hospital :

It is a new establishment of 550 beds replacing the old Amiri hospital which is 416 beds built in 1949. It is supposed to be finished in 1981 .

- c. An extension to Sabah hospital of 300 beds which will be completed in 1980 and is supposed to accomodate for 90 beds opbthalmology and the rest for five surgical specialties .
- d. An orthopedic hospital of 250 beds replacing the present orthopedic beds of Soleibekhat hospital .

Also the infectious diseases hospital is studied to be replaced of rennovated .

The existing hospitals in Sabah area are studied now to be reallocated as a whole complex of subspecialties and super specialties (Sabah Medical Center). Bed allocation in this center is not yet decided. So by the end of 1981 there will be about 2728 new beds added to the existing 3695 hospital beds .

1.4.2. The New National Health Planning Process :

The planning process started in Kuwait early in 1979 by forming: The Higher Committee for Planning, Executive Committee for the National Health Plan, Six Working Groups for Manpower, Management and Financing, Facilities, Statistical Information, Epidemiologic Information and Health Services Research. An office for national health plan was established acting as a secretariat for both committees and the working groups. This organization for planning was formulated mainly

to work in two stages. The first stage (5 years) is to develop local planning capacity and to formulate the policy and broad guidelines for the long range health plan to the year 2000, together with the national 5-year health plan 1981-1986. The second stage is for three years and is supposed to continue the planning process 1981 and over through follow-up and evaluation of the 5 year plan 1981-1986 .

2. Responses to the Questionnaires :

2.1. Personal data of respondents and their general attitudes towards medical care services :

Table (28) represents the age, nationality, sex, and marital status of the four categories of respondents. It can be noticed that the largest number of hospital physicians lied in the age group 25-34 years while in the primary care physicians it is between 35-44 years. This can be attributed to the higher number of junior physicians in hospitals as trainees and residents who were new graduates. The nursing staff and paramedicals on the other hand showed the higher distribution in the age group of 25-34 and 35-44 years .

The nationality of respondents varied from one category to the other. For physicians, Kuwaitis were 15% of hospital physicians and only 1% in the primary care units. On the other hand the higher percentage of nationality groups in primary care units were Egyptians constituting 75% of the total physicians. The rest were mostly Palestenians and Jordanians 13%, or other arabs 6% .

It was found that there are about 5% of Indian physicians in primary care units .

Hospital non-Kuwaiti physicians were 42% as Palestenians and Jordanians, 31% as Egyptians, 3% Indians, and 2% Europeans. Other arabs and other nationalities were 1%. About one-third of the nursing staff were Egyptians, one-third Indians and the rest were either Kuwaitis (3.33%), Palestenians and Jordanians about (10%), other arabs (about 17%) or other nationalities (1.3%) .

The Male:female ratio among physicians in primary care units was about 4:1 while in hospitals it was about 9:1. Male nursing staff were about 20%, while females 80%. Two thirds or more of all categories were married .

Table 28. Distribution of Respondents by Age, Nationality, Sex and Marital status

Respondents	Hospital	lry Care	Nursing	Para-	Total
Personal Data	physi-	physicians	Staff	medicals	
	cians		No. %	No. %	No. %
1. <u>Age groups</u>					
<u>in years</u>					
Less than 25	3	0	31 10.34	2 1	36 5.1
25-34	57	8	135 45	79 39.5	279 39.8
35-44	26	69	101 33.67	75 37.5	271 38.7
45-54	11	23	31 10.33	32 16	97 13.8
55 +	3	0	1 0.33	11 5.5	15 2.1
Not stated	0	0	1 0.33	1 0.5	2 0.2
Total	100	100	300 100	200 100	700 100

Table 28. (Cont.)

Respondent	Hospital physicians	Primary Care physicians	Nursing Staff		Para- medicals		Total	
Personal Data			No.	%	No.	%	No.	%
2. <u>Nationality</u>								
Kuwaiti	15	1	10	3.33	66	33	92	13.14
Egyptian	31	75	103	34.33	49	24.5	258	36.86
Palestinian & Jordanian	42	13	29	9.67	60	30	144	20.57
Other Arabs	6	6	52	17.34	13	6.5	77	11.00
Indian & Pakistani	3	5	102	34.0	11	5.5	121	17.28
European	2	0	0	0	0	0	2	0.29
Others	1	0	4	1.33	1	0.5	6	0.86
Total	100	100	300	100	200	100	700	100
3. <u>Sex</u>								
Male	89	78	58	19.33	172	86	397	56.71
Female	11	22	242	80.67	28	14	303	43.29
Total	100	100	300	100	200	100	700	100
4. <u>Marital Status</u>								
Single	34	29	73	24.33	47	23.5	183	26.14
Married	64	70	221	73.67	149	74.5	504	72
Divorced or widowed	2	1	6	2	4	2	13	1.86
Total	100	100	300	100	200	100	700	100

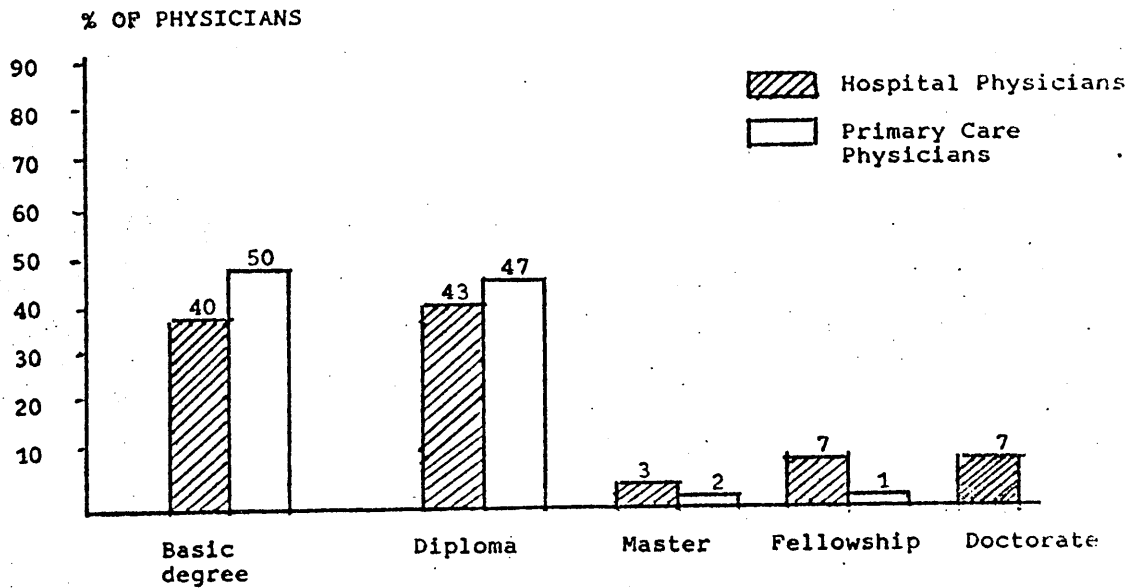


FIGURE (8): Graphical presentation of percentages , the highest qualifications of the sample physicians in hospitals and primary care units, Ministry of Public Health, Kuwait.

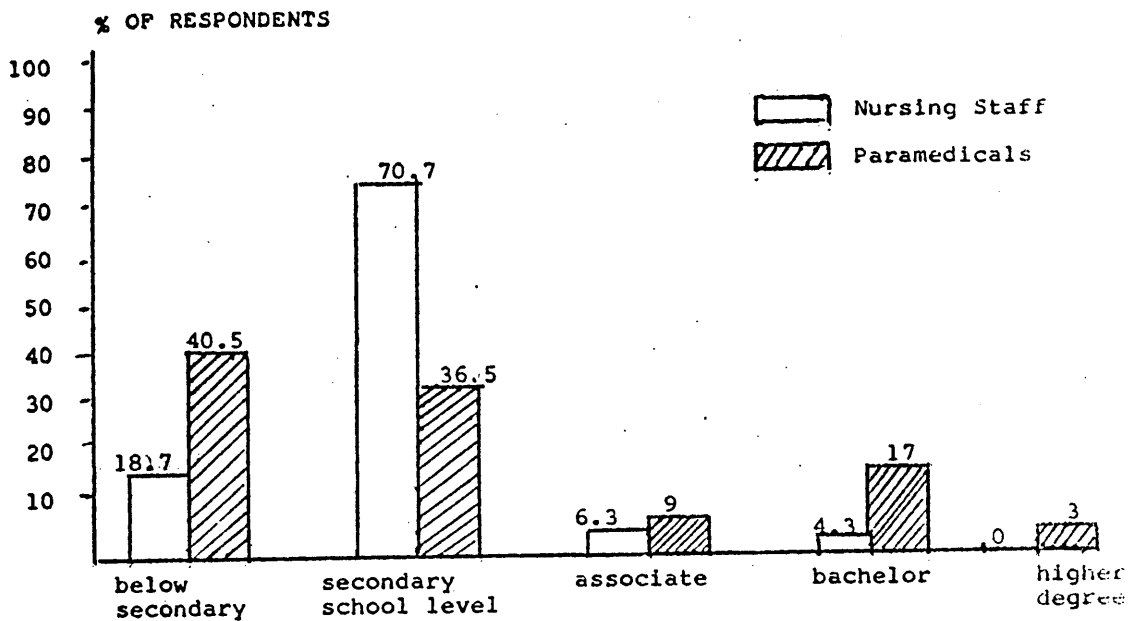


FIGURE (9): Graphical presentation of percentage of the highest qualifications of the sample nursing staff and paramedical staff, Ministry of Public Health, Kuwait.

It can be shown in figure (8) that less than one half (47%) of primary care physicians were diploma holders. These were found mostly working in the child and maternal care clinics. Two physicians had a master degree and one had a fellowship, while 50% were holding the basic degree. On the other hand 40% of hospital physicians were holding only their basic degree, 43% holding a diploma, 3% having masters degree or a two year diploma course, 7% holding a fellowship degree and 7% were holding a doctorate degree, i.e. 14% of hospital physicians were holding the highest degree in their specialty .

Figure (9) explains the qualifications of respondents of the nursing and paramedical staff. For the nursing staff, about 70%, were holding a degree equivalent to secondary school level in nursing, 6.3% with an associate degree and 4.3% holding a bachelor degree of nursing. Those who had a degree below secondary school were found to be mostly assistant nurses and constituted 18.7% .

Qualifications of the paramedical staff show that about 40% were below the secondary school level who were mostly the clerks in the medical records divisions, secretaries of units or some technicians or assistant technicians. Bachelor degree holders were mostly qualified technicians and pharmacists who are 17% .

Table 29. Distribution of Respondents by Country of Basic Education

Respondents	Hospital	Primary Care	Nursing	Para-	Total
	Physicians	Physicians	Staff	Medicals	
Country			No. %	No. %	No. %
Egypt	71	83	120 40	27 13.5	301 43
Other Arab countries	6	6	51 17	57 28.5	120 17.14
England	2	2	0 0	3 1.5	7 1
India and Pakistan	9	6	105 35	14 7	134 19.14
East Europe	5	3	0 0	0 0	8 1.14
U.S.A.	0	0	0 0	3 1.5	3 0.43
U.S.S.R.	1	0	0 0	0 0	1 1.14
Kuwait	0	0	21 7	92 46	113 16.15
Others	6	0	3 1	4 2	13 1.86
Total	100	100	300 100	200 100	700 100

Table (29) presents the country of basic education of different categories of the samples for health workers. It is shown that most of physicians, i.e. 71% in hospitals and 83% of primary care physicians were graduated from Egypt. These of course include nationalities other than Egyptians especially Palestenians, Jordanians and Kuwaitis. The rest of physicians were graduates of different schools in different countries including other arab countries, East Europe and U.S.S.R. On the other hand, the nursing staff educated in Kuwait were 7% including Kuwaiti nurses and nurses from other arab countries residing in Kuwait .

Table (30) shows the answers of respondents on some questions of continuous education and training. It was found that about two thirds of hospital physicians and primary care physicians never attended an inservice training course during their length of experience either before or after employment by the Ministry of Public Health, Kuwait. Those who attended a course since one year were 17% of hospital physicians and 20% of primary care physicians. 13% of hospital physicians, 17% of primary care physicians mentioned attending a course since 2-4 years and 5% of hospital physicians attended an inservice training course since 5-7 years, but none of the primary care

Table 30. Distribution of Respondents by some Indicators of Continuous Education

Respondents	Hospi- tal physi- cians	lry Care physicians	Nursing Staff		Para- medicals		Total	
I t e m s			No.	%	No.	%	No.	%
<u>. Training Courses:</u>								
None	64	63	246	82	176	88	549	78.43
Since one year	17	20	34	11.83	11	5.5	82	11.72
Since 2-4 years	13	17	8	2.67	9	4.5	47	6.71
Since 5-7 years	5	0	8	2.67	2	1	15	2.14
Since 8 years&more	1	0	4	1.33	2	1	7	1
Total	100	100	300	100	200	100	700	100
<u>. Registration in post graduate courses</u>								
Yes	37	15	3	1	10	5	65	9.29
No	63	85	297	99	190	95	635	90.71
Total	100	100	300	100	200	100	700	100
<u>. Regular reading of references:</u>								
Mostly	41	11	37	12.33	18	9	107	15.29
Occasionally	43	52	172	57.33	116	58	383	54.71
Rarely	4	32	68	22.67	36	18	140	20
None	10	5	23	7.67	28	14	66	9.43
Not stated	2	0	0	0	2	1	4	0.57
Total	100	100	300	100	200	100	700	100

Table 11. (Cont.)

Respondents	Hospital	Primary Care	Nursing	Para-	Total
	Physicians	Physicians	Staff	Medicals	
I t e m s			No. %	No. %	No. %
4. <u>Attendance of clinical meetings or lectures :</u>					
Mostly	65	3	16 5.33	19 8.5	103 14.71
Occasionally	22	38	6 2	16 8	82 11.72
Rarely	9	26	3 1	15 7.5	53 7.57
None	4	33	275 91.67	150 75	462 66
Total	100	100	200 100	200 100	700 100

physicians. The percentage of those who never attended inservice training courses is still higher among the nursing and paramedical staff being 82% and 88% respectively. About 11% of the nursing staff mentioned attending a training course since one year, 2.67% since 2-4 years and similar percentage since 4-7 years. The paramedical staff who attended an inservice training course since one year were 5.5% and since 2-4 years were 4.5%. Generally

speaking a percentage of 78.43% of all categories of health workers were never subjected to inservice training courses.

As regards registration in post graduate studies 37% of hospital physicians were found to be registered, but only 15% of primary care physicians were enrolled in post graduate studies. The difference can be attributed to the fact that junior physicians in hospitals are keen to hold higher degrees as a means for promotion to higher posts which is not the case with primary care physicians. The percentage was much lower in the nursing staff (1%) and in the health allied personnel (5%).

Regular reading of references and periodicals was spelled in a more or less similar pattern as stated by physicians. It is mostly done by 41% of hospital physicians, but only 11% of primary care physicians. There was a percentage of 14% of hospital physicians and 37% of primary care physicians who admitted that they do not or rarely are studying references or periodicals.

The situation was expressed by the nursing and paramedical staff, indicating the fact that about 58% read occasionally, but about one-third never or rarely exercise reading of references and periodicals. As regards regular attendance of clinical

or scientific meetings, it was found that about two thirds of hospital physicians do it mostly but only 3% of primary care physicians share regular attendance of those meetings mostly. About one third of primary care physicians, 92% of the nursing staff, about two thirds of the paramedical staff and 4% of the hospital physicians outlined that they never attend clinical or scientific meetings .

As a response to the questions about the difficulties encountered in the process of training and continuous education of health workers, the following was the opinion of respondents.

Opinions of the hospital physicians gave the whole range of possible causes. More than 70% mentioned the causes as being the deficiency in training courses and fellowships. About half of them emphasized the lack of references and about one third mentioned lack of incentives as one of the causes. 27% of these physicians attributed constraints for training and continuous education to all mentioned causes. The primary care physicians put less emphasis on availability of fellowship, training courses, or references, but a higher percentage, i.e. 61% outlined the lack of incentives for continuous education as a cause .

Table 31. Distribution of Opinion of Respondents on Constraints for Continuous Education and Training of Health Manpower, Ministry of Public Health, Kuwait .

Respondents Constraints	Hospi- tal physi- cians	lry Care physicians	Nursing Staff		Para- medicals	
			No.	%	No.	%
Deficiency in training courses	71	51	115	38.33	24	12
Deficiency in Fellowships	75	43	78	26	35	17.5
Deficiency of references	48	31	89	29.67	38	19
Lack in incentives	31	61	43	14.33	45	22.5
All causes	27	31	125	41.67	26	13
No causes	0	8	34	11.33	19	9.5
Not stated	0	4	0	0	17	18.5

The opinion of about 42% of the nursing staff spelled all causes, while only 13% of the paramedical staff mentioned the same. Lack of incentives in the opinion of the nursing staff was mentioned as a cause by 14%, other than 47% who claimed that all causes are being responsible. As for the paramedical

staff, 22.5% attributed the lack of incentives as a cause other than 13% of them claiming all causes being responsible.

Table 32. Distribution of the Nursing and Paramedical Staff by Command on Arabic and English Language

Level of Respondents Command	Nursing Staff				Paramedical Staff			
	Arabic		English		Arabic		English	
	No.	%	No.	%	No.	%	No.	%
Fluent, read write and speak	187	62.33	105	35	166	83	14	7
Good reading, writing and speech	22	7.34	42	14	9	4.5	81	40.5
Fair reading, writing and speech	24	8	84	28	10	5	32	16
Simple conversation	66	22	66	22	13	6.5	35	17.5
Not known	1	0.33	3	1	2	1	38	19
Total	300	100	300	100	200	100	200	100

Table (32) shows the degree of command of languages used for communication in medical care facilities between the medical staff themselves and between them and the consumers.

It is shown that the Arabic language is mastered by less than two thirds of the nursing staff, 15% can read and write to a variable degree, about 24% can only carry simple conversation and one nurse do not know any arabic .

The English language command is possible for all the nursing staff to the degree of simple conversation except 1% who do not know English. Among those, there were 23% who are not capable of reading or writing in English .

For the paramedical staff, the most important finding is that the vast majority has a good command of Arabic except 6.5% who only communicate by simple conversation and 1% who do not know Arabic. The communication by simple conversation in English is not possible for 19%. Reading and writing compet is lacking in 36.5% of the total paramedical staff .

Table 33. Distribution of Opinion of the Respondents on the Effect of Number and/or Qualifications of Health Workers as Factors Lowering the Efficiency of the Medical Care System, in Kuwait

Respondents	O p i n i o n o f					
Deficiency in number and/or qualifications	Hospital physicians	Primary Care Physicians	Nursing staff		Paramedicals	
			No.	%	No.	%
1. <u>Physicians:</u>						
Deficiency in number	22	38	162	54	75	37.5
Deficiency in qualifications	15	18	2	0.67	37	18.5
Both of them	35	13	88	29.33	48	24
None of them	18	31	24	8	23	11.5
Not stated	10	0	24	8	27	13.5
Total	100	100	300	100	200	100
2. <u>Nursing staff :</u>						
Deficiency in number	31	12	168	56	44	22
Deficiency in qualifications	16	9	13	4.33	54	27
Both of them	38	53	81	27	43	21.5
None of them	9	26	17	5.37	43	21.5
Not stated	6	0	21	7	16	8
Total	100	100	300	100	200	100
3. <u>Paramedical staff :</u>						
Deficiency in number	32	15	135	45	64	32
Deficiency in qualifications	15	8	13	4.33	46	24
Both of them	37	53	72	24	23	11.5
None of them	9	24	57	19	42	17
Not stated	7	0	23	7.67	25	12.5
Total	100	100	300	100	200	100

Table (33) represents the responses of the sample health personnel about their opinion whether or not there was any deficiency in number and/or qualifications of health workers and if this deficiency is lowering the efficiency of the medical care system. It was outlined by 18% of hospital physicians, 31% of primary care physicians, 8% of the nursing staff and 11.5% of paramedicals that there was no deficiency in either number or qualifications of the physicians. As regards the nursing staff, 9% of hospital physicians, 26% of primary care physicians and 5.4% of the nursing staff and 21.5% paramedical staff assumed that numbers and/or qualifications of the nursing staff are adequate. In relation to their opinion towards the paramedical staff regarding number and/or qualifications, all categories expressed a similar opinion as that for nursing staff .

On the other hand, only the deficient number and not the qualification of physicians was assumed to lower the efficiency of the system in the opinion of 22% of hospital physicians, 38% of primary care physicians, 54% of the nursing staff, and 37.5% of the paramedical staff.

About half of the nursing staff and 32% of the paramedical staff believed that there was a deficiency only in number of the nursing staff affecting the efficiency of the system and not the qualifications .

It can also be noticed that about one third of hospital physicians considered the three categories as deficient in number and qualifications. More than half of primary care physicians believed the same for the nursing and paramedical staff but only 13% of them outlined that number and qualifications of physicians is lowering the efficiency of the system. Nearly one forth of the paramedical staff and nursing staff expressed the same opinion for the three categories .

Table (34) presents the response of the different categories of respondents to whether or not some factors were existing within the medical care system affecting its efficiency. The number and percentage in each category represents those who stated "yes, the factor is existing and causing inefficiency of the services". The rest of total sample population who were 100 hospital physicians, 100 primary care physicians, 300 nursing staff and 200 paramedical staff, these considered the factor not existing nor affecting efficiency of the services .

Table 34. Distribution of Opinion of the Respondents
Approving on the Existence of some Shortcomings
Lowering the Efficiency of the Medical Care
Services of Kuwait

Respondents	Hospital physi- cians	Primary Care physi- cians	Nursing Staff	Para- medicals	Total
Shortcomings	No.&% n=100	No.&% n=100	No. % n=300	No. % n=200	No. % n=700
1.Organizational structure of the Ministry of Public Health	49	82	106 35.3	41 20.5	278 39.6
2. Internal organization of the primary care units	37	80	117 39	45 22.5	279 39.6
3.Internal organization of hospitals	58	52	116 38.7	50 25	276 39.4
4.Referral system	63	79	145 48.3	51 25.5	338 48.3
5.Inadequate hospital beds	68	49	205 68.3	58 29	380 54.3
6.Inadequate medical equipments	18	12	63 21	23 11.5	116 16.6
7.Inadequate X-ray and labs facilities	49	10	80 26.7	53 26.5	192 27.4
8.Inadequate ambulance system	49	77	131 43.7	56 28	313 44.7
9.Inadequate medical record system	59	76	141 47	57 28.5	333 47.6
10. Abuse of the free service	63	73	185 61.7	45 22.5	366 52.2

The organizational structure of the Ministry was stated as being a factor by 42% of physicians in hospitals and 82% of primary care physicians. Lower percentage of the nursing staff (35%) and the paramedical staff (21%) expressed the same factor .

The internal organization within the primary care units, while it was considered as a shortcoming by 37% of hospital physicians, it was felt to be a shortcoming in view of 80% of primary care physicians. About half of all physicians and the nursing staff stated the internal organization of hospitals as being a factor lowering the efficiency of services. The referral system was considered a cause of deficiency by more than two thirds of all physicians and around one half of the nursing and paramedical staff .

About two thirds of the hospitals physicians and nursing staff believed that the number of hospital beds were inadequate, these were about 68% while a lower percentage of primary care physicians, i.e. 49% and paramedical staff, i.e. 54% agreed about the same opinion .

Medical equipments were considered inadequate by 21% of the nursing staff and 11.5% of the paramedical staff. 18% of the

hospital physicians and 12% of primary care physicians outlined the same opinion .

While about one half of the hospital physicians considered the diagnostic facilities inadequate, only 10% of primary care physicians expressed the same opinion and a similar agreement was spelt by about 27% of both the nursing and paramedical staff .

44-49% of hospital physicians, nursing and paramedical personnel considered the ambulance services inadequate and causing a short coming in the provision of medical care services. A higher percentage of primary care physicians (77%) assumed the inadequacy of the ambulance services .

A similar pattern of response was obtained as regards the medical record system. About one half of paramedicals and nursing staff assumed abuse of the medical care services as services free of charge and they considered this factor as a cause lowering the efficiency of the medical care system. This is in agreement with 63% of hospital physicians and 73% of primary care physicians. Considering the level of the efficiency of the medical care services provided by the Ministry of Public Health of Kuwait. Table (35) represents opinions of respondents as follows :

Table 35. Distribution of the Respondents' Opinion on the Level of Efficiency of the Medical Care Services Provided by the Ministry of Public Health, Kuwait .

Respondents	Hospital physicians	Primary Care Physicians	Nursing Staff		Para- medicals		Total	
Level of efficiency	No.&%	No.&%	No.	%	No.	%	No.	%
1. Very good	10	3	39	13	64	32	116	16.6
2. Good	49	61	163	55.67	72	36	349	49.9
3. Average	25	23	75	25	42	21	165	23.6
4. Below average	15	13	18	6	11	5.5	57	8.1
5. Bad	1	0	0	0	1	0.5	2	0.3
6. Very bad	0	0	0	0	8	4	8	1.1
7. Not stated	0	0	1	0.33	2	1	3	0.4

About half of the health workers ranked the efficiency of services as being good by about the same of the four categories of workers .

While 10% of hospital physicians consider it very good only 3% of primary care physicians feel the same. A higher percentage of paramedicals considered services as very good who were about one third

An average of 8% of all categories, ranked services as being below average with a variable proportions between ohysicians and other workers. The former proportion was 14% while the proportion of the paramedicals or the nursing staff who considered services as below average were 5-6% .

Suggestions presented in table (36) by the respondents were answers to the last question in the questionnaire of each category of workers. It was an open ended question asking the respondent "to state if he likes to mention suggestions to improve the quality of services provided" .

Most of the suggestions were found to fall under one or more of the listed suggestions in the table. As a whole about two thirds of the nursing and the paramedical staff did not respond, while one half of the hospital physicians and 68% of the primary care physicians responded to this question. About 6% of physicians, 9% of nursing staff and 1.5% of the paramedical staff, suggested introduction of new specialities. 8.3% of the total respondents suggested improvements in the organizational structure of the Ministry of Public Health and/or the medical care facilities, the higher percentage of respondents suggesting this improvement were the paramedical staff with a proportion of 17.5%. About 11% of the hospital physicians

Table 36. Distribution of Respondents by Suggestions for Improvement of the Efficiency of Medical Care Services, Kuwait .

Respondents	Hospital Care		Nursing Staff		Paramedicals		Total	
Suggestions	physicians No.&%	physicians No.&%	No.	%	No.	%	No.	%
1. Opening new sub-specialities	7	6	9	3	3	1.5	25	3.6
2. Improving and developing the organizational structure	6	8	9	3	35	17.5	58	8.3
3. Availing more training courses and fellowship	11	4	3	1	4	2	22	3.1
4. Equity of opportunities for workers	7	16	25	8.3	4	2	52	7.4
5. Giving more incentives to workers	2	11	5	1.7	16	8	34	4.9
6. Assuring more dignity and better working conditions for workers	3	11	6	2	3	1.5	23	3.3
7. Two of the above suggestions	7	6	22	7.3	4	2	39	5.6
8. More than two	7	6	20	6.7	5	2.5	38	5.4
9. No suggestions	50	32	201	67	126	63	409	58.4
Total	100	100	300	100	200	100	700	100

recommended awardness of fellowships and/or training courses. Only 4% of the primary care physicians, 1% of the nursing staff stated the same suggestion .

Equity among workers for privilage and promotion was asked by 16% of primary care physicians, 8.3% of the nursing staff, 7% of the hospital physicians and only 2% of the paramedical staff. Again the primary care physicians represented the highest percentage suggesting giving more incentive to the workers and assuring dignity and improving the working condition. These were suggested by 11% of primary care physicians, 5.6% of the nursing staff and about 3% of the hospital physicians. The paramedical staff regarding these two recommendations differed. While 8% of them asked for incentives, 1.5% only aksed for assuring dignity and improving the working condition .

2.2. Responses of Physicians in Primary Care Units :
on Services in these Units :

2.2.1. Attitude of Physician towards working in primary
care :

Responses to a question by the primary care physicians regarding their preference to work in primary care units are represented, alternatives were: always, for a limited period, or prefer to be transferred. The following were their responses: 49% stated their preference to work only for limited period. 29% preferred to work constantly 22% preferred to be transferred .

Causes for which a physician preferred to be transferred from the primary care centers to hospitals was stated as follows for those who did not mention their preference to work continuously in primary care units

- 35% for scientific development
- 28% for getting more respect and dignity in patients relationships
- 8% for lesser load of work .

As a response to their opinion on the requisites of training and/or qualification for a physician to work in the primary care units, they outlined the following :

59% considered training courses only

25% no requisites at all

6% considered experience in hospital activities

5% assured that the physician should be experienced
in primary care units

5% preferred qualification or diploma of general
practice .

2.2.2. Administrative Issues :

The person responsible for distribution of daily
duties for physicians in the primary care units was said to
be:

- a senior physician in the unit 79%
- a senior physician outside the unit 18%
- no regular procedure 3% .

Regarding the response whether there were standing orders
of duties and physicians responsibilities,
38% of physicians assumed existence of such standing orders.
41% outlined that duties are only known through practicing
12% stated duties are known through asking colleagues
2% through asking assistants
7% did not respond to the question .

As to whether or not, the physicians were aware of duties of the other health workers in the primary care units, the response was :

- 36% know through the standing orders
- 39% know through the different circulars
- 13% know through practice
- 9% not known definitely
- 3% no response .

2.2.3. Professional Competence :

Table 37. Distribution of Opinion of Primary Care Physicians on Professional Competence of the Medical team in the Primary Care Unit .

Competence Category	Competent	Need More Trai- ning	Need Higher Quali- fication	Need trai- ning & qualifi- cation	Total
1. Nursing Staff	16	50	6	28	100
2. Technicians	18	4	44	31	100
3. Administrative Staff	9	10	30	51	100

The physician's opinion is shown in the table (32). Only 16% of physicians considered the nursing staff as being competent, 18% stated the same towards technicians, and only 9% of physicians considered the administrative personnel as competent. The rest of the physicians outlined all categories as being in need for higher qualifications or more training. It was agreed by 44-51% of physicians that :

Nursing staff need more training, technicians need having higher qualifications, and the administrative staff needing higher qualifications and more training .

2.2.4. Medical Audit :

Regarding to a question about whether there was an organized supervision on the physicians performance, 59% of physicians stated the presence of such supervision while 41% outlined their absence of any medical audit in primary care units .

To a question whether the physician approve that his performance be audited through review of medical records, 16% of physicians refused this in principle and the rest agreed on auditing .

2.2.5. Physician-Consumer Relationship :

Physicians were asked to state if the relation is based on respect from the consumers side, and to estimate the percentage of patients who may deal with them in non-respect attitude. Here are the findings :

- 5% of physicians stated that these consumers are more than 30% of attendants
- 12% of physicians stated that these consumers are about 20-29% of attendants
- 3% of physicians stated that these consumers are about 10-19% of attendants
- 6% of physicians stated that these consumers are about 5-9% of attendants
- 42% of physicians stated that these consumers are less than 5% of attendants
- 32% of physicians stated that these consumers their relation is always based on respect .

It can be noticed that the highest proportion of physicians (42%) estimated the attendants relationship associated with non respect to physicians in less than 5% of all attendants. 15% of physicians estimated this proportion of patients to be from 10-30% and 32% of physicians denied the presence of such relationship with attendants .

2.2.6. Load of Work and Utilization of Services :

Table 38-a. Distribution of Average Number of Cases
Examined Daily by Physicians in the Primary
Care Units in the Physician's Opinion .

Average number of cases seen daily	Number & percent of physicians
Less than 50	0
50 -	8
60 -	9
70 -	13
80 -	22
90 -	20
100 -	15
110 +	13
T o t a l	100

Table 38-b. Distribution of Average Time Required to Examine a Case in the Physicians' Opinion

Number of minutes required per case	Number and percent of physicians
2 - 4	6
5 - 7	18
8 - 10	39
11 - 13	18
14 - 16	9
17 - 19	6
20 - 22	3
23 - 25	1
Total	100

From table (38-a), it can be noticed that the highest distribution of physicians was among those who stated that the average number of cases seen daily were 70-79 and 80-89 patients as stated 22% and 20% of the total physicians respectively. 13% of physicians mentioned that they were examining 70-79 cases and another 13% stated that they were examining 110 patients or more, 17% of physicians mentioned examining

50-70 cases per day and no one considered the average number of cases seen daily to be less than 50 cases .

The mean number of minutes stated by physicians as being required proper examination and management of a case was about 10 minutes, with a range between 2 to 25 minutes (Table 38-b) .

Table 39. Distribution of Percentage of Attendants Unnecessarily Visiting the Primary Care Units in the Opinion of Physicians

Percentage of Attendants	Percentage of Physicians
None	22
1 - 4	3
5 - 9	7
10 - 19	29
20 - 29	12
30 - 39	17

Mode : 10 - 19

Mean : 13.92%

The mean percentage of attendants considered by physicians as visiting the primary care unit unnecessarily was found to be about 14% of all attendants.

Analysing the possible causes for those who unnecessarily attending the unit, the primary care physicians outline the following :

Table 40. Distribution of Percentage of Physicians Opinions on Possible Factors, Causing some Attendants to Unnecessarily Visit the Primary Care Unit

Factors	Percent of Physicians
1. Abuse due to free provision of services	52
2. Well but worried consumers	49
3. Waiting time due to social factors	47
4. Lack of confidence in services provided	22
5. Lack of confidence in physicians competence	19

It can be noticed that the first listed three factors in table (40) were considered by about half of the physicians as a cause. 22% of physicians attributed the lack of confidence in the services provided as being a cause, while 19% of physicians assumed lack of confidence in physicians competence as one of the possible causes .

2.2.7. Provision of Medical Care Services in the
Primary Care Unit :

Table 41. Distribution of Primary Care Physicians' Opinion Towards the Possible Preventive Services to be Performed by the G.P.

Activity	No. & % of physicians
1. Maternal and child care	26
2. Health education	3
3. Periodic examination	1
4. Routine vaccination	2
5. MCH and Health Education	9
6. MCH, Health Education and periodic examination	25
7. All of the above services	8
8. None of the above services	26
Total	100

Regarding the services listed in table (36) whether it can be carried by the general practitioner, about one forth of physicians think that only maternal and child care can be provided by the general practitioner. Another fourth considered that only the general practitioner should provide MCH ,

Health Education and periodic examination, and another one fourth consider that none of these services should be provided by the general practitioner .

A response to a question is stated by physicians. As regards routine vaccination against immunizable diseases, it was found that 2% of physicians considered it a responsibility of the primary care physician, whereas 98% of physicians believed that it is a responsibility of the physician working in the preventive section .

To a question whether check up on a periodic base is available to consumers, 11% of physicians mentioned that it is available, these were found mostly to be pediatric physicians, while 89% outlined that it was not available .

The education of the consumers on health by the different categories of workers in the primary care units is outlined by physicians to be as follows :

Table 42. Provision of Health Education in the Primary Care Units by Categories of Health Workers as Stated by Primary Care Physicians

Frequency Category of workers	Mostly	Occasio- nally	Rarely	Never	Total
1. Physicians	24	40	13	23	100
2. Nursing staff	8	48	26	20	100
3. Health Educators	0	3	4	93	100
4. Social workers	0	0	2	98	100
5. Others	0	0	1	99	100

It can be noticed that 40-48% of physicians consider provision of health education is done by physicians and nurses, only occasionally. It is mostly done by physicians in the opinion of 24% of respondents and by the nursing staff in the opinion of 8%. 93-99% of physicians state that it is never provided by health educators, social workers or other health workers. On the other hand 22 to 23% of physicians admitted that health education is not provided at all by physicians or nurses .

Table 43. Distribution of Physicians Performing home Visits in the Last Three Months by Number of Visits

Number of Visits in the last three months	Number of percentage of physicians
None	71
1 - 2	20
3 - 4	7
5 - 6	2
7 +	0
Total	100

Mean : 0.65

Mode : 0

The mean number of visits per physicians per month is calculated to be 0.2 of a visit i.e. one visit every five months .

2.2.10. Emergency Care :

As a response to a question on the first facility attended by a patient in emergency cases, 66% of physicians outlined that the patient visit first the primary

care units whereas 34% of physicians explained that the patient go directly to the hospital. The method of communication to ask for an ambulance was pointed out by 41% of physicians to be through telephone call to the primary care unit, and 59% mentioned that a relative or a friend come directly to the unit to ask for an ambulance.

In response to the estimated time consumed to transfer the patient from his home or the scene of injury to the primary care unit and to the hospitals. The following was the physicians assumptions :

Table 44. Distribution of Number of Minutes Estimated by Primary Care Physicians for a Patient to be Transferred to the Unit and to the Hospital by the Ambulance Car

Minutes	(1) Physicians' percentage opinion to units	(2) Physicians' percentage opinion to hospital
Less than 5	0	0
5 - 9	4	0
10 - 14	8	2
15 - 19	21	7
20 - 24	22	10
25 - 29	28	13
30 - 34	11	18
35 - 39	6	17
40 - 49	0	20
50 - 59	0	9
60 - 69	0	4
Total	100	100

(1) Mean = 22.95 M, Mode = 25-29 M

(2) Mean = 35.58M, Mode = 40 - 49 M

It can be noticed from table (44) that the mean time estimated to be taken by the ambulance to transfer the patient to the primary care unit was about 23 minutes, the range was 5 to 40 minutes, and from the unit to the hospital as 35 minutes, the range was 10 - 70 minutes .

Another question was answered by physicians on whether any type of care can be provided to the patient during the ambulance journey, no one stated that care can be provided through the ambulance officer, 62% stated that it can be provided by a nurse who can accompany the patient during transference, and 38% of physicians mentioned this type of care to be unavailable .

2.2.8. Referral Pattern :

Table 45. Distribution of Percentage of Causes for Referring Patients to Hospitals as Estimated by Primary Care Physicians .

	Percentage of cases
Patients need more investigation	18
Patients needing specialty care	61
Patients needing emergency care	4
Patients needing medication not available in units	2
Patients transferred to avoid responsibility	6
Patients insisting to be transferred	6
Other causes	3
Total	100

Table (45) shows that, other than 61% of cases referred for specialty care and 4% for emergency care, there were 2% of physicians who referred cases because the drugs needed for patient management were not available in the primary care units, 6% of cases were referred by physicians to avoid responsibility, although they need not to be transferred, 6% were referred according to patients request and insistance and 3% referred for other causes .

Table 46. Distribution of Physicians Opinion on the Relation with the Hospital for Refrred Patients

Frequency Type of relation	Mostly	Occa- sio- nally	Rarely	Not occu- ring	Total
1. Reporting to the hospital fully on patient's condition	69	20	6	5	100
2. Feedback from the hospital after patient admission or discharge	0	6	21	73	100
3. Patient referred to the primary care unit after discharging for follow up	7	16	26	51	100
4. The hospital physician may call the referring physician for more in- mation on the patient's condition .	0	3	27	70	100

The inter-communication between primary care units and hospitals for patient's referral is presented in table (46). From the primary care physicians' point of view 69% of them considered that patients were referred with full report in most cases, 20% of them mentioned that referring with full report was only occasionally done, 6% considered it rarely and 5% considered referral with a full report as not occurring.

The feedback from the hospital to the primary care unit on admission or discharge of the patient was denied by 73% of the primary care physicians. Only 21% of them stated that it was rarely occurring and 6% considered feed back occasionally occurring. No one stated that feedback was mostly taking place. A more or less similar perspective was expressed on the possibility that the hospital physician calls the referring physician asking for more information on the patient's condition .

After discharging, the patient from the hospital 51% of the physicians in the primary care units outlined that the patient was never referred back to the unit for follow-up. About one forth said that this was happening rarely, 16% considered referral after discharge was happening occasionally,

and only 7% of the primary care physicians stated that this type of referral was mostly occurring.

2.2.9. Availability of Consultations to the Primary
Care Physicians :

Whenever consultation on patient care is needed by primary care physicians, they stated the following :

17% consult a colleague of the same unit

8% consult a colleague of another specialty in the same unit.

2% consult a hospital physician

73% stated that consultation was not available and the patient was referred to the hospital .

The suggestions of primary care physician to assure proper consultation among physicians was stated as follows:

18% of physicians are suggesting holding a weekly clinical meeting

1% of physicians suggest availing telephone call consultations with the hospital physicians .

30% suggest locating specialty clinics in the combined units .

51% suggest more than one of the above procedures .

2.2.10 Continuity of Care in the Primary Care Units:

Table 47. Distribution of Opinions of Primary Care Physicians on some Indicators Explaining Continuity of Patient Care in the Primary Care Units.

Frequency Indicator	Mostly	Occasion- ally	Rarely	Not occurring	Total
1. The consumer visits more than one primary care unit for delivery of care.	17	79	4	0	100
2. The consumer visits the unit at different times to be examined by more than one physician.	69	22	1	1	100
3. The consumer visits the unit for follow-up and re-examination.	23	28	35	14	100
4. The consumer is registered and seen regularly by one physician.	15	4	6	75	100
5. The attending physician in the primary care unit visit his patient if referred and admitted in the hospital for follow up.	0	3	10	87	100

Table 47 is presenting the response of physicians in primary care units on some indicators investigating the continuity of patient care. It was found that 17% of consumers visit more than one primary care unit mostly, 79% do this occasionally, 4% rarely and no physician stated that this pattern is not occurring. Within the same primary care unit itself, 69% of physicians outlined that the patient visit the unit mostly at different times to be seen by different physicians, 22% mentioned that this occasionally happens, and a small proportion of 1% clarified that it rarely or never occur.

Whether the consumer visit the unit for re-examination and follow-up, 23% of the physicians considered it happening mostly, 28% occasionally, 35% rarely and 14% considered re-examination not followed by the consumer. On the other hand 15% of physicians explained that a consumer is constantly examined by one physician mostly, 4% occasionally, 6% rarely and 75% stated that this was not occurring.

On referring patients to be admitted in hospitals, no physician was mostly visiting them for follow-up. A proportion of 3% of physicians outlined that this is followed only occasionally, 10% rarely and 87% consider this follow-up visit as not occurring.

2.2.11. Medical Records in Primary Care Units:

Table 48. Distribution of Physicians Opinion on Types of Data Recorded in the Medical Record of Primary Care Units.

Frequency Tye of data	Mostly	Occasionally	Rarely	Not Recorded	Total
1. Complete personal data.	57	26	9	8	100
2. Care by primary care units.	49	19	5	27	100
3. Lab. and x-ray results.	9	16	6	69	100
4. Care provided by specialty clinics.	6	20	15	59	100
5. Care provided by hospital in-patient care.	3	8	13	76	100

As shown in table 48, while 57% of physicians consider personal data mostly recorded, 26% of them assume that it is only occasionally recorded, 9% rarely and 8% not recorded. The care provided by the primary unit was considered mostly recorded by about half of the physicians. 19% assumed that recording at primary care visit occur occasionally, 5% rarely and 27% not occurring.

The results of diagnostic x-ray and laboratory tests, specialty clinic care, hospital in-patient care, were stated to be not recorded in the patients record, by a proportion of 69%, 59% and 76% of physicians respectively. Most of the rest of physicians assumed recording of these data, being done occasionally or rarely. Only 9% of physicians considered specialty care as being recorded mostly, 6% assumed that care by specialty clinics was mostly recorded, and 3% only mentioned the same for hospital in-patient care.

A response to a question on the opinion of physicians towards the most important function of medical records was outlined by physicians as follows:

30% for follow-up of care.

35% for statistical information.

19% for health research.

11% for medical audit.

5% for planning of health services.

- On a question on whether the health registration in a specific unit of a consumer was strictly binding to the patient except in emergency cases, 39% considered it being strictly followed, 61% state that it is not binding and the patient visit more than one unit.

-Assessment of completion of medical records from the physicians point of view was:

23% mostly complete.

60% occasionally complete.

5% rarely complete.

12% not complete.

- The attitude of completing the medical record data by the physicians themselves was tested by a question on whether the physicians prefer records to be filled by an assistant e.g. a nurse or a health allied person:

49% of physicians accepted an assistant to record all data.

24% accepted an assistant to record most of the data.

14% accepted the assistant to record some data.

13% did not accept an assistant to record any data.

2.2.12 Adequacy of Resources and Facilities in Primary Care Units:

Table 49. Distribution of Physicians' Opinion on Adequacy and Availability of Some Resources and Facilities in Primary Care Units.

Frequency	Excess	Adequate	Not Adequate	Not Available	Not Stated	Total
Resource or Facility						
Number of physicians.	0	64	34	0	2	100
Number of dentists	4	74	79	3	0	100
Number of nurses	0	69	28	2	0	100
Number of clerks	48	44	7	0	0	100
Number of labourers and guards	68	30	2	0	0	100
Daily load of work	79	20	1	0	0	100
Ambulance cars.	0	65	34	0	0	100

Table 49.(Cont'd).

Frequency	Excess	Adequate	Not Adequate	Not Available	Not Stated	Total
Resource of facility						
Laboratory facilities	1	54	35	10	0	100
Medical equipments	8	50	37	5	0	100
Drugs	0	61	38	1	0	100
Treatment and examination rooms.	5	80	12	3	0	100
Beds for patient's observation.	0	2	12	83	3	100
Waiting area.	11	79	9	1	0	100
Administrative area	25	66	6	1	2	100

The adequacy and availability of resources are presented in table 49 as in the physicians opinions. Regarding the number of physicians and nurses, about two thirds of respondents considered it adequate, and about one third as not adequate. The same view was obtained for the number of dentists except 4% who considered that there is an excess in, and 3% as not available.

The opinion was different regarding clerks, workers and wards. About one half to two thirds of physicians considered these categories existing in excess. The daily work load on physicians was ranked as excess by 79% and adequate by 20%.

Ambulance cars were considered adequate by about two thirds, inadequate by 24% and not available by 8%. Laboratory facilities was found to be adequate in the opinion of more than half of physicians, not adequate by 35% . A more or less similar opinion was expressed on medical equipments, but 8% assumed that it was available in excess. Drugs were considered to be adequate by 61%, and not adequate by 38%.

Treatment and examination rooms were considered not adequate by 12% waiting areas not adequate by 9% and in excess by 11%. The administrative area was ranked as available in excess by 25%, adequate by 66% and not adequate by 6%.

The availability of beds for patient's observation or day care was denied by 83% of physicians and considered not adequate by 12% of physicians.

2.3. Responses of Hospital Physicians on the Medical Care Services of Hospitals.

Table 50. Distribution of Physician's Opinion of the Professional Competence of the Medical Team in Medical Care Facilities of Kuwait.

Frequency Category	Competent	Need More training	Need higher qualification	Need both	Total
1-Primary care physicians.	21	32	35	12	100
2-Nursing staff	42	31	17	10	100
3-Technicians.	41	30	21	8	100
4-Dieticians.	35	27	37	1	100
5-Record and statistical officers.	11	20	22	47	100
6-Social workers.	26	28	21	25	100
7-Supportive service workers.	41	30	20	9	100
8-Maintenance staff.	12	47	20	21	100

From table 50 it can be noticed that the physicians opinion on the competence of primary care physicians was variable. While 21% of hospital physicians considered primary care physicians as being professionally competent, 32% assumed that they need more

training, 35% considered that they need higher qualifications and 12% considered them needing both training and higher qualifications. The judgement on professional competence of the nursing staff, technicians and supportive service workers was expressed as competent by more than 40% of hospital physicians 28-30% recommended more training, 17-21% recommended higher qualifications and 8-10% recommended both to improve their competence.

Statistical and medical record officers as well as the maintenance staff were the least rated by physicians as competent (11-12%). About half of the physicians considered statistical and medical record officers needing higher qualifications and better training, 22% recommended higher qualifications, and 20% suggested more training for these officers.

47% of the physicians assumed that the maintenance staff were in need of more training, 20% mentioned them needing higher qualifications and 21% mentioned the need for both. The dieticians were considered competent by one third of physicians, or needing more training by 27% of the physicians.

Opinions on the social workers' competence was variable, rating them about equally in either of the four categories of opinions.

Table 51. Distribution of the Physicians Opinion On the Functions and Activities Performed by the Hospital Board.

Frequency	Done	Not done	Not stated	Total
Function and activity				
1- Policy making and management of services.	12	84	4	100
2- Implementing regulations put by higher authorities.	66	31	3	100
3- Training and educational activities.	11	85	4	100
4- Sharing in planning and evaluation of services.	28	67	5	100
5- Sharing in improving quality of services.	18	77	5	100

The stated functions of the hospital board shown in table 51 was agreed as not being done by 67-84% of physicians in terms of policy making and management, training and educational activities, sharing in planning and evaluation of services or sharing in improving the quality of services. About two thirds of physicians believed that the board is only implementing regulations put by higher authorities and 31% of the physicians denied this activity.

Table 52. Distribution of the Physicians Opinion about the Existence of Some Medical Committees in the Hospital.

Committees	Existing	Not Existing	Not stated	Total
1- Tissue committee.	0	92	8	100
2- Infection control committee.	29	63	8	100
3- Hospital records committee.	6	72	22	100
4- Medical audit committee.	0	72	28	100
5- Drug committee	10	85	5	100
6-Autopsy committee	0	83	17	100

From table 52 it can be noticed that the tissue committee, medical audit committee or autopsy committee were not existing in any hospital. The medical record and the drug committee were considered only present in the opinion of 6% and 10% of physicians respectively. Infection control committee was mentioned to be existing by 29% of physicians. There was a high none response rate on this question ranging between 5-28 % for the various committees.

On a question about the presence of a clearly specified job description of duties and responsibilities of hospital physicians the following was outlined:

23% of physicians applied as present.

54% of physicians denied its presence.

23% of physicians gave no response.

Medical research activities were investigated and the following are the findings:

8% physicians participated in published research.

18% physicians participated in unpublished research.

66% physicians did not participate in research.

8% physicians gave no answer.

The acceptance of physicians for medical audit through patient charts review was expressed by the physicians as follows

84% agreed on audit.

10% refused auditing in principle.

6% gave no answer.

Table 53. Distribution of Physician's Opinion on the Frequency of Supervision on their Daily Work by Consultants in Hospitals.

Frequency Department	Not relevant		Mostly		Occasion- ally		Rarely		None		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Outpatient Department	17	35	47.9	10	13.7	9	12.4	19	26		73	100
Reception Room.	17	16	21.9	17	23.3	6	8.2	34	46.6		73	100
Patient Ward.	17	52	71.2	13	17.8	3	4.1	5	6.9		73	100

Consultants were excluded from responses presented in table 54 and were considered as non-relevant respondents.

For physicians other than consultants, about one half stated that their performance was mostly supervised in the out patient departments, 26% denied any supervision and the rest which were 26.1% outlined occasional or rare supervision.

In the reception room only 21.9% considered supervision is mostly occurring, about one half (46.6%) outlined the absence of any supervision and the rest which were 31.5% mentioned occasional or rare supervision. In patient wards the percentage of supervision rated as mostly was higher (71.2%), while 6.9% denied supervision in this area.

Out-patient Services:

Explaining the application of the appointment system in out-patient departments, physicians mentioned the following:

40% stated that it was mostly followed.

28% stated that it was occasionally followed.

14% stated that it was rarely followed.

18% said that it was not followed.

- Whether cases visiting the out-patient department were referred by the primary care units; the following was the physicians response:

46% outlined that all cases were referred.

29% outlined that most of cases were referred.

25% outlined that most of cases were visiting the hospital directly.

- Asking the hospital physicians to whether or not, cases referred by the primary care units are necessarily needing specialty care, they stated the following:

1% mentioned that cases need specialty care.

32% mentioned that most cases need specialty care.

67% mentioned that only some cases need specialty care.

- The application of a waiting list for elective surgery was investigated as stated by physicians to be:

21% mentioned that a waiting list was not existing.

28% did not answer the question.

27% mentioned that the waiting list was strictly followed.

14% mentioned that the waiting list was occasionally followed.

10% mentioned that the waiting list was existing but rarely or not followed.

Reception Room Services:

Table 54. Distribution of Physician's Opinion on Estimated Percentage of Attendants to the Reception Room by Referral and Necessity for Referral.

Percentage of cases	(1)	(2)
	Percentage of opinion not unnecessarily visiting casualty room,	Percentage of opinion on cases visiting without referral
0	8	1
1 - 2	5	5
3 - 4	9	7
5 - 9	11	11
10 - 14	10	10
15 - 19	18	6
20 - 24	20	11
25 - 29	11	11
30 - 34	8	21
35 - 39	0	7
40 - 44	0	10
Total	100	100

(1) Mean = 15.21%, Mode = 20-24,

(2) Mean = 21.89%, Mode = 30-34,

The mean percentage estimated by physicians was found to be 21% of cases unnecessarily visiting casualty rooms, while about 21% of all attendants were considered visiting the reception room directly without referral from the primary care units.

Relationship of Hospitals with Primary Care Units:

- The hospital physicians outlined that cases received from primary care units with a full report on the patient's condition was occurring by the following frequency:

26% of physicians outlined mostly full reporting.

39% of physicians outlined occasionally full reporting.

26% of physicians outlined that they were rarely receiving full reports.

9% of physicians assumed that they never receive cases with full reports.

- Explaining the feedback on patient care from hospitals to primary care units, the hospital physicians mention the following:

7% of them were writing a full report to the primary care unit.

23% of them were writing a brief report.

25% only sometimes were writing a brief report.

45% sent no reports to the primary care units.

Table (55). Distribution of Physician's Opinion on Some Relationships with Primary Care Physicians.

Relation	Yes	No	Not stated	Total
1- Receive consultation when required.	32	(64)	4	100
2- Receive medical reports on hospital care.	17	(80)	3	100
3- Training periodically in hospitals	2	(98)	0	100
4- Follow up of cases he refers to hospitals	1	(91)	8	100
5- Visited periodically in units by hospital specialists.	0	(96)	4	100
6- Joint meetings with hospital physicians.	0	(90)	10	100

From table 55 it is obvious that physicians in primary care units were receiving consultation when required in the opinion of about one third of physicians, and this relation was denied by the rest of hospital physicians. Only 17% of hospital physicians explained that physicians in primary care units received medical reports on hospital care. Regarding the other four listed relationships, it was agreed upon by the vast majority of physicians as being not occurring.

Hospital Medical Records:

- A general question was asked to hospital physicians on their opinion on completion of the patient's record. The response was:
 - 65% of physicians considered records as properly complete.
 - 32% of physicians considered records as not properly complete.
 - 3% gave no answer.
- The out-patient records were mentioned to be used by 75% of physicians.
- The pattern of using unified records and forms in the hospital was assured by 44% of physicians, denied by 52% and 4% did not answer this question.
- Opinions of the physician on the legibility of the data recorded in the patient records by his peers were stated as follows:
 - 51% found it legible mostly.
 - 30% found it legible occasionally.
 - 14% found it only rarely legible.
 - 6% found it always illegible.

Table 56. Distribution of physicians' Opinion on the Utilization of the Medical Records in Hospitals.

Use	Not			Total
	Yes	No	Stated	
1- Follow up of patient care.	72	24	4	100
2- Medical research.	24	72	4	100
3- Hospital statistics.	31	65	4	100
4- Planning and evaluation of management.	22	76	2	100

Physicians' opinion about the utilization of medical records in the hospital was outlined by 72% who considered the utilization for follow-up of patient care, 20-24% of physicians only considered that records are used for research and/or planning and only 31% of the physicians stated utilization of records for health statistics.

Hospital Facilities:

Table 57. Distribution of Physicians' Opinion on the Availability and Adequacy of Some Hospital Facilities.

Facility	Adequate	Available in the hospital In-Adequate	Easily avail- able in other hosp.	Available with diff- iculty in other re- lated hsop.	Not avail- able	Not stated	Total
1-Organized O.P.	24	68	3	0	5	0	100
2-Emergency room.	23	50	19	2	6	4	100
3-Intensive care unit.	7	7	12	7	65	2	100
4-Histopathology	21	23	20	12	23	1	100
5- Blood bank.	27	20	32	18	3	0	100
6- Renal dial- ysis.	6	10	26	34	24	0	100
7-Special radio- diagnostic tests.	40	11	10	36	3	0	100
8- Diagnostic radio- isotope.	25	0	26	24	25	0	100

Table 57 (Cont'd).

9- Physiotherapy	19	22	30	27	2	0	100
10-Dental services	12	19	36	33	0	0	100
11-Social services	6	2	12	15	60	5	100
12-Home care services	0	0	0	0	92	8	100

Findings as presented in table 57 are showing that any facility or service listed in the table was considered available and adequate by only 27% or less of physicians. An exception to this are the special radiodiagnostic tests which were considered adequate by 40%, available and inadequate by 11%, easily available in another hospital by 10% of physicians, and available with difficulty in other hospitals by 36% of physicians. The out-patient department although was described available within the hospital for 92% of physicians, yet 68% of them considered it inadequate.

The intensive care units were totally mentioned unavailable in the opinion of 65% of physicians. It was considered available in hospital either adequate or inadequate for 14% of physicians. 19% assumed that the intensive care unit was available only in another related hospital either easily with difficulty.

Renal dialysis is availed to only 16% of physicians within the hospital and considered by 50% as available with or without difficulty in another hospital.

Dental services were only availed with the hospital for 31% of physicians. Social services were only available for 8% of physicians and considered not available by 60% of physicians. There was a general agreement that home care is not provided by hospitals.

2.4. Responses of Nursing and Paramedical Staff on Medical and Nursing Services:

Administrative Issues:

Table 58. Distribution of Opinions of Respondents on their Preference for Working in Facilities of the Ministry of Public Health, Kuwait.

Respondents		Nursing staff opinion		Paramedical staff opinion	
Type of facility	No.	%	No.	%	
Hospitals	164	54.7	116	58	
Primary Care Units.	79	26.3	62	31	
Public Health.	22	7.3	9	4.5	
School Health.	35	11.7	6	3	
Others.	0	0	7	3.5	
Total	300	100.0	200	100.0	

It can be noticed from table 58 that more than one half of both categories preferred working in hospitals, 26 and 31% preferred primary care units 11.7% of the nursing staff preferred working in school health, while only 3% of the paramedical staff spelled the same opinion.

In response to a question whether the respondent prefers to change his present place of work 14.3% of the nursing staff, 22% of the paramedical staff were asked.

Table 59. Responses of the Nursing and Paramedical Staff on the Responsibles directly Supervising their Daily Work.

Respondents	Nursing Staff Opinion		Paramedical staff opinion	
Responsible	No.	%	No.	%
1-Technical Director.	46	15.3	20	10.0
2- Technical Director and Physician.	55	18.3	14	20.5
3- Technical Director and Administrative persons.	26	8.7	79	39.5
4-All of the above	71	23.7	6	3.0
5- No supervision.	102	34.0	54	27.0
Total	300	100.0	200	100.0

Table 59 is showing that about 34% of the nursing staff and 27% of the paramedical staff had no direct daily supervision by any responsible.

On the other hand while 23.7% of the nursing staff were supervised by nursing directors, physicians and administrators, only 3% of the paramedical staff were similarly supervised. Supervision by the technical director only was stated by 15.3% of the nursing staff and 10% of the paramedical staff.

2.4.2. Relationships between the Medical Care Team and the Consumers:

Table 60. Distribution of the Nursing Staff Opinion on their Relationship with the Consumers and Other Health Providers.

Grade	Very good	Good	Average	Un-operative	Unrespect	Insult	Total
Person							
Patients	No. 59	115	84	18	18	6	300
	% 19.7	38.3	28	6	6	2	100
Visitors	No. 7	85	82	30	57	39	300
	% 2.3	28.4	27.3	10	19	13	100
Physicians	No. 143	108	38	5	6	0	300
	% 47.7	36	12.6	1.7	2	0	100
Nursing Directors	No. 60	107	120	13	0	0	300
	% 20	35.7	40	4.3	0	0	100
Colleagues	No. 180	99	21	0	0	0	300
	% 60	33	7	0	0	0	100
Administrative Staff	No. 58	74	117	44	5	2	300
	% 19.3	24.7	38.9	14.7	1.7	0.7	100

It can be noticed from table 60 that 6% of nurses described their relationships with patients as unrespect and 2% as insulting. The description was applied for visitors by 19% and 13% respectively.

Still a higher percentage of 14.7% described their relation with the administrative personnel as uncooperation.

Table 61. Distribution of Paramedical Staff Opinion on their Relationship with the Consumers and Other Health Providers, Ministry of Public Health, Kuwait.

Grade	Very	good	Good	Average	un-Cooperative	Un-respect	Insulting	Total
Person								
Patients.	No.	50	44	44	10	20	32	200
	%	25	22	22	5	10	16	100
Visitors	No.	30	44	100	12	8	6	200
	%	15	22	50	6	4	3	100
Physicians	No.	79	64	47	8	0	2	200
	%	39.5	32	23.5	4	0	1	100
Technical Directors	No.	116	47	35	0	0	2	200
	%	58	23.5	17.5	0	0	1	100
Colleagues	No.	129	47	16	4	4	0	200
	%	64.5	23.5	8	2	2	0	100
Administrative staff	No.	48	45	68	34	5	0	200
	%	24	22.5	34	17	2.5	0	100

Table 61 explains the relationship between the paramedical staff and the patients described by 10% as non-respect, 16% as insulting where as the proportion is less for visitors, where it was mentioned by 4% as non-respect and 3% insulting. 17% were considering the relationship with administrative staff as in-cooperative.

Nursing Activities:

Table 62. Distribution of the Nursing Staff Opinion on Performance of Some Nursing Activities.

Frequency		Done and is the nurse res- ponsibility	Done and should be done by others	Not done	Not Stated	Total
Activity						
1-Statistical recording.	No.	98	184	2	16	300
	%	32.7	61.3	0.7	5.3	100
2-Inventory of non- medical equipment.	No.	107	190	1	2	300
	%	35.7	63.3	0.3	0.7	100
3-Patients personal hygiene.	No.	250	41	0	9	300
	%	83.3	13.7	0	3	100
4- Meal distribution	No.	123	143	28	6	300
	%	41	47.7	9.3	2	100
5- Answering telephone calls of relatives	No.	49	188	55	8	300
	%	16.3	62.7	18.3	2.7	100

Table 62 explains performance of some activities by nursing staff and their opinion towards these activities. It is clear that 61-63% of the nursing staff were recording statistical data, keeping inventory of non-medical equipments, and answering telephon calls for patients which they feel it is not their responsibility.

About one half of nurses who were distributing meals to patients felt that this is not a nursing duty. About one third of the nursing staff explained that health education is not provided while 23.7% stated that they perform this activity but should be assigned to others.

3- Results of the Study on Medical Records in the Primary Care Units

3.1 Health Registration:

The method used for this study was explained in chapter 4. Health registration was applied in Kuwait since 1962. Kuwait inhabitants are registered in the nearest primary care unit to their residence in either a dispensary or combined unit, according to its catchment area. The registered person is supposed to visit only the unit in which he is registered except in emergency cases. Those who are registered in dispensaries are supposed to seek care in case of emergency after the working hours from the nearest combined unit which is opening around the clock. So, for every member an identity card is issued defining the dispensary and the combined unit which the consumer can use.

Household folders are kept in the health records office and officers are supposed to deliver the whole folder to the physician before the patient's examination. For each household there is a folder kept in the primary care unit containing one health card for each member. This medical card is coloured in white for males and red for females. Data included in this card are: personal data as regards name of unit, name of consumer, birth year, nationality, address and occupation. The data on periodic check up and vaccination, blood picture, urine and stool analysis and tuberculin tests are also printed to be

filled. The rest of the card is a table, in which data should be filled in every visit to the physician on clinical finding and diagnosis, treatment, notes, and physicians signature. The family folder can be easily opened to add new papers, or cards.

During 1962 all inhabitants were registered, and household folders were established to them. Registration is done by the central division of health registration or in one of its two registration branches who were established since 3 years. Addition or abolishing of members, referral to the other dispensaries, and registration of new households are supposed to be carried out in these offices.

Findings on registration of 1st January 1978, were as follows

Table 63. Number of Households and Persons Registered in Primary care Units Compared to Kuwait Population.

- Total no. of households registered in Kuwait	198,06
- Total no. of registered persons in Al Madina region	321,82
- Total no. of registered persons in Farwania region	280,39
- Total no. of registered persons in Algahra region	144,89
- Total no. of registered persons in Salmeiah region	305,16
- Total no. of registered persons in Ahmadi region	185,29
- Total no. of persons registered in Kuwait	1,237,57
- Mean No. of households registered/primary care unit	4,04
- Mean no. of persons registered/primary care unit	25,25
- Estimated population on 1st January 1978,	1,163,85
- Percentage of overregistration to the total population	6.33

It can be noticed that there was an over registration of 6.33% of the estimated total population. It was also observed that the mean number of folders in each health record office in one unit was 4042 folders including a mean number of 25,257 persons in every unit.

In order to estimate the number of unregistered attendants the two geographical regions which are Ahmadi and Farwania were recording a pilot census on cases seen in these regions from January to December 1977, as regards registration and presentation of the health folder to the physician before examination. These monthly data were collected by the researcher and the following are the findings:

Table 64. Distribution of percentage of cases visiting units in two regions and the availability of their health records 1977.

	<u>Farwania</u>	<u>Ahmadi</u>
- Registered cases seen and health record presented.	% 62.47	% 44.75
- Registered cases seen and health record not presented.	31.51	43.05
- Unregistered cases seen	6.02	12.20
Total	<u>100.0</u>	<u>100.0</u>

In these two regions, there were 19 primary care units and about 465 thousand population are registered i.e. 38.8% of Kuwait primary care units and 37% of the population registered in all units. Although similar data were not available for other regions

but it can be seen that about 6-12% of consumers examined were not registered and 32-43% were registered yet their health folders were not presented to the physician by the health record officers.

3.2. Utilization of Health Records:

Table 65. Household folders and Personal Health Cards
Regarding Target Population and Sample by Age,
Sex and Utilization.

Primary units	Salmeiah	Romeithia	Shwiekh	Kadsia	Gahra	Total
	disp.	disp.	disp.	disp.	comb. unit	
Data						
1- Total no. of household folders.	9,400	2,315	625	3,896	3,045	19,201
2- Total no. of registered persons.	44,285	9,070	5,247	16,643	18,264	93,509
3- No. of sample households.	94	23	6	38	30	191
4- No. of sample personal health cards.	561	104	57	187	203	1112
5- Mean family size of sample	5.97	4.52	9.5	4.92	6.77	5.82
6- Sex of sample records:						
Male	No. 325	58	27	88	99	597
	% 58	56	48	47	49	53.7
Female	No. 236	46	30	99	104	414
	% 42	44	52	53	51	46.3
7- Age groups of sample records:						
Less than 1	No. 11	4	2	10	2	29
	% 2	3.5	3.5	5.4	1	2.6
1-4	No. 34	10	10	36	11	101
	% 6	10	17.1	19	5.3	9.1
5-14	No. 101	27	16	54	24	222
	% 18	26	28	29	12	20
15 & over	No. 415	63	29	87	166	760
	% 74	60.5	50.9	46.6	81.7	68.3
8- No. of health cards not utilized	No. 230	19	9	47	102	360
	% 41	18	15.8	25.1	50.2	32.4

Table 65 (Cont'd).

9- No. of visits
recorded in
the last 5
Years.

0	No.	292	39	12	67	172	582
	%	52	37.5	21	35.8	84.7	52.3
1-4	No.	191	44	21	78	19	353
	%	34	42.3	36.8	41.8	9.4	31.7
5-8	No.	39	12	9	12	11	83
	%	7	11.5	15.8	6.4	5.4	7.5
9-12	No.	17	8	10	18	0	53
	%	3	7.7	17.6	9.6	0	4.8
13-16	No.	11	0	3	9	1	24
	%	2	0	5.3	4.8	0.5	2.2
17-20	No.	11	1	2	3	0	17
	%	2	1	3.5	1.6	0	1.5
Over 20	No.	0	0	0	0	0	0
	%	0	0	0	0	0	0
Total	No.	561	104	57	187	203	1112
	%	100	100	100	100	100	100

Primary care units in which this study was conducted were:

- 1- Al Salmeiah dispensary, which is a residential area of middle and higher socio economic class of non-Kuwaitis.
- 2- Al Romeithia dispensary, which is of mixed Kuwaiti and non-Kuwaiti middle class residents.
- 3- Al Showeikh dispensary and Kadsia dispensary, which are Kuwaiti suburbs of higher socio economic class.
- 4- Al Gahra combined unit which is the residential area of mixed bedouins and non-Kuwaitis of lower socio economic class.

As shown in table 65 the total sample of health cards were 1112 cards included in 191 family folders. This represents 1.19% of the target population in these units, and about one thousand of Kuwait total population. Males were 53.7% of the sample. Infants below one year were found to be 2.6%, children 1-4 years 9.1%, and 5-15 years were 20%.

It can be noticed from table 65 that 32.4% of the health cards were never utilized, the highest proportion was in Al Gahra combined unit (50.2%) and in Al Salmeiah dispensary (41%) and the lowest was in Al Shweikh dispensary (15.8%).

Health cards in which no medical data were entered in the last five years constituted 52.3% of the total health cards including those which were never utilized. This was maximally occurring in Al Gahra combined unit in which no data were recorded in the last five years in 84.7% of the

From one to four visits were found to be recorded in 31.7% of the records. In 7.5% there was recorded from 5 to 8 visits, 4.8% were recorded 9-12 visits and in 3.7% of the records there was 13-20 visits, in the last five years. The highest proportion of records in which more recording was observed was in Shweikh dispensary then Kadsia dispensary, and the least was in Al Gahra combined unit.

Table 66. Distribution of Data Recorded in the Sample Health Records by Type of Data and Degree of Completion.

Type of data	Complete		Incomplete		Illegible		Missed		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Personal data.	1112	100	0	0	0	0	0	0	1112	100
Medical history.	22	2	6	0.5	4	0.4	1080	97.1	1112	100
Clinical check up	22	2	6	0.5	0	0	1084	97.5	1112	100
Laboratory check up	26	2.3	0	0	0	0	1086	97.7	1112	100
Vaccination	26	2.3	10	0.9	0	0	1076	96.8	1112	100
Provisional diagnosis	353	31.7	301	27.1	98	8.8	360	32.4	1112	100
Final diagnosis	26	2.3	19	1.7	16	1.6	1049	94.4	1112	100
Clinical findings	39	3.5	61	5.5	11	1	1001	90	1112	100
Classification	55	4.9	457	41.1	240	21.6	360	32.4	1112	100
Ray and laboratory results none in visits.	58	5.2	18	1.6	0	0	1036	93.2	1112	100

Table 66.(Cont'd).

11-Follow-up visits	26	2.3	19	1.7	17	1.5	1050	94.5	1112	10
12- Referral to specialty	12	1	4	0.4	2	0.2	1094	98.4	1112	10
13-Referral to hospital	8	0.7	14	1.3	4	0.4	1086	97.6	1112	10
14-Feedback from specialist	7	0.6	0	0	0	0	1105	99.4	1112	10
15-Feedback from hospital	2	0.2	0	0	0	0	1110	99.8	1112	10
16- Data of children's clinic (1)	6	2.7	0	0	0	0	216	97.3	222	10
17-Data of maternity clinic(2)	0	0	0	0	0	0	234	100	234	10

- (1) Data retrieved from children's clinic was investigated for the age group 4 - 15 years which were 222 child.
- (2) Data retrieved from maternity clinic were investigated for female patients over 15 years who were 234 females.

3.3 Type and Completion of Data Recorded:

Table 66 represents the type of data investigated to be present in the health record and the degree of its completion. It is obvious that other than the personal data which is written on issuing the health card, only a varying small proportion of the other data were found to be complete. Data to be recorded on issuing the health record, namely medical history, clinical check-up, laboratory check-up and vaccinations were missing in about 97% of records.

The provisional diagnosis of cases seen by physicians was recorded complete in 31.7% of records, incomplete in 27.1% of records and illegible in 8.8% of the records. It was missing in 32.4% of records which were never used. The final diagnosis was only recorded in 2.3% of records, incomplete of illegible in about 1.7%. Clinical findings were missing in 90% of records and if recorded were either complete (3.5%), incomplete (5.5%), or illegible (1%). Medication was only completely recorded as regards name of drug, dosage and duration of treatment in only 4.9% of records, the rest were either incomplete in 41.1%, illegible in 21.6% of missed in 32.4%.

Diagnostic results of laboratory and x-ray investigations as well as follow up visits were missing in about 94% of records and only complete in 2 to 5%. Referral to specialty clinics and to hospitals and feedback from these facilities were not recorded almost in all records (88 to 99%).

For those consumers which were expected to be under care of maternity or paediatric clinics only 2.7% of children's clinic data were found included in the folder and this was only found in Shwiekh dispensary, where as it was completely (100%) missing for maternity cases in all units.

4- Study of the Referral Pattern for Maternity Cases:

4.1 Organizational Issues:

The objectives and methodology of this study was explained in Chapter 4. It was conducted in June 1978. The maternity centers were 15 in number and distributed geographically in the country, supposed to provide antenatal, natal and post-natal care. Deliveries are supposed either to be attended at home by nurses, or as in-patient deliveries in one of the six delivery centers which were attached to some of the maternity centers. Its total bed compliment was 124 beds. Only abnormal deliveries should be referred to the maternity hospital through these centers.

Data were collected in the maternity hospital reception room and maternity wards. Data recorded in the maternity centers for June 1978 as regards referral and the occupancy rate of the lay-in beds, were also collected for correlation with hospital data. The bed occupancy of the six delivery centers was not available and was calculated through the dieting daily lists which represents the daily census of each center. The following are the data collected for June 1978:

-Total number of deliveries admitted to maternity hospital	case 1742
- Total number of obstetric cases received in the reception room of the maternity hospital	2511
- Total number of obstetric cases referred by the centers to the maternity hospitals reception room.	131

- Total number of labours delivered in the delivery centers case 980
- Bed occupancy rate in the delivery centers during June 1978. 56.8
- Bed occupancy rate in the delivery wards of the maternity hospitals. 81.7

The obstetric cases received in the reception room during the period 1st to 21 June 1978 were studied as regards, source of referral, diagnosis, admission and care provided by the hospital for these cases. The total sample investigated was 515 cases seen in the different three shifts of working hours, each shift for one week.

4.2 Source of Referral and Presenting Diagnosis of Sample Cases:

Table 67. Distribution of Source of Referral of the Sample Cases to the Reception Room of Maternity Hospital (June 1978).

Referring Source	Received Cases	
	No.	%
1- Maternity clinic.	39	7.6
2- Dispensary.	20	3.9
3- Private physician or hospital.	10	1.9
4- Hospital out patient.	30	5.8
5- Others	4	0.8
6- Without referral	412	80.0
Total	515	100.0

It is clear from table 67 that 80% of cases were attending the reception room without referral as walk-in cases. Only 7.6% were referred by maternity or delivery centres and 3.9% by general practitioner in primary care units. Cases referred by the hospital out patient i.e. were under care in this clinic constituted 5.8%.

Table 68. Distribution of the sample cases by Primary Diagnosis on Attendance to the Reception Room of the Maternity Hospital.

Primary diagnosis	Cases	
	No.	%
1- Normal labour.	301	58.4
2- Multi-More than 5	26	5
3- High cephalic in primigravida	16	3.1
4- Prolonged first stage	18	3.5
5- Prolonged second stage	16	3.1
6- Abnormal presentation	27	5.2
7- Foetal stress	16	3.1
8- Ante-partum haemorrhage	23	4.5
9- Previous difficult labour	21	4.1
10- Previous caesarian.	18	3.5
11- Toxaemia or hypertension	5	1.0
12- Medical risk	0	0
13- Other antenatal causes	2	0.4
14- Postnatal causes	4	0.8
15- Post-partum haemorrhage	11	2.1
16- Retained placenta	6	1.2
17- Post natal eclampsia	3	0.6
18- Post natal fever	2	0.4
Total	515	100

It is clear from table 68 that 58.4% of cases attending the maternity reception room for obstetric care were normal pregnancies and normal labour cases. The other listed causes constituted 41.6% as prenatal, natal, or post natal abnormal or complicated cases.

4.3 Admission of Cases and Type of Care Provided by the Hospital

Table 69. Distribution of the Sample Cases by Admission, Referral and Hospital Care Provided, Kuwait, June 1978.

Type of referral or care	Cases		
	No.	% of sub-total	% of total
<u>A- Non-admitted cases:</u>			
1- Referred to maternity clinic.	22	24.2	4.3
2- Referred to hospital O.P.	23	25.3	4.5
3- Referred to other specialty	8	8.8	1.5
4- Not referred.	38	41.7	7.4
Total non-admitted cases	91	100	17.7
<u>B- Admitted cases:</u>			
5- Normal delivery (including episiotomy-	269	63.4	52.3
6- Abnormal delivery with surgery or procedures under general anaesthesia	57	13.4	11.0
7- Abnormal delivery with surgery or procedures without general anesthesia	83	19.6	16.1
8- Abortion.	9	2.1	1.7
9- Others	6	1.4	1.2
Total admitted cases	424	100	82.3
Total	515	--	100

Table 69 shows the decision taken at the reception room as regards admission or referral. It also shows the type of care provided to admitted cases according to the care recorded in the hospital record two days after admission.

It is clear that 17.7% of cases who visited the reception room were not admitted, 4.3% were referred to the maternity centers, 4.5% to the hospital out-patient, 1.5% to other specialty clinics and 7.4% were not advised by the physician for any follow-up or referral. All these cases were examined and proved not in labour and not in need for in-patient antinatal care.

The total admitted cases were 82% of all attendants to the reception room. 52.3% of all attendants who were also 63.4% of all admitted cases were cared by the hospital as normal deliveries, including 36 cases (i.e. 7% of all received cases and 8.5% of all admitted cases) for which episiotomy, was done. These were cases that could be managed in the maternity centers. 11% of the attendants i.e. 13.4% of admitted cases delivered with procedures or surgical interference under general anesthesia. 19.6% of admitted cases delivered with procedures as forceps, ventouse, extraction, or other surgical procedures without general anesthesia.

5- Household Interviewing Survey on Utilization
of the Available Medical Care Services

The methods used to conduct this survey were explained in Chapter 4. The objective was mainly to determine the morbidity pattern of the population and the behaviour of individuals when becoming sick. It aimed also at investigating health registration, attitude and opinion towards governmental medical care services, of those who consume private non-governmental health services inside as well as outside Kuwait.

Table 70. Distribution of Respondents by Registration in Primary care Units and Number of Times the Respondent Become Sick in Three Months Period.

Respondents	Males			Females		
	Non			Non		
	Kuwaiti	Kuwaiti	Total	Kuwaiti	Kuwaiti	Total
<u>Registration/sickness</u>						
<u>I- Health Registration:</u>						
Registered	No. 1950	615	2565	1942	676	2618
	% 98.6	83.3	94.5	98.5	83.9	94.3
Not registered	No. 28	121	149	29	130	159
	% 1.4	16.7	5.5	1.5	16.1	5.7

Table 70.(Cont'd).

II- Number of times getting
sick in three months:

None	No.	656	340	996	488	275	76
	%	33.2	46.2	36.7	24.8	34.1	27
1-2	No.	819	298	1117	852	353	12
	%	41.5	40.5	41.1	43.5	43.8	43
3-4	No.	306	67	373	382	118	50
	%	15.5	9.1	13.7	19.4	14.7	18
5-6	No.	94	18	112	122	35	19
	%	48	2.5	4.2	6.2	4.3	5.4
7-8	No.	28	4	32	38	10	48
	%	1.4	0.5	1.2	1.9	1.2	1.4
9-10	No.	27	3	30	31	6	37
	%	1.3	0.4	1.1	1.6	0.8	1.4
11-18	No.	48	6	54	53	9	62
	%	2.3	0.8	2	2.6	1.1	2.4
Total	No.	1978	736	2714	1971	806	27
	%	100	100	100	100	100	100

Table 70 presents the situation as regards registration. It was found that while about 16% of non-Kuwaitis were not registered, only about 1.5% of Kuwaitis were not registered.

The number of times, the respondents got sick in a period of three months before interviewing, 36.7% of males were never sick while the similar proportion for females was 27.5% i.e. the proportion for both Kuwaitis and non-Kuwaitis females was lower than males.

The highest frequency was among those who were sick once or twice, who were about 40-44% of the total sample population for both sexes.

Those who were sick 3 to 4 times, constituted 13.7% among males and 18% among females. Those who were sick 5-6 times were 4.2 and 5.7% among males and females respectively.

Those who were sick 7-8 times and similarly 9-10 times of more than 11 times were from 1-2 % of each category of both sexes, with Kuwaitis representing higher proportion than non-Kuwaitis. The mean number of sickness per respondent was found to be 1.8 for males and 2.2, for females with an average of two times in a period of three months.

17 Table 71. Distribution of Behaviors of those who were Sick in three Months period by Type of Care.

Respondents		Males			Females		
Behaviour		Kuwaiti	Non Kuwaiti	Total	Kuwaiti	Non Kuwaiti	Total
1-Self-care	No.	178	66	244	219	101	320
	%	13.5	16.7	14.2	14.8	19	15.9
2-Arabic or traditional medicine.	No.	21	2	23	24	5	29
	%	1.6	0.5	1.3	1.6	0.9	1.4
3-Private clinic	No.	170	75	245	189	69	258
	%	1.28	18.9	14.3	12.7	12.9	12.8
4-Dispensary	No.	953	235	1188	1050	340	1390
	%	72.1	59.4	69.2	70.8	63.9	69
5-Combined unit	No.	276	77	353	375	95	470
	%	20.9	19.4	20.5	25.3	17.8	23.3
6-O.P.of government hospital	No.	97	24	121	78	32	110
	%	7.3	6.1	7	5.3	6	5.5
7-Admission in private hospitals	No.	9	2	11	23	9	32
	%	0.7	0.8	0.7	1.7	1.7	1.7
8-Admission in government hospitals	No.	46	16	62	72	19	91
	%	3.5	4.3	3.7	4.7	3.6	4.4
Total who were sick.		1322	396	1718	1483	532	2015
Total without sickness		656	340	966	488	274	762
Total respondents		1978	736	2714	1971	806	2777

Table 71 explains the type of care the respondent followed when he was sick in a period of three months before interview.

The highest proportion of care attended was in dispensaries by about 70% of those who were sick. Combined units received about 20-23% while private clinics provided care for about 13-14%. 14-16% of patients resorted to self care. The traditional or arabic medicine was followed by only about 1.4% of respondents.

Out-patient clinics of governmental hospitals provided care to about 5.5 to 7.3%. About 3.7 to 4.7% were admitted to those hospitals. 0.7% of males and 1.7% of females were admitted to private hospitals. It can be observed from this table that these proportions represent those who get sick and were constituting 63.3% of total sample of males and 72.5% of the total sample of females. It can also be observed that some respondents resorted to more than one type of care.

Table 72. Distribution of Respondent's Opinion Towards Visiting the Primary Care Unit Whenever becoming Sick.

Respondents		Males			Females		
		Kuwaiti	Non Kuwaiti	Total	Kuwaiti	Non Kuwaiti	Total
Opinion							
1- Mostly	No.	1472	480	1952	1508	551	2059
	%	74.4	65.2	71.9	76.5	68.4	74.4
2-Occasionally	No.	306	102	408	293	128	421
	%	15.5	13.9	15	14.9	15.9	15.7
3- Rarely	No.	121	54	175	99	41	140
	%	6.1	7.3	6.5	5	5	5
4- Not attending	No.	79	100	179	71	86	157
	%	4	13.6	6.6	3.6	10.7	5.7
Total	No.	1978	736	2714	1971	806	2777
	%	100	100	100	100	100	100

The opinion of the respondents was recorded as whether he mostly visits a primary care unit when he becomes sick. Table 72 shows that about 72-74% mostly visit the primary care unit. The rest who were about 26-28% of all respondents were either visiting the unit occasionally (about 15%), rarely about (6.0%), or not attending primary care units at all who were 6.6% of males and 5.7% of females.

The possible causes why those who do not visit the primary care unit mostly when they get sick was investigated and presented in table 73.

Table 73. Distribution of Respondents not Mostly Visiting the Primary Care Unit in Case of Sickness by Possible causes.

Respondents		Males			Females		
Cause		Kuwaiti	Non Kuwaiti	Total	Kuwaiti	Non Kuwaiti	Total
1-Mild sickness	No.	213	62	276	177	65	242
	%	42.3	24.2	36.2	38.2	25.2	33.7
2-Prefer traditional or arabic medicine.	No.	19	2	21	26	9	35
	%	3.8	0.8	2.8	5.6	3.5	4.9
3-Inadequacy of service.	No.	123	36	159	153	47	200
	%	24.3	14.1	20.9	33	18.4	27.6
4-Inadequacy of medication	No.	155	32	187	157	36	193
	%	30.6	12.5	24.5	33.9	14.1	26.9
5-Inadequacy of investigations	No.	19	4	23	21	6	27
	%	3.8	1.6	3	4.5	2.4	3.8
6-Distant primary care unit.	No.	5	12	17	6	7	13
	%	1	4.7	2.2	1.3	2.7	1.8
7-Over crowding in units.	No.	118	73	191	114	94	208
	%	23.3	28.5	25.1	24.6	36.9	29
8-Badly treated	No.	44	7	51	29	4	33
	%	8.7	2.7	6.7	6.3	1.6	4.6
9-Unsuitable working hours	No.	23	21	44	14	20	34
	%	4.7	8.2	5.8	3	7.8	4.7
10-Illegible for government care.	No.	4	72	76	2	59	61
	%	0.8	28.1	10	0.4	23.1	8.5
11-Covered by special care system.	No.	71	46	117	16	28	44
	%	14	18	15.4	3.5	11	6.1
12-Other causes	No.	47	16	63	42	25	67
	%	9.3	6.3	8.3	9.1	9.8	9.3
Total		506	256	762	463	255	718

About one third of respondents were having only minor diseases which needed no medical care. 3.8% of male Kuwaitis and 0.8% of males non-Kuwaitis, and a higher percentage of females (3.5 to 5.6%) of both nationality groups resorted to traditional medicine. 21-28% did not use the primary care services because of inadequacy of its services or its medications. This latter cause was more expressed among Kuwaiti males and females. Only about 3 to 4% expressed the cause of under utilization as inadequate investigations. Difficult accessibility due to far distance of the unit, was spelled by only about 2% in both sexes but the percentage was higher among non-Kuwaitis.

Over-crowding in primary care units was the most prominent cause in the respondent's opinion as expressed by about 25-29% of both sexes. Other causes as being badly treated of unsuitable working hours was expressed by about 5-7% by different categories. Respondents illegible for medical care who were mostly non Kuwaitis constituted 8.5- 10%. Those who did not consume governmental services because they are covered by special medical care schemes were 15.4% of males and 6.1% of females. It can also be noticed that some respondents expressed more than one cause.

Table 74. Distribution of Respondents by Admission to Private Hospitals Inside and Outside Kuwait.

Respondents		Males			Females		
Hospitalized		Kuwaiti	Non Kuwaiti	Total	Kuwaiti	Non Kuwaiti	Total
1-Not nospitalized in private hospitals	No. 1853 % 93.7	718 97.6	2571 94.7	1813 92	764 94.8	2577 92.8	
2-Private hospital in Kuwait.	No. 57 % 2.9	15 2	72 2.7	109 5.5	33 4.1	142 5.1	
3-Private hospital abroad	No. 59 % 3	3 0.4	62 2.3	38 1.9	8 1	46 1.7	
4-Private hospital in Kuwait and abroad	No. 9 % 0.4	0 0	9 0.3	11 0.6	1 0.1	12 0.4	
Total	No. 1978 % 100	736 100	2714 100	1971 100	806 100	2777 100	

The number respondents who were never admitted in private hospitals is presented in table 74. These were 6.3% of total male Kuwaitis, 2.4% of male non-Kuwaitis, 8% of female Kuwaitis and 5.2.% of female non-Kuwaitis. It was also found that 2.7% males were admitted to private hospitals inside the country, 2.3% outside the country, and 0.3% were admitted in both types of hospitals. For females the similar proportions were 5.1% , 1.7% and 0.4% respectively.

These respondents outlined the causes why they sought care in private hospitals as shown in table 75 and 76.

Table 75. Distribution of Respondents Admitted to Private Hospitals in Kuwait by Possible Causes.

Respondents		Males			Females		
Causes		Kuwaiti	Non Kuwaiti	Total	Kuwaiti	Non Kuwaiti	Total
1-Covered by special care system.	No. 3 % 4.6	2 13.3	5 6.2	9 7.5	5 14.7	14 9.1	
2-Unsatisfaction by competence government hosp. physicians.	No. 19 % 28.8	4 26.6	23 28.4	34 28.3	5 14.7	39 25.3	
3-Unaccepted for admission by gov.hosp.	No. 1 % 1.5	0 0	1 1.2	3 2.5	2 5.9	5 3.2	
4-Far date appointed for admission	No. 10 % 15.2	4 26.2	14 17.3	21 17.5	5 14.7	26 16.9	
5-Unavailability of private room	No. 1 % 1.5	1 6.7	2 2.5	13 10.8	5 14.7	18 11.7	
6-Better hotel services in private hospital.	No. 32 % 48.5	5 33.3	37 45.6	63 52.5	12 35.3	75 48.7	
7-Higher level of nursing care.	No. 14 % 22.1	2 13.3	16 19.8	36 30	6 17.6	42 27.3	
8-Better quality of food.	No. 1 % 1.5	0 0	1 1.2	4 3.3	1 2.9	5 3.2	
9-Unsuitable visiting hours.	No. 2 % 3	1 6.7	3 3.7	14 11.7	1 2.9	15 9.7	
10-Other causes	No. 14 % 21.1	2 13.3	16 19.8	24 20	7 20.6	31 20.1	
Total		66	15	81	120	34	154

level of nursing care. Unavailability of private rooms in governmental hospitals was expressed by females than males (20% and 7% respectively).

Long time appointments for elective admissions was spelled by 14 to 26% of all categories of respondents. Those who are covered by special medical care schemes were 6 to 9% in both sexes.

Respondents who were admitted to hospitals outside Kuwait were 3.4% of males Kuwaitis, 0.4% male non-Kuwaitis, 2.5% of female Kuwaitis and 1.1% of non-Kuwaiti females.

Of those respondents, 15 to 17% were referred by the Ministry of Public Health, about one forth were admitted when becoming suddenly sick during travel abroad. The most prominent two causes stated by 40 to 47% of both sexes was that they were seeking a higher level of physicians care.

Table 76. Distribution of Respondents Admitted to Private Hospitals Outside Kuwait by Possible Causes.

Respondents		Male			Female		
Causes		Kuwaiti	Non Kuwaiti	Total	Kuwaiti	Non Kuwaiti	Total
1-Referral by M.P.H.	No. 12	0	12	8	1	9	
	% 17.7	0	16.9	16.3	11.1	15.5	
2- Sudden sickness when travelling abroad	No. 17	2	19	11	4	15	
	% 25	66.7	26.9	22.4	44.4	25.9	
3-Check-up	No. 13	0	13	9	0	9	
	% 19.1	0	18.3	18.4	0	15.5	
4-Unsatisfaction with local hospitals	No. 15	1	16	15	2	17	
	% 22.1	33.3	22.5	30.6	22.1	29.3	
5-Unavailable speciality in local hosp.	No. 5	0	5	12	0	12	
	% 7.4	0	7	24.5	0	20.7	
6-Higher level of physicians care.	No. 32	1	33	21	3	24	
	% 47.1	33.3	46.5	42.9	33.3	41.4	
7-Higher level of nursing care.	No. 6	0	6	3	1	4	
	% 8.8	0	8.5	6.1	11.1	6.9	
8-Better hotel services	No. 7	0	7	2	1	3	
	% 10.3	0	9.9	4.1	11.1	5.2	
Total		68	3	71	49	9	58

For those who were admitted in Kuwait private hospitals, the most frequent cause was seeking better hotel services (45-48%) about 26 to 28% were unsatisfied by physicians' competence in governmental hospitals and about 22 to 27% were seeking for higher