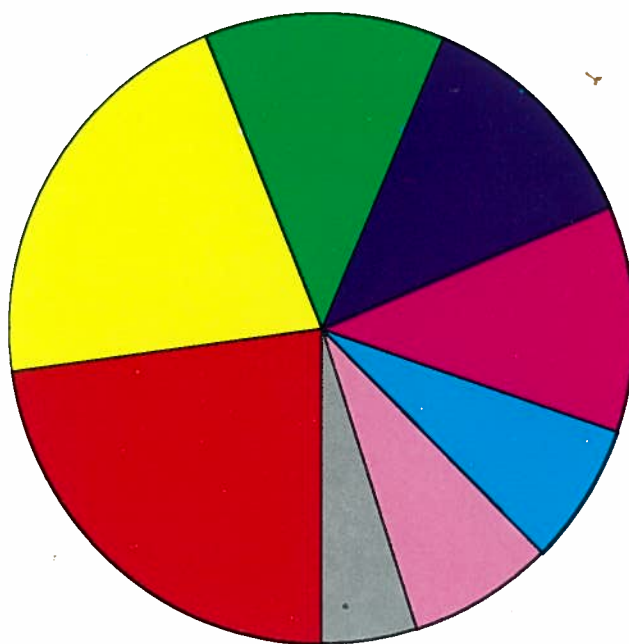


**SULTANATE OF OMAN
MINISTRY OF HEALTH**

ANNUAL STATISTICAL REPORT

1990 A.D. 1410 / 1411 A.H.



Prepared by :-
Directorate-General of Planning

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HIS MAJESTY SULTAN QABOOS BIN SAID

PREFACE

1990 was the twentieth year since the renaissance of this country and we can be proud of the developments that have taken place in the health field over this time. The health facilities provided by the Ministry of Health to the people of Oman have grown from two hospitals with a few beds in 1970 to 47 hospitals and 3 maternity centres with 3,431 beds and 91 health centres spread all round the country by the end of 1990.

As well as improving curative services, the preventive health services of the country have developed from almost nil in 1970 to achieving levels of protection against childhood diseases that exceed those of almost all other countries of the world.

Having successfully overcome most of the serious infectious diseases, the country has now reached the stage of development of the most advanced countries in the world in the increasing importance of non-communicable diseases such as diabetes, hypertension and heart problems. 1990 saw the successful launch of the National Diabetes Programme, while in the field of the treatment of heart disease, Oman joined the developed world in performing its first open heart surgery.

Thus, under the wise guidance of His Majesty the Sultan, the health services have developed into a comprehensive service of the highest standards.

1990 saw the preparation of the fourth five-year development plan. It includes the strengthening of the Primary Health Care system including the building of new health centres combined health units (polyclinics). It also includes the development of the regional hospitals to give regional self-sufficiency in secondary care specialties.

We shall thus endeavour to continue to improve the health services, in order to provide the best health care for all the people of Oman.

May God bless us and guide us to achieve our goal.

Ali bin Mohammed bin Moosa
Minister of Health

FOREWORD

At the end of 1990, the Health Ministry operated 47 hospitals and 3 maternity centres with a total of 3,431 beds. To cope with an increased need for paediatric services, work on the construction of new wards has begun at Tanam, Ibra, Sumail and Bahla hospitals. Tender documents have been submitted for the construction of three new hospitals in Rustaq (200 beds), Buraimi (100 beds) and Wadi Heebi (18 beds), as well as two new Combined Health Units (polyclinics) in Suwaiq and Shinas. These Combined Health Units provide both primary care services as well as specialist outpatient services in general medicine, paediatrics, obstetrics, ophthalmology, ENT, surgery and dentistry.

During 1990, two new health centres were opened - Al Ayoun and Wadi Bani Jaber - thus bringing the total to 91 health centres. All health centres provide primary health care - curative, preventive and promotive - to the communities in which they are located. There are also mobile medical teams, to provide access to health care for the smaller isolated communities. To further strengthen the provision of primary health care, three new health centres are being constructed in Wadi Jahawer, Wadi Ahen and Wadi Bani Omar. Tenders have been submitted for a further two health centres in Wadi Haitam and Wadi Alain & Al Hagar.

The preventive services continued to improve the health of the population of the Sultanate, and, at the end of 1990, there were 64 Public Health Units, 2 Maternal and Child Health Centres and 9 Malaria Control Centres operating throughout the country. There were also 7 Health Checkposts at points of entry to Sultanate, which include 3 ports, 2 airports & 2 border checkposts.

Maternal and Child Health (MCH) services have continued to protect mothers and children, and in 1990 more than 85% of all pregnant women used ante-natal services for an average of nearly six times during each pregnancy.

In 1990, the Expanded Programme of Immunization (EPI) immunized 96% of all infants before they reached the age of one year, to provide them with the security of protection against the six serious communicable diseases of tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis and measles. The numbers of cases of these diseases has fallen dramatically since 1986, and in 1990 there were no cases of diphtheria, poliomyelitis or neonatal tetanus. In order to tackle the problem of viral hepatitis, the EPI programme successfully incorporated a new programme of immunization to protect children against Type B Hepatitis.

The special programme to control tuberculosis achieved a significant reduction in the numbers of new cases, and the Acute Diarrhoeal Diseases programme continued to provide oral rehydration for early treatment, and hence reduced both the severity and the subsequent mortality. The Eye Health Care programme has continued to reduce the incidence of moderate and severe cases of trachoma,

There was, however, a significant increase in the incidence of malaria in 1990 to over 32 thousand new cases - almost double the numbers diagnosed in each of the previous three years. New measures have been introduced to attempt to control the problem.

As in the recent past, the country remained free from all indigenous cases of quarantinable diseases throughout the year.

The number of medical and para-medical personnel employed under the Ministry of Health grew by 2.5% in 1990. At the end of 1990 the Ministry employed 994 physicians, 3,512 nurses, 40 dentists, 33 pharmacists and 3,161 para-medical personnel. Including health staff in the government sector and the private sector, the Sultanate had one doctor per 970 population, and one nurse per 350 population.

The training of nurses and technicians at the Institute of Health Sciences continued to develop, and 8 nurses, 18 assistant nurses, 5 physiotherapists, 6 laboratory technicians and 11 radiology technicians graduated in 1990. Periodical workshops, symposia and seminars for medical and para-medical workers were organized in order to keep them abreast with developments in their respective fields. Short-term training courses for medical and public health workers were also organized during the year.

In terms of major changes that took place in 1990, the most important was one of administration and management whose direct effect will not be immediately apparent to the general population. The administrative structure of the Ministry of Health was revised with responsibility for the provision of health services being given to Regional Directorates-General in order to provide an integrated health care service at the local level.

This report contains data and information on the current status and utilization of health services in the Sultanate. Any suggestions for the improvement of the content or the presentation of this report would be most welcome.

Mohammed Baqer bin Moosa bin Ali

Director-General

Directorate-General of Planning

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1. INTRODUCTION

(a) General features

The Sultanate of Oman occupies most of the south-eastern corner of Arabian Peninsula and has a coast line stretching almost 1,700 kilometers from the Straits of Hormuz in the north to the frontier with the People's Democratic Republic of Yemen. The Musandam Peninsula, the northern most point of Oman is separated from the main body of the Sultanate by a strip of territory which is part of the United Arab Emirates. The total land area of the country is 300,000 square kilometers which includes 246,000 sq.kms of wadi & desert areas, 45,000 sq.kms of mountains and 9,000 sq.kms of coastal plains.

In 1988, the Higher Council for Regional Development standardised the regions of the country to ensure consistency and hence comparability between the information provided by different sectors. These are :-

- (1) Muscat (including Quriyat)
- (2) Janubia (formerly Dhofar or Southern)
- (3) Dakhilya (formerly Interior or Al Joof)
- (4) Sharqiya (formerly Eastern)
- (5) Batinah
- (6) Dhahirah
- (7) Musandam

For administrative purposes in the Health Ministry, the Region of Batinah was subdivided into the two regions of North Batinah and South Batinah. Tables thus present results for these regions.

In 1990 the Sultanate was divided into 41 Wilayats in addition to the capital area of Muscat. The country has about 1,900 towns & villages. The administrative divisions of the Sultanate are shown in Annex A. Oil is still the main source of national income, although some industrialization has taken place in recent years. Agriculture and fisheries are also being developed as additional sources of national income.

(b) Demographic profile

No population census has ever been undertaken in the Sultanate. However, from surveys carried out by the Development Council and the Ministry of Health, national and regional estimates of the population size have been made for the purpose of planning and evaluating health services. These are shown in Tables 1.1 to 1.3.

(c) Health Care Delivery System

The Ministry of Health is the main provider of health care in the country. The four organizations of the Ministry of Defence, the Royal Oman Police, Petroleum Development Oman (PDO) and Sultan Qaboos University (SQU) provide medical care to their employees and their dependants. No private hospitals exist in Oman, but primary care is provided by private physicians who work in their own clinics.

The Ministry of Health provides both curative and preventive health services. During 1990 each was administered by its own Directorate-General. However, from the beginning of 1990, in order to achieve better co-ordination and utilization of resources, the delivery of curative and preventive services has been integrated into a regionalized health care system. The 1990 administrative structure is shown in Annex-A.

(1) Directorate-General of Curative Services

The Directorate-General of Curative Services provides primary, secondary and tertiary care through a network of hospitals, health centres, maternity centres and mobile medical units.

(i) At the local level, a health centre headed by a physician provides basic health care. Small hospitals also exist at the local level which are of two types. One type has from 4 to 20 beds for general medicine and maternity, as well as an outpatient service. These facilities are also shared with preventive health units to provide comprehensive primary care services. The other type of hospital has 24 to 49 beds providing additional inpatient, casualty and emergency services. These hospitals also provide preventive services including maternal and child health (MCH), environmental sanitation and school health services.

(ii) At the district and regional levels, the curative services are provided by district hospitals with 50 to 160 beds and regional hospitals with 200 or more beds. These hospitals have extensive inpatient and out-patient services, including specialized services in medicine, surgery, paediatrics and maternity. The three major hospitals in Muscat - the Royal, Khoula and Al Nahdha - also provide tertiary care and act as national referral hospitals.

(2) Directorate-General of Preventive Medicine

This Directorate-General administers a network of units which conduct preventive programmes comprising maternal and child health (including immunization), environmental health, control of communicable diseases and health promotion. The control of communicable diseases includes vertical programmes for the control of Malaria, Trachoma, Tuberculosis, Diarrhoeal diseases, Respiratory diseases as well as the Expanded Programme of Immunization.

1 GENERAL INFORMATION

While no census has yet been undertaken in the Sultanate, both population sizes and vital statistics are required for the planning and evaluation of health services. Based on information available at the Ministry of Health, Table 1.1 shows the best estimates available of the vital statistics for the last ten years.

The infant mortality rate is generally accepted as an overall indicator of the health of a country as it is affected by the provision of health services (curative and preventive), the utilization of these services by the population, and the quality of the environment in which the population lives, each of these being an important factor in the risk of mortality amongst the very young. The significant decline in the infant mortality over the last ten years is an indication of the improved provision of health services to the very young and to an overall improvement in the general standard of living.

The most noticeable features of Table 1.1 are the high birth rates and hence high natural increase rates. The birth rate of 44.9 per 1,000 population in 1990 is among the highest in the world due to the high fertility rates among women of all ages, especially those aged 30-39. With the majority of births now surviving, due to improved maternal and child health care, the infant mortality rate has more than halved over the last decade to about 29 per 1,000 livebirths in 1990. The combination of the high birth rate and the low overall death rate results in a very high estimated natural increase rate of 3.7% in 1990. At this rate, the population of Oman will double every 20 years.

As a measure of the contribution of the provision of health services to the improved health of the population, Table 1.2 shows the trend in health service indicators for the last 5 years. Each indicator has continued to improve over this period. There were no major changes in 1990, but additional beds were added to some of the busier hospitals.

TABLE 1.1**ESTIMATED OMANI NATIONAL POPULATION STATISTICS 1980-1990****(A) ESTIMATED VITAL RATES**

YEAR	BIRTH RATE (per 1000 population)	DEATH INFANTS (per 1000 livebirths)	RATES OTHER (per 1000 population)	OVERALL (per 1000 population)	NATURAL INCREASE RATE (%)
1980	50	64	10.0	13.3	3.7
1981	50	59	9.5	12.5	3.7
1982	50	55	9.0	11.8	3.8
1983	50	51	8.6	11.2	3.9
1984	49	48	8.1	10.5	3.8
1985	48	45	7.7	9.9	3.8
1986	47	42	7.4	9.4	3.8
1987	47	38	7.0	8.8	3.8
1988	46	34	6.6	8.2	3.8
1989	45.4	31	6.3	7.7	3.8
1990	44.9	29	6.3	7.6	3.7

SOURCES**(1) BIRTH RATES -**

The results of applying the age-specific fertility rates found in the 1988 Maternal and Child Health survey to the estimated age/sex distribution of the population

(2) INFANT MORTALITY RATES -

55 in 1982 and 45 in 1985 (Child Mortality Survey 1986)
34 in 1988 (Maternal and Child Health Survey 1988)
Interpolation and extrapolation for other years

(3) OVERALL MORTALITY -

The results of applying the west life tables to the estimated age/sex distribution of the population

TABLE 1.2**HEALTH INDICATORS : 1985 - 1990**

(Combined Data for both Ministry of Health and
all Other Government and Private Organizations)

INDICATOR	1985	1986	1987	1988	1989	1990
TOTAL BEDS.....	3,210	3,348	3,455	3,859	3,952	4,158
TOTAL DOCTORS.....	1,033	1,096	1,243	1,371	1,392	1,557
TOTAL NURSES.....	2,420	2,533	3,467	3,810	3,866	4,286
TOTAL DENTISTS.....	65	80	83	96	97	99
TOTAL PHARMACISTS.....	213	224	227	235	235	269
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
HOSPITAL BEDS/10,000 POPN.....	23.6	24.4	25.0	27.2	26.9	27.5
DOCTORS/10,000 POPULATION.....	7.6	8.0	9.0	9.7	9.5	10.3
NURSES/10,000 POPULATION.....	17.8	18.5	25.1	26.8	26.3	28.4
DENTISTS/10,000 POPULATION....	0.5	0.6	0.6	0.7	0.7	0.7
PHARMACISTS/10,000 POPN.....	1.6	1.6	1.6	1.7	1.6	1.8
- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
POPULATION/HOSPITAL BED.....	420	410	400	370	370	360
POPULATION/DOCTOR.....	1,320	1,250	1,110	1,040	1,060	970
POPULATION/NURSE.....	560	540	400	370	380	350
POPULATION/DENTIST.....	20,900	17,100	16,600	14,800	15,200	15,300
POPULATION/PHARMACIST.....	6,400	6,100	6,100	6,000	6,300	5,600

2. DISTRIBUTION AND UTILIZATION OF CURATIVE SERVICES

Table 2.1 shows the regional distribution of the curative services of 47 hospitals, 3 maternity centres and 91 health centres which were operational under the Ministry of Health at the end of 1990.

At the end of 1990, the hospitals and maternity centres had a total of 3,431 beds compared with 3,360 beds at the end of 1989. Their distribution by region, hospital and specialty is shown in Table 2.2. Each region is well equipped, with the number of hospital beds approximately proportional to the region's population. The only exception to this is the Muscat region whose beds are a mixture of general beds to serve the Muscat population alone, and tertiary care beds (to provide the specialist services not routinely available in general hospitals) for the whole Sultanate. The underprovision of beds in the Batinah regions is currently being amended with extensions to the Sohar and Rustaq hospitals.

The utilization of the hospitals' inpatient services is shown in Table 2.3. Almost 183.2 thousand patients were discharged from the 47 hospitals in 1990. On average, the hospitals cared for 2,377 inpatients per day, who stayed for an average of 4.7 days. This meant that the hospital beds were occupied, on average, 70% of the year - almost the same as for 1989. Smaller hospitals, with less demand had, on average a lower occupancy rate, while some of the busier hospitals even ran at over 100% occupancy (this meant that extra beds had to be used temporarily to cope with the demand).

The utilization of hospital outpatient services is shown in Table 2.4. A total of 5.6 million patients were seen during 1990, which was a 2% increase over the 5.5 million in 1989. The three hospitals with the highest throughput were the Al Nahdha H Hospital in Muscat, the Sohar Hospital in Sohar and the Qaboos Hospital in Salalah, each of which saw an average of over 1,100 patients on each of the 365 days of the year.

The utilization of the 91 health centres, 3 maternity centres and mobile medical teams is shown in Table 2.5. A total of 2.3 million patients were seen during 1990 - a 7% increase over the 2.8 million in 1989. The busiest clinics were the Amirat and the Seeb in Muscat and the Birka and Masnah in North Batinah each of which saw an average of over 390 patients each day of the year.

Thus, in hospital outpatient departments and health centres combined a total of 8.6 million outpatients were seen, an average of 5.7 visits per person per year. This is a very high average figure for the total population.

TABLE 2.1**REGIONAL DISTRIBUTION OF CURATIVE UNITS ON 31.12.1990**

REGIONS	HOSPITALS	MATERNITY CENTRES	HEALTH CENTRES	TOTAL
MUSCAT.....	8	0	9	17
JANUBIA.....	5	0	27	32
DAKHILYA.....	8	0	10	18
SHARQIYA.....	10	0	19	29
BATINAH NORTH.....	4	1	8	13
BATINAH SOUTH.....	5	0	7	12
DHAHIRA.....	4	1	8	13
MUSANDAM.....	3	1	3	7
TOTAL	47	3	91	141

TABLE 2.2

HOSPITAL BEDS BY SPECIALTY AT END OF DECEMBER, 1990

BEDS BY SPECIALTY								
REGION HOSPITAL	TOTAL BEDS	PAEDI ATRIC	ADULT MEDICAL	ADULT SURGICAL	ADULT MIXTURE	OBSTETRIC GYNAE	ICU CCU	OTHER
MUSCAT								
ROYAL.....	645	137	152	163	0	141	32	20
KHOULA.....	415	67	0	168	0	145	6	29
AL-NAHDHA.....	205	32	28	107	0	0	4	34
AR-RAHMA.....	80	0	77	0	0	0	0	3
ASSAADA.....	...(16)	0	0	0	0	...(16)	0	0
IBN-SINA.....	81	0	81	0	0	0	0	0
QURIYAT.....	37	13	16	0	0	8	0	0
MUSCAT.....	2	0	0	0	0	0	0	2
TOTAL:	1465	249	354	438	0	294	42	88
JANUBIA								
QABOOS.....	316	69	92	80	0	53	4	18
TAWI ATTAIR.....	6	0	0	0	6	0	0	0
RAKHUYUT.....	18	5	1	0	12	0	0	0
SUDH.....	18	5	13	0	0	0	0	0
MADINAT AL-HAQ.....	18	5	13	0	0	0	0	0
TOTAL:	376	84	119	80	18	53	4	18
DHAKILYA								
SUMAIL.....	74	18	20	20	0	10	0	6
NIZWA.....	169	68	19	30	0	42	2	8
BAHLA.....	42	12	18	0	0	12	0	0
HAIMA.....	40	9	15	8	0	8	0	0
IZKI.....	20	6	0	0	8	6	0	0
ADAM.....	31	9	0	0	13	7	0	2
JABAL AKHDAR.....	4	2	0	0	0	2	0	0
DUQUM.....	12	6	6	0	0	0	0	0
TOTAL:	392	130	78	58	21	87	2	16
SHARQIYA								
IBRA	67	27	14	16	0	10	0	0
SUR.....	124	28	25	40	0	31	0	0
B.B.BU ALI.....	70	26	16	12	0	12	0	4
B.B.BU HASSAN.....	52	18	16	6	0	8	0	4
SINAW	41	12	0	0	14	8	0	7
MASIRAH.....	29	9	0	0	20	0	0	0
WADI DIMA & TAYEEN...	35	0	0	0	0	0	0	35
WADI BANI KHALID.....	8	2	3	0	0	3	0	0
SAMAD AL-SHAAN.....	27	6	0	15	0	6	0	0
BIDIYA.....	26	8	0	0	12	6	0	0
TOTAL:	479	136	74	89	46	84	0	50

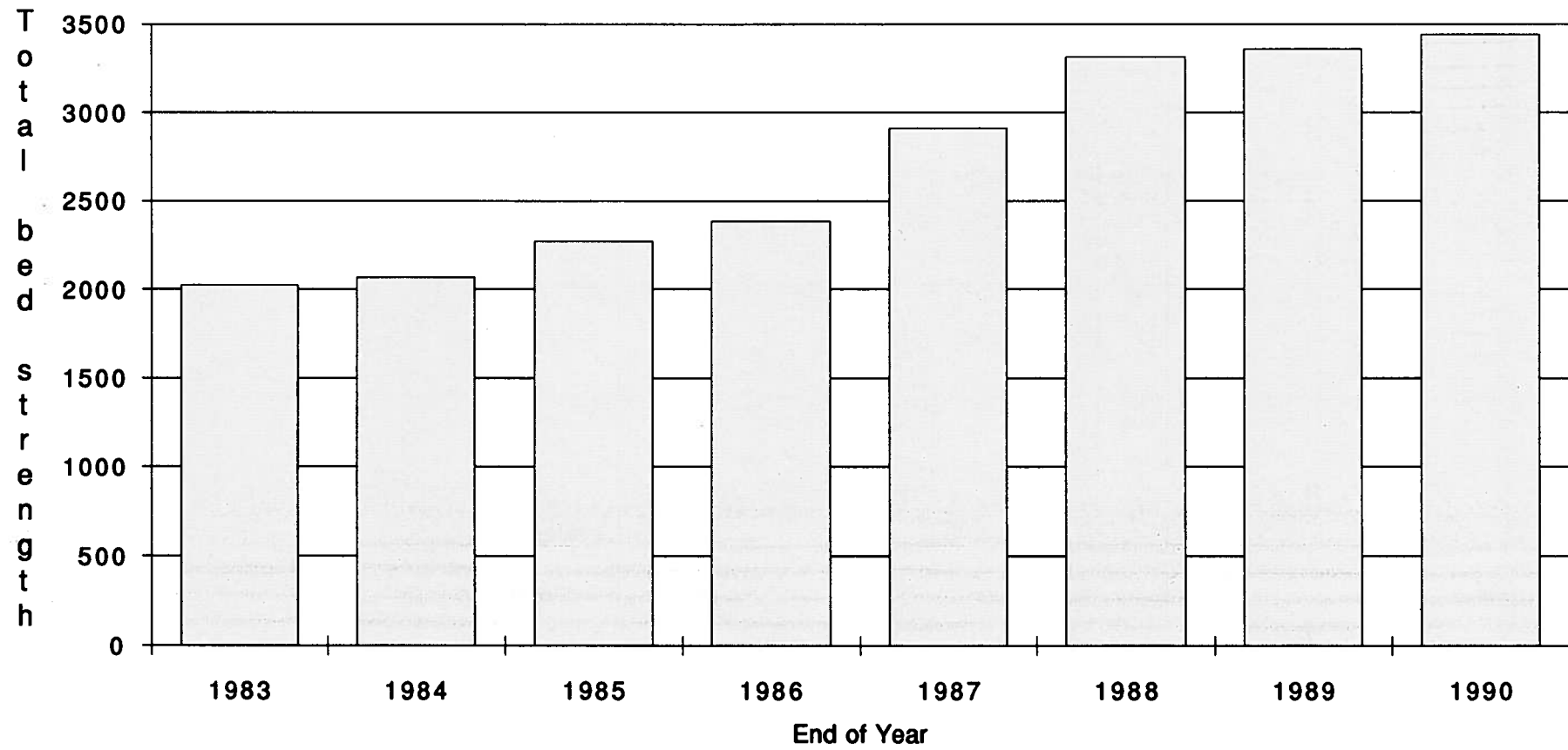
TABLE 2.2 (cont)

HOSPITAL BEDS BY SPECIALTY AT END OF DECEMBER, 1990

BEDS BY SPECIALTY								
REGION	TOTAL BEDS	PAEDI ATRIC	ADULT MEDICAL	ADULT SURGICAL	ADULT MIXTURE	OBSTETRIC GYNAE	ICU CCU	OTHER
HOSPITAL								
NORTH BATINAH								
SOHAR.....	184	68	18	43	0	38	2	15
SAHAM.....	52	16	18	0	0	18	0	0
WADI SARAMI.....	12	0	9	0	0	3	0	0
WADI HAWASNA.....	14	6	5	0	0	3	0	0
HEEBI (M).....	2	0	0	0	0	2	0	0
TOTAL:	264	90	50	43	0	64	2	15
SOUTH BATINAH								
RUSTAQ.....	116	41	17	14	0	38	2	4
WADI BANI GHAFIR....	16	4	0	0	2	6	0	4
WADI MISTAL.....	14	6	3	0	3	2	0	0
WADI HEMLI.....	14	6	5	0	0	3	0	0
WADI BANI KHAROOS..	16	6	0	0	10	0	0	0
WADI SAHTAN H.C.....	6	0	0	0	0	6	0	0
TOTAL:	182	63	25	14	15	55	2	8
DHAHIRA								
TANAM.....	94	26	19	3	16	22	2	6
BURAIMI.....	75	17	23	26	0	6	0	3
YANKUL.....	9	3	3	0	0	3	0	0
MAHDHA (M).....	4	0	0	0	0	4	0	0
TOTAL:	182	46	45	29	16	35	2	9
MUSANDAM								
BUKHA.....	13	0	13	0	0	0	0	0
BAYA.....	26	0	0	0	16	10	0	0
KHASAB.....	50	10	16	10	0	8	0	6
MADHA (M).....	2	0	0	0	0	2	0	0
TOTAL:	91	10	29	10	16	20	0	6
NATIONAL TOTAL:	3431	808	774	761	132	692	54	210

(M) = Maternity Centre

MINISTRY OF HEALTH HOSPITAL BEDS
1983 - 1990



MINISTRY OF HEALTH HOSPITAL BEDS **RATES PER 1000 POPULATION - 1990**

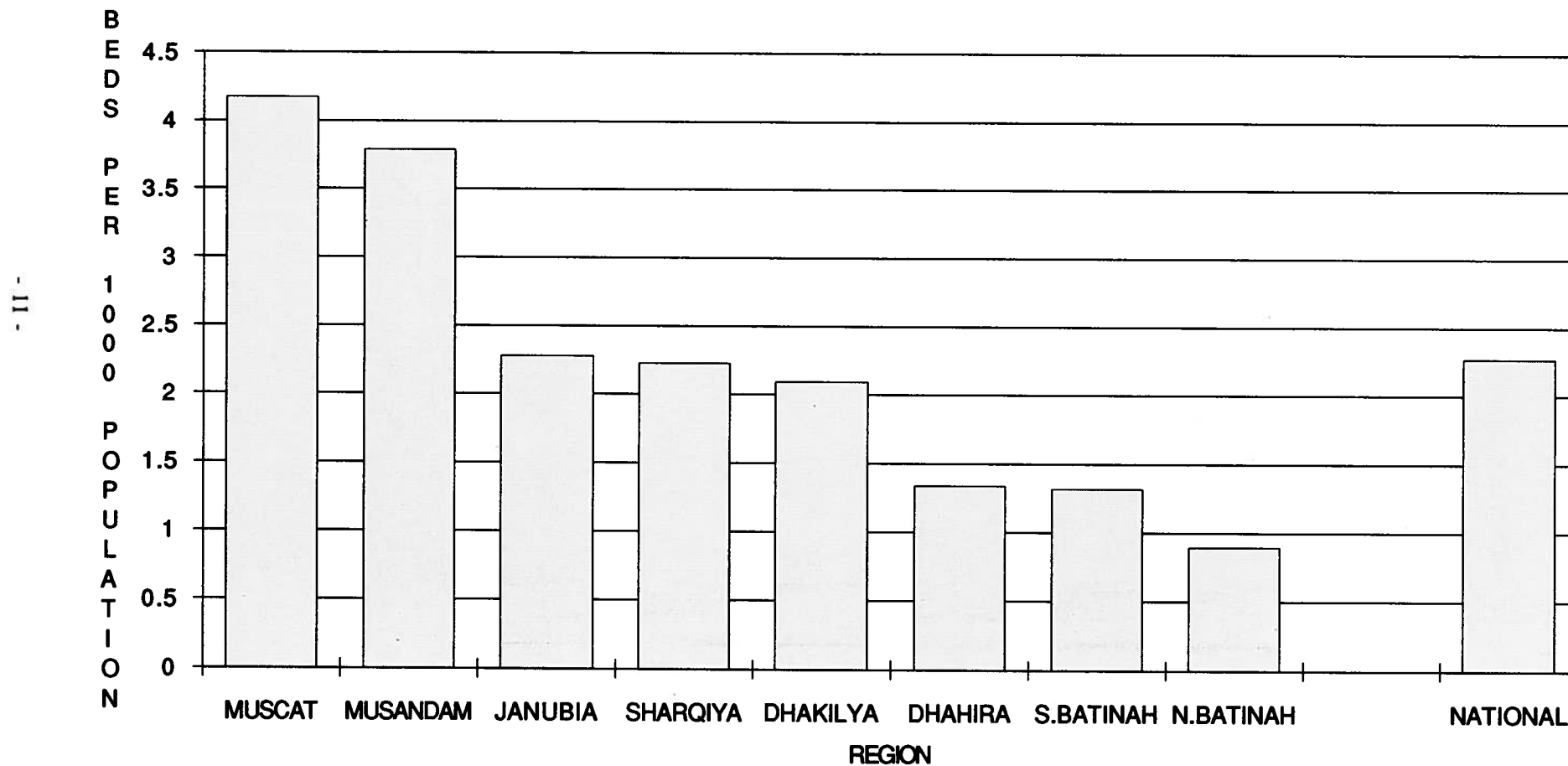


TABLE 2.3

MINISTRY OF HEALTH HOSPITALS - 1990
HOSPITAL INPATIENT ADMINISTRATIVE STATISTICS

HOSPITAL / REGION	BED STRENGTH AS ON 31.12.90	DISCHARGES (Including Deaths)			DEATHS			TOTAL PATIENT DAYS	HOSPITAL STATISTICS		
		M	F	TOTAL	M	F	TOTAL		% OCCUP	MEAN STAY	AVERAGE PATIENTS PER DAY
									-ANCY		
MUSCAT :											
ROYAL.....	645	11,510	15,197	26,707	452	292	744	171,847	73%	6.4	471
KHOULA.....	415	5,295	11,198	16,493	61	36	97	107,173	71%	6.5	294
AL-NAHDHA.....	205	2,724	1,754	4,478	1	1	2	29,873	40%	6.7	82
AR-RAHMA.....	80	317	181	498	24	8	32	18,650	64%	37.4	51
QURIYAT.....	37	862	1,903	2,765	15	4	19	8,796	65%	3.2	24
IBN-SINA.....	81	432	216	648			0	51,923	176%	80.1	142
TOTAL	1,463	21,140	30,449	51,589	553	341	894	388,262	73%	7.5	1064
AL-BATINAH (NORTH):											
SOHAR.....	184	6,105	10,917	17,022	173	123	296	54,359	81%	3.2	149
SAHAM.....	52	1,045	4,543	5,588	4	0	4	9,916	52%	1.8	27
WADI SARAMI.....	12	288	397	685			0	1,339	31%	2.0	4
WADI AL-HAWASNA	14	66	149	215			0	514	10%	2.4	1
TOTAL :	262	7,504	16,006	23,510	177	123	300	66,128	69%	2.8	181
AL-BATINAH (SOUTH):											
RUSTAQ.....	116	2,987	6,973	9,960	74	41	115	36,121	85%	3.6	99
W.B.GHAFFIR.....	16	315	615	930			0	2,701	46%	2.9	7
WADI MISTAL.....	14	30	116	146	1	0	1	947	19%	6.5	3
WADI HEMLY.....	14	294	407	701	1	1	2	1,828	36%	2.6	5
WADI B. KHAROOS.....	16	180	239	419	0	2	2	1,701	29%	4.1	5
TOTAL :	176	3,806	8,350	12,156	76	44	120	43,298	67%	3.6	119
TOTAL AL-BATINAH	438	11,310	24,356	35,666	253	167	420	109,426	68%	3.1	300
DAKHILYA :											
SUMAIL.....	74	2,066	3,282	5,348	28	31	59	19,571	72%	3.7	54
NIZWA.....	169	4,570	5,928	10,498	73	48	121	48,018	78%	4.6	132
BAHLA.....	42	1,504	2,985	4,489	10	8	18	12,500	82%	2.8	34
HAIMA.....	40	589	396	985	4	1	5	3,172	22%	3.2	9
IZKI.....	20	688	1,566	2,254	2	2	4	4,930	68%	2.2	14
ADAM.....	31	1,076	1,444	2,520	6	4	10	8,725	77%	3.5	24
DUQUM.....	12	332	352	684	1	0	1	1,811	41%	2.6	5
JABAL AKHDAR.....	4	43	97	140			0	300	21%	2.1	1
TOTAL :.....	392	10,868	16,050	26,918	124	94	218	99,027	69%	3.7	271

(CONT) TABLE 2.3

MINISTRY OF HEALTH HOSPITALS - 1990
HOSPITAL INPATIENT ADMINISTRATIVE STATISTICS

HOSPITAL / REGION	BED STRENGTH AS ON 31.12.90	DISCHARGES (Including Deaths)			DEATHS			TOTAL PATIENT DAYS	HOSPITAL STATISTICS		
		M	F	TOTAL	M	F	TOTAL		% OCCUP -ANCY	MEAN STAY	AVERAGE PATIENTS PER DAY
SHARQIYA :											
IBRA.....	67	1,842	3,169	5,011	28	21	49	17,227	70%	3.4	47
SUR.....	124	2,334	4,763	7,097	41	25	66	28,512	63%	4.0	78
B.B. BU ALI.....	70	1,990	3,352	5,342	22	22	44	18,463	72%	3.5	51
B.B. BU HASSAN.....	52	1,165	1,540	2,705	7	5	12	9,798	52%	3.6	27
SINAW.....	41	1,207	2,383	3,590	15	15	30	10,179	68%	2.8	28
MASIRAH.....	29	955	1,156	2,111	5	5	10	6,892	65%	3.3	19
W.DIMA & TAYEEN.....	35	1,182	1,506	2,688	4	3	7	7,361	58%	2.7	20
WADI BANI KHALID.....	8	174	364	538			0	1,406	48%	2.6	4
SAMAD AL-SHAAN.....	27	645	1,223	1,868	2	1	3	6,213	63%	3.3	17
BIDIYA.....	26	802	1,030	1,832	4	0	4	4,686	49%	2.6	13
TOTAL :.....	479	12,296	20,486	32,782	128	97	225	110,737	63%	3.4	303
AL-DHAHIRA											
TANAM.....	94	4,415	6,692	11,107	51	44	95	36,610	107%	3.3	100
BURAIMI.....	75	2,126	2,233	4,359	24	21	45	17,304	63%	4.0	47
YANKUL.....	9	210	834	1,044			0	1,594	49%	1.5	4
TOTAL :.....	178	6,751	9,759	16,510	75	65	140	55,508	85%	3.4	152
JANUBIA :											
QABOOS.....	316	5,100	8,663	13,763	90	72	162	83,783	73%	6.1	230
TAWI ATTAIR.....	6	79	144	223			0	459	21%	2.1	1
RAKHYUT.....	18	140	168	308			0	1,347	21%	4.4	4
SUDH.....	18	144	234	378			0	1,594	24%	4.2	4
MADINAT AL-HAQ.....	18	210	256	466			0	1,572	24%	3.4	4
TOTAL :.....	376	5,673	9,465	15,138	90	72	162	88,755	65%	5.9	243
MUSANDAM :											
BUKHA.....	13	173	266	439	1	0	1	1,050	22%	2.4	3
DIBBA (old BAYA).....	26	753	881	1,634	5	1	6	4,828	51%	3.0	13
KHASAB.....	50	1,226	1,299	2,525	15	9	24	9,850	54%	3.9	27
TOTAL :.....	89	2,152	2,446	4,598	21	10	31	15,728	48%	3.4	43
NATIONAL TOTAL	3,415	70,190	113,011	183,201	1,244	846	2,090	867,443	70%	4.7	2,377

(This table does not include the three maternity centres with 8 beds, the Sahtan Health Centre with 6 beds and Muscat Hosp with 2 beds)

MINISTRY OF HEALTH HOSPITALS
INPATIENT DISCHARGES - 1983 - 1990

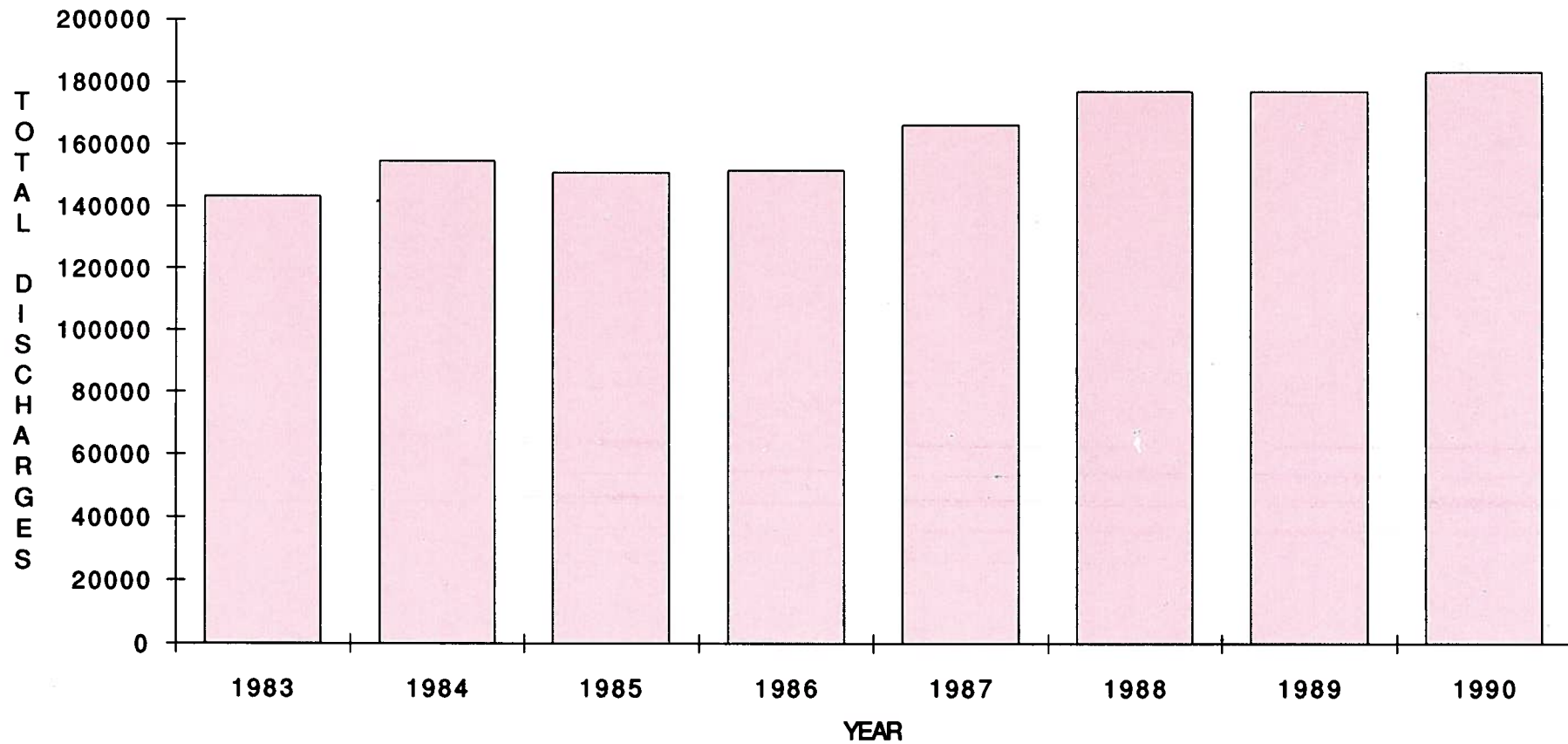


TABLE 2.4

**ATTENDANCE IN OUT-PATIENT DEPARTMENTS
OF HEALTH MINISTRY HOSPITALS - 1990**

HOSPITALS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE PER WORKING DAY(1)
REGIONS		
MUSCAT		
ROYAL.....	358,757	983
KHOULA.....	107,946	296
AL-NAHDHA.....	416,376	1,141
AR-RAHMA.....	127,201	348
ASSAADA(2).....	12,524	34
IBN-SINA.....	30,005	82
QURIYAT.....	84,403	231
MUSCAT.....	89,484	245
TOTAL:	1,226,696	3,361
JANUBIA		
QABOOS.....	487,738	1,336
TAWI ATTAIR.....	31,454	86
RAKHYUT.....	7,002	19
SUDH.....	24,081	66
MADINAT AL-HAQ.....	26,206	72
TOTAL:	576,481	1,579
DAKHILYA		
SUMAIL.....	185,576	508
NIZWA.....	244,255	669
BAHLA.....	152,329	417
HAIMA.....	15,775	43
IZKI.....	107,944	296
ADAM.....	93,019	255
JABAL AKHDAR.....	24,527	67
DUQUM.....	22,541	62
TOTAL:	845,966	2,318

(CONT)TABLE 2.4

**ATTENDANCE IN OUT-PATIENT DEPARTMENTS
OF HEALTH MINISTRY HOSPITALS - 1990**

HOSPITALS REGIONS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE PER WORKING DAY(1)
SHARQIYA		
IBRA	181,197	496
SUR.....	200,326	549
B.B.BU ALI.....	198,697	544
B.B.BU HASSAN.....	93,329	256
SINAW	156,194	428
MASIRAH.....	67,256	184
WADI TAYEEN.....	56,388	154
WADI BANI KHALID.....	22,294	61
SAMAD AL-SHAAN.....	107,310	294
BIDIYA.....	73,007	200
TOTAL:	1,155,998	3,167
NORTH BATINAH		
SOHAR.....	482,443	1,322
SAHAM.....	213,692	585
WADI SARAMI.....	10,122	28
WADI HAWASNA.....	11,305	31
TOTAL:	717,562	1,966
SOUTH BATINAH		
RUSTAQ.....	207,439	568
WADI MISTAL.....	7,925	22
WADI HEMLI.....	32,605	89
WADI BANI GHAFIR.....	52,135	143
WADI BANI KHAROOS.....	21,930	60
TOTAL:	322,034	882
DHAHIRA		
TANAM.....	251,489	689
BURAIMI.....	205,145	562
YANKUL.....	94,257	258
WADI JIZZI.....	27,821	76
TOTAL:	578,712	1,586
MUSANDAM		
BUKHA.....	25,833	71
DIBBA.....	74,372	204
KHASAB.....	102,059	280
TOTAL:	202,264	554
NATIONAL TOTAL:	5,625,713	15,413

NOTE:

- (1) Total attendances divided by 365 days.
(2) Closed in November and December, 1990.

TABLE 2.5

**ATTENDANCES IN HEALTH CENTRES &
MATERNITY CENTRES - 1990**

HEALTH CENTRES & MATERNITY CENTRES REGIONS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE PER WORKING DAY(1)
(1) MUSCAT		
AMIRAT.....	145,674	399
DAGMAR.....	24,441	67
HAIL AL GHAF.....	17,141	47
MAZARA.....	14,387	39
NEW AL KHODH.....	49,098	213
OLD AL KHODH.....	14,510	40
SEEB.....	205,200	562
SIYA.....	27,669	76
YETI.....	37,043	101
TOTAL:	535,163	1,466
(2) JANUBIA		
ASHUWAIMIYAH.....	5,393	15
DHALQUT.....	13,935	38
GHADOW.....	11,665	32
HADBEEN.....	5,956	16
HAIGHAF.....	10,464	29
HASIK.....	6,338	17
JIBJAT.....	10,345	28
KAHIL.....	17,651	48
KHADRAFI.....	8,356	23
KURIA MURIA.....	3,795	10
LQBI.....	7,121	20
MAKINAT SHAHAN.....	12,781	35
MARSADIT.....	2,395	7
MIRBAT.....	43,074	118
MUDHAI.....	8,260	23
MUQSHAN.....	1,339	43
PORT RAYSUT.....	3,825	10
QEIRON HEIRITI.....	20,604	56
RIMA.....	1,237	3
SHAHIB ASSAIB.....	20,053	55
SHARBITHAT.....	5,223	14
SHELEEM.....	15,428	42
SOGHARA.....	5,139	14
TAQA.....	40,866	112
TEYTUM.....	12,538	34
THUMRAIT.....	21,527	59
UMBUSHEQ.....	5,792	16
M.M.T. IN CENTRAL JABAL.....	2,977	8
M.M.T. IN EASTERN JABAL.....	23,471	64
M.M.T. IN EASTERN COASTAL.....	7,460	20
M.M.T. IN NEGD & C. OMAN.....	17,767	49
M.M.T. IN WESTERN JABAL.....	7,878	22
TOTAL:	380,653	1,043

(CONT) TABLE 2.5

**ATTENDANCES IN HEALTH CENTRES &
MATERNITY CENTRES - 1990**

HEALTH CENTRES & MATERNITY CENTRES REGIONS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE PER WORKING DAY(1)
(3) DAKHILYA		
BARKAT AL MOUZ.....	24,006	66
BISIYA	38,507	105
FANJA.....	61,799	169
GHAFAT.....	34,362	94
HAMRA.....	83,437	229
MAMoor.....	35,063	96
MANAH.....	44,077	121
QURIYATEEN.....	32,534	89
WADI BANI RAUWAHA.....	26,167	72
WADI MAHRAM.....	16,848	46
TOTAL:	396,800	1,087
(4) SHARQIYA		
AFLAJ.....	18,214	50
AIGA.....	12,904	35
ASHKARA.....	34,455	94
DHAHIR.....	10,934	30
DREEZ.....	10,645	29
FALAJ AL MASHAIKH.....	14,664	40
GHAINA.....	20,113	55
KAMIL.....	41,192	113
MAHOOT.....	39,189	107
MUDHAIBI.....	46,778	128
MUDHERIB.....	14,554	40
QUMAILA**	10,601	29
RAS AL HAD.....	15,731	43
RUWAIIS.....	20,710	57
SUWAIH**	13,575	37
TIWI.....	12,358	34
WAFI.....	30,501	84
AL AYOON*.....	11,850	35
WADI BANI JABER*.....	756	12
TOTAL:	379,724	1,040
(5a) NORTH BATINAH		
ABU BAQRA.....	18,429	50
KHABURA.....	105,888	290
KHATMAT MALAHA	7,489	21
LIWA.....	100,645	276
MASHAIQ	8,164	22
SHINAS.....	70,526	193
SUWAIQ.....	101,513	278
WADI SHAFAN.....	6,118	17
HEEBI (M.C.).....	24,068	66
TOTAL:	442,840	1,213

(CONT) TABLE 2.5**ATTENDANCES IN HEALTH CENTRES &
MATERNITY CENTRES - 1990**

HEALTH CENTRES & MATERNITY CENTRES REGIONS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE PER WORKING DAY(1)
(5b) SOUTH BATINAH		
AFI.....	39,698	109
AWABI.....	31,201	85
BIRKA.....	173,232	475
HOQEIN.....	31,932	87
MASNAH.....	175,927	482
NAKHAL.....	38,493	105
WADI SAHTAN.....	29,089	80
TOTAL:	519,572	1,423
(6) AL-DHAHIRA		
DHANK.....	45,424	124
FAYADH.....	10,410	29
Hajeermat.....	33,124	91
IBRI.....	66,291	182
MAMUR.....	19,742	54
MUQNIYAT.....	45,318	124
SUNAINA.....	15,315	42
WADI FIDA.....	16,052	44
MAHDHA (M.C.).....	20,677	57
TOTAL:	272,353	746
(7) MUSANDAM		
KUMZAR.....	7,549	21
LIMA.....	13,257	36
MADHA (M.C.).....	22,926	63
BUKHA.....	***	
TOTAL:	43,732	120
NATIONAL TOTAL:	2,970,837	8,139

(M.C.) = Maternity Centre

(M.M.T.) = Mobile Medical Team

NOTES

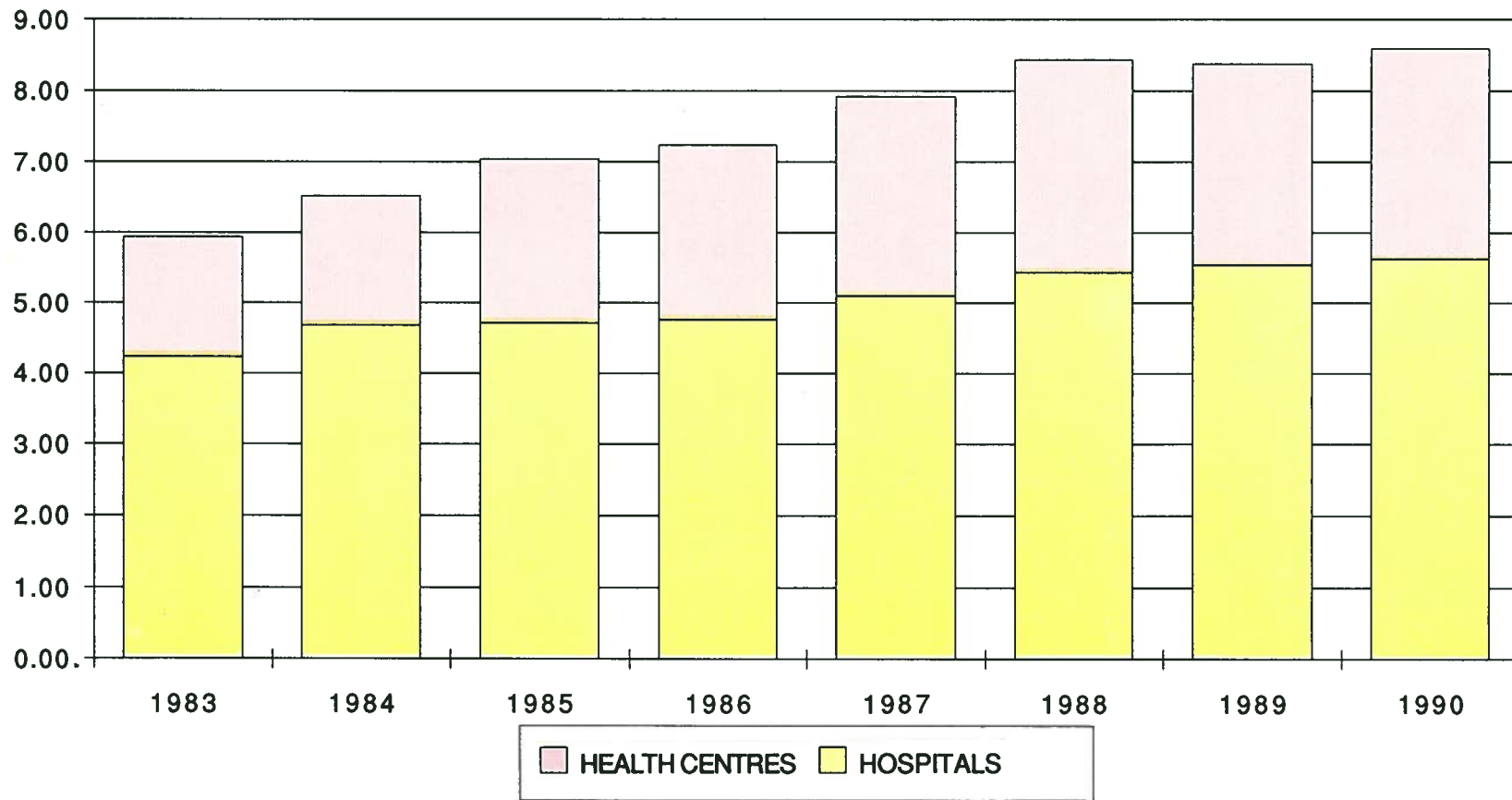
- Total attendances divided by 365 days except Al Ayoon with 334 days and Wadi Bani Jaber Health Centre with 61 days.
- * Al Ayoon started functioning effective February 1 and Wadi Bani Jaber Health Centre effective November 1, 1990.
- ** Closed from July to August, 1990.
- *** The data is included in Bukha Hospital.

OUTPATIENT ATTENDANCE 1983 - 1990

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3 MORBIDITY

The morbidity groups of all inpatients discharged from hospitals in 1990 is shown in Table 3.1. This is the number of discharges for the 18 standard Disease Groups. While not an illness, Normal Deliveries (Group 11b) had the largest number of discharges in 1990, accounting for 36% of all female discharges.

Of the disease groups, those of the respiratory system (Group 8) accounted for the highest proportion of cases with over 23 thousand patients. The infectious diseases (Group 1) showed a marked increase from 1989 with the number of cases increasing from 18.6 thousand in 1989 to 20.7 thousand in 1990. This was mainly due to an increase in the number of malaria cases which increased from its high of 4,397 in 1989 to 6,828 in 1990 - close to the 1988 figure of 6,793. The main cause of infectious diseases continued to be gastro-enteritis and diarrhoea.

The next highest cause of inpatient admission was injuries and poisoning for which 14 thousand cases were admitted. This was a 5 % increase over the 1989 figure which was itself 6% higher than the number of admissions in 1988. The three most common causes are, firstly, non-specific injuries (i.e. excluding fractures, open wounds and burns) followed by poisonings and ,thirdly, fractures of the humerus, radius and ulna.

The regional distribution of inpatient morbidity is shown in Tables 3.2 and 3.3. Table 3.2 shows the numbers of patients treated for each disease in each region in 1990, i.e. the workload on the hospitals in each region. However, each region has a different sized population and so the numbers of admissions do not reflect the pattern of morbidity around the country. In order to compare the regional morbidity patterns, Table 3.3 shows the rate of admissions per 10,000 population in each region.

Thus admissions for gastroenteritis and diarrhoea are highest by far in Sharqiya and Musandam, while being relatively low in both the Muscat and Batinah regions. (It must be remembered that some of the hospitals of the Muscat region are referral hospitals which take cases from all over the Sultanate. Hence high rates for Muscat e.g. for malignancies, do not necessarily imply a higher than expected incidence of a disease.)

The pattern of inpatient morbidity only reflects the distribution of the more serious diseases that require admission for treatment. Table 3.4 shows the conditions treated on an outpatient basis in both hospitals and health centres. It should reflect the incidence of each disease as a "new case" is defined as the first visit during the episode of an illness i.e. multiple visits for the same problem are not included. However, it is recognised that some hospitals and health centres do not strictly adhere to this definition and hence the figures may not reflect the true incidence of each disease.

There was a total of 5.6 million "new visits" during 1990, a 4% increase over the 5.6 million of 1989. Diseases of the respiratory system accounted for 1.9 million cases, which was the largest proportion (33%) of all "new cases". Infectious diseases accounted for 492 thousand cases, the major diseases being gastroenteritis (280 thousand), malaria (40 thousand), and trachoma (1 7 thousand). This demonstrates the importance of the control programmes currently in operation to control diarrhoeal diseases, malaria and trachoma. There were wide regional variations in these diseases - Sharqiya having the highest rate for gastroenteritis, Batinah for malaria and Dakhilya for trachoma.

The numbers of cases of notifiable diseases reported from 1985 to 1990 are shown in Table 3.5. This only includes cases notified, and is not necessarily the complete incidence of the disease. Influenza had by far the highest number of cases, followed by malaria., which had an alarming increase to almost double its 1989 level While the notifications of some diseases have declined consistently (e.g. tuberculosis, diphtheria, tetanus), others have reached what may be their endemic levels with fluctuations up or down each year (e.g. typhoid, amoebiasis, brucellosis, measles, mumps).

TREATMENT ABROAD

Under the Government's commitment to provide free medical treatment, patients who cannot be treated locally are sent for treatment abroad by the Ministry of Health. Details of patients treated abroad in 1990 are shown in Table 3.6.

A total of 418 patients were treated abroad, which was 4% lower than the 436 in 1989. The principal countries used were the U.K.(41%), Jordan (28%) and India (26%).

The highest proportion of conditions were Cardiac cases, comprising 61% of the total sent abroad. Neoplastic (13%), Ophthalmic (7%), Nephrological/Urological (4%) and Neurological (4%) conditions were the other main causes for treatment abroad.

TABLE 3.1

INPATIENT MORBIDITY STATISTICAL REPORT

GENERAL GROUPS

ALL HOSPITALS

COMPARISON OF 1990 AND 1989

ICD GROUP CODE	DISEASE / CONDITION	TOTAL DISCHARGES IN 1990 (alive and dead)			TOTAL IN 1989	% CHANGE	DEATHS IN 1990	CASE FATALITY RATE
		MALE	FEMALE	TOTAL				
1 -	INFECTIOUS AND PARASITIC DISEASES :	11,299	9,352	20,651	18,682	11%	175	1%
2 -	NEOPLASMS.....	1,076	1,034	2,110	1,849	14%	190	9%
3 -	ENDOCRINE, NUTRITIONAL, METABOLIC & IMMUNITY DISORDERS:.....	1,363	1,663	3,026	2,699	12%	48	2%
4 -	DISEASES OF THE BLOOD & BLOOD-FORMING ORGANS :	1,997	1,835	3,832	3,729	3%	19	0%
5 -	MENTAL DISORDERS :	657	670	1,327	1,294	3%	1	0%
6 -	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS:.....	3,355	2,522	5,877	6,395	-8%	80	1%
7 -	DISEASES OF THE CIRCULATORY SYSTEM :	5,277	4,162	9,439	9,031	5%	666	7%
8 -	DISEASES OF THE RESPIRATORY SYSTEM :	12,820	10,317	23,137	22,706	2%	145	1%
9 -	DISEASES OF THE DIGESTIVE SYSTEM :	5,509	4,255	9,764	9,621	1%	92	1%
10 -	DISEASES OF THE GENITOURINARY SYSTEM :	3,427	5,191	8,618	8,413	2%	53	1%
11 - A	COMPLICATIONS OF PREGNANCY & BIRTH :	0	17,138	17,138	16,843	2%	1	0%
11 - B	NORMAL DELIVERY.....	0	40,946	40,946	40,292	2%	0	0%
12 -	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE :	3,107	1,441	4,548	4,241	7%	0	0%
13 -	DISEASES OF THE MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE:.....	1,716	1,293	3,009	2,952	2%	6	0%
14 -	CONGENITAL ANOMALIES :	984	590	1,574	1,708	-8%	76	5%
15 -	CONDITIONS ORIGINATING IN THE PERINATAL PERIOD :	2,072	1,725	3,797	3,499	9%	300	8%
16 -	SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS :	4,772	3,620	8,392	8,301	1%	89	1%
17 -	INJURIES AND POISONING:.....	9,685	4,480	14,165	13,553	5%	144	1%
18 -	(V-CODES) OTHER REASONS FOR CONTACT WITH HEALTH SERVICES.....	1,074	777	1,851	1,015	82%	5	0%
	TOTAL.....	70,190	113,011	183,201	176,823	4%	2090	1%

TABLE 3.2

**MORBIDITY OF INPATIENT DISCHARGES IN 1990 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES**

BTL CODE GROUP	DISEASE/CONDITION GROUP	TOTAL DISCHARGES IN 1990								
		NATIONAL TOTAL	MUSCAT	JANUBIA	DAKHILYA	SHARQIYA	BATINAH (NORTH)	BATINAH (SOUTH)	DHAHIRA	MUSANDAM
019.1	1- INFECTIOUS AND PARASITIC DISEASES :.....	20651	2038	1236	3936	5914	2625	1434	2784	684
052	ACUTE GASTRO-ENTERITIS AND DIARRHOEA	7025	881	735	1134	2167	926	281	644	257
043-049.5	MALARIA	6828	162	6	1484	1920	1285	606	1337	28
	ALL VIRAL DISEASES	3311	272	135	781	1029	136	162	551	245
	2- NEOPLASMS :.....	2110	1621	100	107	95	61	39	63	24
181	3- ENDOCRINE, NUTRITIONAL, METABOLIC AND IMMUNITY DISORDERS:....	3026	955	263	410	454	240	292	316	96
	DIABETES MELLITUS	1958	561	215	268	291	200	80	264	79
200.0-200.1	4- DISEASES OF THE BLOOD & BLOOD-FORMING ORGANS :.....	3832	1760	156	579	312	375	181	380	89
	ALL ANAEMIAS	2741	1580	135	245	251	153	112	191	74
	5- MENTAL DISORDERS :.....	1327	658	153	134	224	6	9	90	53
231	6- DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS:.....	5877	2773	379	814	715	471	168	461	96
REM 230-239	CATARACT	1342	682	93	113	199	65	34	140	16
	ALL OTHER DISEASES OF EYE & ADNEXA	2451	1162	118	440	228	219	36	223	25
279.1	7- DISEASES OF THE CIRCULATORY SYSTEM :.....	9439	2870	684	1363	1405	1384	455	991	287
269.1	ISCHAEMIC HEART DISEASES NOS	2465	578	127	368	267	679	84	306	56
289.2	HYPERTENSIVE DISEASES NOS	1891	382	146	338	365	292	45	197	126
	DISEASES OF PULMONARY CIRCULATION & HEART NOS	1473	556	151	258	202	1	103	187	15
311-312	8- DISEASES OF THE RESPIRATORY SYSTEM :.....	23137	3698	2629	4282	5920	2863	981	2079	685
323	ACUTE UPPER RESPIRATORY INFECTIONS (EXCL. TONSILLITIS)	6240	246	648	656	1808	1706	536	521	119
321	BRONCHITIS, CHRONIC & UNSPECIFIED, EMPHYSEMA & ASTHMA	4319	601	565	695	1471	257	135	385	210
320	PNEUMONIA	3325	536	374	871	921	251	109	191	72
310	ACUTE BRONCHITIS & BRONCHIOLITIS	2972	254	502	892	869	152	91	162	50
315	ACUTE TONSILLITIS	1603	63	198	492	410	233	17	76	114
	CHRONIC DISEASES OF TONSILS AND ADENOIDS	1138	919	104	2	23	42	5	18	25
	9- DISEASES OF THE DIGESTIVE SYSTEM :.....	9764	2782	1128	1363	1779	1106	414	907	285
349.1	GASTRITIS AND DUODENITIS	2609	195	288	501	739	283	142	382	79
342	APPENDICITIS	1735	586	238	215	191	284	70	109	42
343	HERNIA OF ABDOMINAL CAVITY	1250	522	112	114	159	180	40	102	21

(CONT) TABLE 3.2

MORBIDITY OF INPATIENT DISCHARGES IN 1990 BY MAJOR DISEASE GROUPS AND REGIONS

AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES

BTL CODE GROUP	DISEASE/CONDITION GROUP	TOTAL DISCHARGES IN 1990								
		NATIONAL TOTAL	MUSCAT	JANUBIA	DAKHILYA	SHARQIYA	BATINAH (NORTH)	BATINAH (SOUTH)	DHAHIRA	MUSANDAM
350-359.2	10- DISEASES OF THE GENITOURINARY SYSTEM :.....	8618	3051	591	1145	1500	830	366	721	414
	ALL DISEASES OF URINARY SYSTEM	4357	1342	243	687	957	360	225	431	112
380-389.3	11-A COMPLICATIONS OF PREGNANCY & BIRTH :.....	17138	5777	1950	2176	2779	1648	1239	1353	216
	ALL ABORTIONS	6275	1879	629	748	1058	825	511	503	122
40	INDIRECT OBSTETRIC CAUSES	2316	553	510	190	301	249	226	263	24
399.0	EARLY OR THREATENED LABOUR	1651	294	106	454	216	241	125	192	23
	11-B NORMAL DELIVERIES.....	40946	10323	2653	4977	6801	8129	4217	3275	571
	12- DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE :.....	4548	2427	212	557	452	238	190	361	111
	13- DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE :.....	3009	1240	363	334	308	295	151	180	138
	14- CONGENITAL ANOMALIES :.....	1574	1219	43	91	90	36	40	48	7
452	15- CONDITIONS ORIGINATING IN THE PERINATAL PERIOD :.....	3797	1369	366	649	460	466	269	185	33
	SLOW FETAL GROWTH, FETAL MALNUTRITION & IMMATUREITY	1564	451	148	222	158	415	106	52	12
	16- SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS :.....	8392	1953	1212	1044	1482	1025	590	823	263
462	RENAL COLIC	1527	265	238	338	333	83	102	144	24
460	PYREXIA OF UNKNOWN ORIGIN	1110	7	215	106	339	187	174	51	31
464	EPIGASTRIC PAIN	1031	282	205	60	151	226	24	47	36
	17- INJURIES AND POISONING:.....	14165	3731	1016	2930	2091	1712	1121	1307	257
53	POISONING & TOXIC EFFECTS	1921	221	163	315	424	336	174	254	34
472	FRACTURE OF HUMERUS, RADIUS & ULNA	1099	412	70	177	97	161	71	95	16
56	LATE EFFECTS OF INJURIES, POISONINGS, TOXIC EFFECTS...	1004	183	75	243	132	9	246	98	18
	18- (V-CODES) OTHER REASONS FOR CONTACT WITH HEALTH SERVICES.....	1851	1344	4	27	1	0	0	186	289
	TOTAL DISCHARGES :.....	183201	51589	15138	26918	32782	16510	23510	12156	4598

TABLE 3.3

**RATES OF INPATIENT DISCHARGES IN 1990 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES**

BTL CODE GROUP	DISEASE/CONDITION GROUP	RATES OF DISCHARGES PER 10,000 POPULATION IN 1990								
		NATIONAL TOTAL	MUSCAT	JANUBIA	DAKHILYA	SHARQIYA	BATINAH (NORTH)	BATINAH (SOUTH)	DHAHIRA	MUSANDAM
019.1	1- INFECTIOUS AND PARASITIC DISEASES :	137	58	74	210	275	89	104	205	285
052	ACUTE GASTRO-ENTERITIS AND DIARRHOEA.....	47	25	44	61	101	31	20	47	107
043-049.5	MALARIA.....	45	5	0	79	89	44	44	98	12
	ALL VIRAL DISEASES	22	8	8	42	48	5	12	41	102
	2- NEOPLASMS :	14	46	6	6	4	2	3	5	10
181	3- ENDOCRINE, NUTRITIONAL, METABOLIC AND IMMUNITY DISORDERS.....	20	27	16	22	21	8	21	23	40
	DIABETES MELLITUS.....	13	16	13	14	14	7	6	19	33
200.0-200.1	4- DISEASES OF THE BLOOD & BLOOD-FORMING ORGANS :	25	50	9	31	15	13	13	28	37
	ALL ANAEMIAS	18	45	8	13	12	5	8	14	31
	5- MENTAL DISORDERS :	9	19	9	7	10	0	1	7	22
231	6- DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....	39	79	23	44	33	16	12	34	40
REM 230-239	CATARACT.....	9	19	6	6	9	2	2	10	7
	ALL OTHER DISEASES OF EYE & ADNEXA	16	33	7	24	11	7	3	16	10
279.1	7- DISEASES OF THE CIRCULATORY SYSTEM :	63	82	41	73	65	47	33	73	120
269.1	ISCHAEMIC HEART DISEASES NOS.....	16	16	8	20	12	23	6	23	23
289.2	HYPERTENSIVE DISEASES NOS.....	13	11	9	18	17	10	3	14	53
	DISEASES OF PULMONARY CIRCULATION & HEART NOS.....	10	16	9	14	9	0	7	14	6
311-312	8- DISEASES OF THE RESPIRATORY SYSTEM :	153	105	158	229	275	97	71	153	285
323	ACUTE UPPER RESPIRATORY INFECTIONS (EXCL. TONSILLITIS).....	41	7	39	35	84	58	39	38	50
321	BRONCHITIS, CHRONIC & UNSPECIFIED, EMPHYSEMA & ASTHMA.....	29	17	34	37	68	9	10	28	88
320	PNEUMONIA.....	22	15	23	47	43	9	8	14	30
310	ACUTE BRONCHITIS & BRONCHIOLITIS.....	20	7	30	48	40	5	7	12	21
315	ACUTE TONSILLITIS.....	11	2	12	26	19	8	1	6	48
	CHRONIC DISEASES OF TONSILS AND ADENOIDS.....	8	26	6	0	1	1	0	1	10
349.1	9- DISEASES OF THE DIGESTIVE SYSTEM :	65	79	68	73	83	38	30	67	119
342	GASTRITIS AND DUODENITIS.....	17	6	17	27	34	10	10	28	33
343	APPENDICITIS.....	11	17	14	11	9	10	5	8	18
	HERNIA OF ABDOMINAL CAVITY.....	8	15	7	6	7	6	3	8	9

(CONT)TABLE 3.3

**RATES OF INPATIENT DISCHARGES IN 1990 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES**

BTL CODE GROUP	DISEASE/CONDITION GROUP	RATES OF DISCHARGES PER 10,000 POPULATION IN 1990								
		NATIONAL TOTAL	MUSCAT	JANUBIA	DAKHILYA	SHARQIYA	BATINAH (NORTH)	BATINAH (SOUTH)	DHAHIRA	MUSANDAM
350-359.2	10- DISEASES OF THE GENITOURINARY SYSTEM :	57	87	36	61	70	28	27	53	173
	ALL DISEASES OF URINARY SYSTEM.....	29	38	15	37	45	12	16	32	47
380-389.3	11-A COMPLICATIONS OF PREGNANCY & BIRTH :	113	165	117	116	129	56	90	99	90
	ALL ABORTIONS.....	42	54	38	40	49	28	37	37	51
40	INDIRECT OBSTETRIC CAUSES.....	15	16	31	10	14	8	16	19	10
399.0	EARLY OR THREATENED LABOUR.....	11	8	6	24	10	8	9	14	10
	11-B NORMAL DELIVERIES.....	271	294	160	266	316	276	306	241	238
	12- DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE :	30	69	13	30	21	8	14	27	46
	13- DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE :	20	35	22	18	14	10	11	13	58
	14- CONGENITAL ANOMALIES :	10	35	3	5	4	1	3	4	3
452	15- CONDITIONS ORIGINATING IN THE PERINATAL PERIOD :	25	39	22	35	21	16	19	14	14
	SLOW FETAL GROWTH, FETAL MALNUTRITION & IMMATUREITY.....	10	13	9	12	7	14	8	4	5
	16- SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS :	56	56	73	56	69	35	43	61	110
462	RENAL COLIC.....	10	8	14	18	15	3	7	11	10
460	PYREXIA OF UNKNOWN ORIGIN.....	7	0	13	6	16	6	13	4	13
464	EPIGASTRIC PAIN.....	7	8	12	3	7	8	2	3	15
	17- INJURIES AND POISONING:.....	94	106	61	157	97	58	81	96	107
53	POISONING & TOXIC EFFECTS.....	13	6	10	17	20	11	13	19	14
472	FRACTURE OF HUMERUS, RADIUS & ULNA.....	7	12	4	9	5	5	5	7	7
56	LATE EFFECTS OF INJURIES, POISONINGS, TOXIC EFFECTS.....	7	5	5	13	6	0	18	7	8
	18- (V-CODES) OTHER REASONS FOR CONTACT WITH HEALTH SERVICES.....	12	38	0	1	0	0	0	14	120
	TOTAL DISCHARGES :	1,213	1,470	912	1,439	1,525	562	1,704	894	1,916

TABLE 3.4

AMBULATORY CARE MORBIDITY IN 1990

ALL HOSPITALS AND HEALTH CENTRES

ICD CODE	DISEASE/CONDITION	TOTAL
011	Typhoid fever.....	12
012	Shigellosis (bacillary dysentery).....	2,540
013	Food poisoning (including salmonella).....	418
014	Amoebiasis.....	5,393
019.1	Acute gastro-enteritis and diarrhoea.....	273,920
019.2	Other intestinal infections.....	54,599
020	Pulmonary tuberculosis.....	500
029.1	Tuberculosis of other organs.....	63
031	Brucellosis.....	80
032	Leprosy.....	13
033	Diphtheria.....	2
034	Whooping cough.....	118
035	Streptococcal sore throat, scarlatina & erysipelas.....	8,480
036	Meningococcal infection.....	0
037	Tetanus.....	1
038	Septicaemia.....	126
040	Acute poliomyelitis.....	0
042	Measles.....	1,262
043	Rubella.....	27
046	Viral hepatitis.....	1,176
048	Trachoma.....	13,103
049.1	Chicken-pox.....	7,041
049.2	Herpes.....	27
049.3	Mumps.....	11,375
049.5	Other viral diseases.....	25,008
052	Malaria.....	62,029
053	Leishmaniasis.....	0
06	Venereal diseases.....	978
070	Non-syphilitic spirochaetal diseases.....	0
071	Mycosis.....	467
072	Schistosomiasis.....	29
074	Filarial infection & dracontiasis.....	1
076	Other helminthiasis.....	23,216
078	Late effects of acute poliomyelitis.....	136
079.0	Pediculosis & phthirus infestation.....	70
079.1	Other infectious & parasitic diseases inc late effects.....	4
08	Malignant neoplasm of lip,oral cavity & pharynx.....	0
091	Malignant neoplasm of stomach.....	7
093	Malignant neoplasm of colon.....	0
094	Malignant neoplasm of rectum,rectosigmoid junction, anus.....	2
099.1	Malignant neoplasm of other sites of digestive organs.....	1
101	Malignant neoplasm of trachea,bronchus and lung.....	0
109.0	Malignant neoplasm of other respiratory organs.....	0
111	Malignant melanoma of skin.....	0
113	Malignant neoplasm of female breast.....	0
119.0	Other malignant neoplasm of bone,c. tissue, skin, breast.....	1
120	Malignant neoplasm of cervix uteri.....	4
129.0	Malignant neoplasm of other female genital organs.....	2
129.1	Malignant neoplasm of male genital organs.....	0
129.2	Malignant neoplasm of urinary organs.....	0
13	Malignant neoplasm of other & unspecified sites.....	22
141	Leukaemia.....	0
149.0	Other malignant neoplasm of lymph & haemopoietic tissue.....	1

(CONT) TABLE 3.4

AMBULATORY CARE MORBIDITY IN 1990

ALL HOSPITALS AND HEALTH CENTRES

ICD CODE	DISEASE/CONDITION	TOTAL
151	Benign neoplasm of breast.....	9
152	Benign neoplasm of uterus.....	29
159.0	Other benign neoplasm.....	120
17	Other & unspecified neoplasm.....	132
180.0	Simple and unspecified goitre.....	357
180.1	Other disorders of thyroid gland.....	22
181	Diabetes mellitus.....	5,703
189.0	Other diseases of other endocrine glands.....	152
189.1	Gout.....	6
189.2	Other metabolic diseases and immunity disorders.....	0
190	Kwashiorkor.....	11
191	Nutritional marasmus.....	2,692
192	Other protein-calorie malnutrition.....	1,013
193	Avitaminosis.....	21
200	Anaemias.....	22,335
209.0	Other diseases of blood & blood forming organs.....	2,177
218	Mental retardation.....	364
219.0	Other mental disorders.....	2,662
220	Meningitis.....	162
221	Parkinson's disease.....	72
223	Multiple sclerosis.....	0
225	Epilepsy.....	783
229.0	Hemiplegia.....	28
229.1	Other inflammatory diseases of central nervous system.....	541
229.2	Other hereditary & degenerative diseases of CNS.....	883
229.3	Disorders of the peripheral nervous system.....	23
230	Glaucoma.....	2,951
231	Cataract.....	7,377
232	Blindness and low vision.....	7,359
233	Conjunctivitis.....	237,272
235	Strabismus.....	842
239.0	Other disorders of refraction, accommodation and vision.....	26,495
239.1	Corneal opacity & other disorders of cornea.....	2,451
239.2	Other disorders of conjunctiva.....	1,058
239.3	Other diseases of eye & adnexa.....	20,379
240	Otitis media & mastoiditis	13,294
241	Deafness.....	1,151
249	Discharging ear.....	97,130
249.0	Other diseases of the ear & mastoid process.....	9,069
250	Acute rheumatic fever.....	217
251	Chronic rheumatic heart disease.....	360
260	Hypertensive heart disease.....	6,068
269.1	Other hypertensive diseases.....	4,249
270	Acute myocardial infarction.....	108
279.0	Angina pectoris.....	43
279.1	Other ischaemic heart diseases.....	760
281	Cardiac dysrhythmias.....	14
289.0	Acute pericarditis.....	0
289.2	Other diseases of pulmonary circulation & heart.....	4,442
299.0	Other cerebrovascular diseases.....	111
300	Atherosclerosis.....	1
302	Other diseases of arteries, arterioles & capillaries.....	1

(CONT) TABLE 3.4

AMBULATORY CARE MORBIDITY IN 1990

ALL HOSPITALS AND HEALTH CENTRES

ICD CODE	DISEASE/CONDITION	TOTAL
303	Phlebitis, thrombophlebitis, venous embolism & thrombosis.....	74
304	Varicose veins of lower extremities.....	758
305	Haemorrhoids.....	3,669
309.0	Hypotension.....	497
309.1	Other diseases of circulatory system.....	665
310	Acute tonsillitis.....	226,281
311	Acute laryngitis & tracheitis.....	6,181
312	Other acute upper respiratory infections.....	1,333,216
313	Deflected nasal septum & nasal polyps.....	2,915
314	Chronic pharyngitis, nasopharyngitis & sinusitis.....	40,465
315	Enlarged tonsils.....	19,587
319.0	Peritonsillar abscess.....	7
319.1	Chronic laryngitis & laryngotracheitis.....	2,745
319.2	Allergic rhinitis.....	58,987
319.3	Other diseases of the upper respiratory tract.....	1,679
320	Acute bronchitis & bronchiolitis.....	63,904
321	Pneumonia.....	4,220
322	Influenza.....	82,012
323	Bronchitis, chronic & unspecified, emphysema & asthma.....	43,559
324	Bronchiectasis.....	334
325	Other chronic obstructive pulmonary disease.....	11
326	Lung disease due to external agents.....	15
327	Pleurisy.....	62
329.0	Other diseases of respiratory system (empyema etc).....	11,384
330	Diseases of teeth & supporting structures.....	256,413
331	Diseases of the jaws.....	153
339.0	Diseases of salivary glands, oral soft tissues & tongue.....	3,219
341	Ulcer of stomach & duodenum.....	870
342	Appendicitis.....	1,724
343	Hernia of abdominal cavity.....	1,820
344	Intestinal obstruction without mention of hernia.....	88
347	Chronic liver disease & cirrhosis.....	372
349.0	Gastrojejunal ulcer.....	55
349.1	Gastritis and duodenitis.....	144,248
349.2	Intestinal malabsorption.....	635
349.3	Other diseases of other parts of digestive system.....	31,967
350	Nephritis, nephrotic syndrome & nephrosis.....	233
351	Infections of kidney.....	5,311
352	Urinary calculus.....	1,013
353	Cystitis.....	5,538
359.0	Hydronephrosis.....	68
359.1	Urethral stricture.....	293
359.2	Other diseases of urinary system.....	19,510
360	Hyperplasia of prostate.....	307
361	Hydrocele.....	794
362	Redundant prepuce & phimosis.....	47
363	Infertility, male.....	548
369.0	Inflammatory diseases of prostate.....	303
369.1	Orchitis & epididymitis.....	784
369.2	Other diseases of male genital organs.....	521
370	Diseases of breast.....	3,371
371	Salpingitis and oophoritis.....	17

(CONT) TABLE 3.4

AMBULATORY CARE MORBIDITY IN 1990

ALL HOSPITALS AND HEALTH CENTRES

ICD CODE	DISEASE/CONDITION	TOTAL
374	Uterovaginal prolapse.....	32
375	Menstrual disorders.....	27,099
376	Infertility, female.....	1,764
379.1	Fistulae involving female genital tract.....	35
379.2	Other diseases of female genital organs.....	3,548
380	Spontaneous abortion.....	1,049
389.0	Hydatidiform mole.....	1
389.1	Missed abortions.....	10
389.2	Ectopic pregnancy.....	6
389.3	Other abortions.....	124
390	Haemorrhage of pregnancy & childbirth.....	704
391	Toxaemia of pregnancy.....	663
392	Infections of genitourinary tract in pregnancy.....	2,067
393	Obstructed labour.....	21
394	Complications of puerperium.....	197
399.0	Early or threatened labour	1,165
399.1	Prolonged pregnancy.....	38
399.2	Umbilical cord complications.....	1,274
399.3	Other direct obstetric causes.....	2,645
40	Indirect obstetric causes.....	299
42	Diseases of skin and subcutaneous tissue.....	441,288
430	Rheumatoid arthritis, except spine.....	6,821
437	Acquired deformities of limbs.....	164
439.0	Other diseases of the musculoskeletal system & c. tissue.....	316,884
440	Spina bifida & hydrocephalus.....	94
442	Congenital anomalies of heart & circulatory system.....	186
443	Cleft palate and cleft lip.....	169
444	Other deformities of digestive system.....	3
445	Undescended testicle.....	181
446	Congenital dislocation of hip.....	46
449.0	Other congenital anomalies.....	246
450	Maternal conditions affecting fetus or newborn.....	49
451	Obstetric complications affecting fetus or newborn.....	30
452	Slow fetal growth, fetal malnutrition & immaturity.....	123
453	Birth trauma.....	1
455	Haemolytic disease of fetus or newborn.....	76
459.1	Tetanus neonatorum.....	0
459.3	Other conditions originating in the perinatal period.....	143
460	Pyrexia of unknown origin.....	80,893
462	Renal colic.....	9,512
463	Retention of urine.....	1,394
464	Epigastric pain.....	257,563
465	Senility without mention of psychosis.....	772
467	Respiratory failure.....	29
469.0	Convulsions.....	420
469.2	Gangrene.....	18
469.3	Ascites.....	21
469.4	Other signs, symptoms & ill-defined conditions.....	794,649
470	Fracture of skull & face.....	277
471	Fracture of neck & trunk.....	635
472	Fracture of humerus, radius and ulna.....	3,027

(CONT) TABLE 3.4

AMBULATORY CARE MORBIDITY IN 1990

ALL HOSPITALS AND HEALTH CENTRES

ICD CODE	DISEASE/CONDITION	TOTAL
473	Fracture of neck of femur.....	391
474	Fracture of other parts of femur.....	383
475	Fracture of tibia, fibula and ankle.....	1,110
476	Other fractures of limbs.....	2,775
48	Dislocations, sprains & strains.....	8,298
490	Concussions.....	691
499.0	Internal injury of chest, abdomen & pelvis.....	148
499.1	Other internal injuries incl. nerves, spinal cord.....	193
500	Open wound of eye, ear & head.....	17,422
501	Open wound of upper limb.....	43,958
502	Open wound of lower limb.....	71,203
509.0	Other open wounds & injury to blood vessels.....	12
51	Effects of foreign body entering through orifice.....	11,528
520	Burn confined to eye & adnexa.....	325
521	Burn of wrist & hand.....	5,117
529.0	Burns of face, head, neck, trunk & other parts of limbs.....	4,323
529.1	Other burns.....	10,247
53	Poisoning & toxic effects.....	30,281
54	Complications of medical & surgical care.....	1,164
55	Other injuries.....	253,002
56	Late effects of injuries and poisonings.....	704
V-CODES	Other reasons for contact with health services.....	56,836
	TOTAL 'NEW CASES'	5,837,768
	RE-ATTENDANCE CASES	2,758,782
	GRAND TOTAL (NEW & RE-ATTENDANCE)	8,596,550

TABLE 3.5**NOTIFICATIONS OF INFECTIOUS DISEASES 1985-1990**

(Hospital inpatient cases except where indicated)

(ICD-9) BTL No.	DISEASE	1985	1986	1987	1988	1989	1990
010	Cholera	0	0	0	0	0	1(i)
011	Typhoid fever	244	168	131	117	178	167
012	Shigellosis (bacillary dysentery) *	4,276	3,332	2,457	2,224	2,979	2,540
013	Food poisoning (including salmonella)	319	262	221	208	147	174
014	Amoebiasis *	3,787	4,048	3,833	3,833	5,436	5,393
019.0	Paratyphoid fevers	21	26	36	36	25	84
02	Tuberculosis (all forms) **	1,229*	700	616	477	478	482
031	Brucellosis	260	186	229	292	224	183
032	Leprosy *	32	21	6	15	18	13
033	Diphtheria **	6	4	0	0	0	0
034	Whooping cough	765*	207*	5**	16**	25**	49**
036	Meningococcal infection	9	7	126	41	33	32
037	Tetanus (other than neonatal)	64	24	10	11	11	10
039.0	Anthrax	0	1	2	2	1	0
040	Acute poliomyelitis	33	9**	6**	118**	5**	0
042	Measles *	3,675	2,001	3,804	6,052	4,255	1,262
043	Rubella *	10	1	77	175	54	27
046	Viral hepatitis *	2,118	2,223	1,826	1,688	1,390	1,176
049.1	Chicken-pox *	5,955	8,814	14,616	23,381	16,729	7,041
049.3	Mumps *	18,040	8,778	5,192	11,169	15,167	11,375
052	Malaria **	16,348	16,420	15,437	24,780	17,867	32,720
053	Leishmaniasis	23	17	32	11	27	12
060	Syphilis	12	2	5	8	5	4
061	Gonococcal infection	8	10	6	5	6	10
072	Schistosomiasis *	5	47	17	44	43	29
074	Filarial infection *	20	7	19	82	42	1
322	Influenza *	91,373	83,604	101,358	120,208	98,731	82,012
459.1	Tetanus neonatorum **	11	11	8	1	0	0

* Outpatient cases

** Confirmed cases

(i) Imported cases

No case was reported of the diseases under international surveillance
i.e louseborne typhus, plague, rabies, relapsing fever,
small pox & yellow fever.

TABLE 3.6**PATIENTS TREATED ABROAD BY DISEASE AND COUNTRY OF TREATMENT - 1990**

CONDITIONS TREATED	U.K	INDIA	JORDAN	KUWAIT	* OTHER COUNTRIES	TOTAL CASES		
						1990	1989	1988
Cardiac.....	112	31	115	1	0	259	231	256
Neoplasms.....	2	42	0	7	2	53	81	61
Ophthalmic.....	27	2	0	0	0	29	40	96
Neurology.....	8	9	0	0	0	17	17	32
Nephrology & Urology.....	2	16	0	0	0	18	24	21
Orthopaedics.....	6	3	0	0	1	10	14	21
Haematology.....	6	4	0	10	0	20	7	15
Gastro-intestinal/abdominal.....	3	0	0	0	0	3	7	18
ENT.....	1	0	0	0	0	1	3	13
Dermatology.....	0	0	0	0	0	0	1	5
Liver diseases.....	1	0	0	0	0	1	2	3
Chest inc. tuberculosis.....	0	0	0	0	0	0	1	9
Gynaecology.....	0	0	0	0	0	0	0	8
Psychiatry.....	0	0	0	0	0	0	2	4
Oral surgery.....	0	0	0	0	0	0	0	2
Endocrinology inc thyroid.....	2	2	0	0	0	4	2	4
Plastic surgery.....	1	0	0	0	1	2	1	1
Vascular surgery.....	1	0	0	0	0	1	0	0
Other investigations.....	0	0	0	0	0	0	3	52
TOTAL.....	1990	172	109	115	18	4	418	436
	1989	184	94	125	28	5	436	
	1988	283	134	164	26	14	621	

(Egypt , Singapore , Australia , USA)

4 OTHER HOSPITAL ACTIVITY

a) Deliveries and Births.

Details of the deliveries carried out in hospitals and maternity centres in 1990 are shown in Table 4.1. A total of 44.1 thousand deliveries took place in hospitals and maternity centres - a 12% increase over the 39.3 thousand of 1989. Of these deliveries, 90% were normal, 5% by Caesarean section and 2% by vacuum extraction.

A further 5.3 thousand deliveries (11%) were 'born before arrival (BBA)' at the institution. There was quite a marked variation in the rate of BBA's both between regions and between hospitals. By region, the rate varied from only 4% in Musandam to 14% in South Batinah and 16% in Sharqiya.

The outcome of the deliveries is shown in Table 4.1B. The total 49.4 thousand deliveries resulted in 49.8 thousand births of which 597 (1.2%) were stillbirths. There was limited variation in the rate across the hospitals and regions of the Sultan ate, although the rate at the Nizwa hospital was 50% higher than the national average as it has been for the last three years. Of the 49.2 thousand livebirths, 4 thousand (8.1%) were of low birth weight ("premature" in the table). The rate was highest at 13.5% in the Royal Hospital which has a higher proportion of high risk deliveries; there was only a limited variation across the remainder of the country.

b) Other activities

Table 4.2 show the numbers of operations performed in hospitals and health centres in 1990 by type of operation. The total of 16.3 thousand major operations was 1.2% higher than the 16.1 thousand of 1989, which was itself 25% higher than the 12.9 thousand in 1988. There were 68 thousand minor operations performed - a reduction of 2.7% from the 70 thousand minor operations in 19 89 (itself 8% lower than the 73.1 thousand in 1988). This reduction in minor operations was mainly due to a reduction at the Al-Nahdha hospital from 5,220 in 1989 to only 3,438 in 1990.

Table 4.3 shows the amount of radiography performed in each hospital in 1990. A total of 391 thousand procedures took place - an 10% increase over the 357 thousand procedures of 1989, which was already an 8% increase over the 330 thousand of 1988. This increase occurred in all regions except for Musandam. With numbers of patients only increasing by 3%, this also implies an increase in the number of tests per patient, as also occurred in 1989.

Table 4.4 shows the number of laboratory tests undertaken in 1990. The total 5.1 million was 10% higher than the 4.7 million of 1989, which was already 35% higher than the 3.5 million in 1988.

The use of dental services continued to grow as shown in Table 4.5. 247 thousand treatments were carried out in 1990 - a 16% increase over the 212 thousand in 1989. The ratio of extractions : fillings remained at the 1989 level of 4.2 extractions : 1 filling. The worst regions are still Sharqiya (9.5 extractions: 1 filling) and North Batinah (9.5 : 1). As in 1989, the Sinaw hospital performed over 3 thousand extractions but no fillings.

TAB4-1A
NUMBER OF DELIVERIES & BIRTHS - 1990

REGIONS HOSPITALS	DELIVERIES IN HEALTH UNITS					BORN BEFORE ARRIVAL	GRAND TOTAL	RATE OF BBA'S (PER 100 delivries)
	NORMAL	CAES SECT	FOR/VAC	OTHER	TOTAL			
MUSCAT								
ROYAL.....	5810	803	205	160	6978	364	7342	5%
KHOULA.....	5273	418	80	92	5863	484	6347	8%
ASSAADA.....	58	0	0	0	58	2	60	3%
QURIYAT.....	673	0	10	7	690	295	985	30%
TOTAL:	11,814	1,221	295	259	13,589	1,145	14,734	8%
JANUBIA								
QABOOS.....	2712	204	68	130	3114	146	3260	4%
TAWI ATTAIR.....	47	0	0	0	47	12	59	20%
RAKHYUT.....	2	0	0	0	2	0	2	0%
SUDH.....	37	0	0	1	38	5	43	12%
MADINAT AL-HAQ.....	34	0	0	0	34	3	37	8%
TOTAL:	2,832	204	68	131	3,235	166	3401	5%
DHAKILYA								
SUMAIL.....	1043	113	20	43	1219	178	1397	13%
NIZWA.....	1411	109	49	168	1737	47	1784	3%
BAHLA.....	1091	0	5	34	1130	96	1226	8%
HAIMA.....	35	1	2	0	38	6	44	14%
IZKI.....	639	0	0	9	648	134	782	17%
ADAM.....	300	0	4	2	306	40	346	12%
JABAL AKHDAR.....	36	0	1	2	39	38	77	49%
DUQUM.....	64	0	0	1	65	47	112	42%
TOTAL:	4,619	223	81	259	5,182	586	5768	10%
SHARQIYA								
IBRA.....	1109	89	70	36	1304	239	1543	15%
SUR.....	1658	98	44	33	1833	145	1978	7%
B.B.BU ALI.....	785	31	42	25	883	97	980	10%
B.B.BU HASSAN.....	442	0	0	12	454	133	587	23%
SINAW.....	713	0	8	20	741	239	980	24%
MASIRAH.....	158	3	2	7	170	17	187	9%
WADI TAYEEN.....	239	0	0	2	241	125	366	34%
WADI BANI KHALID.....	89	0	0	0	89	59	148	40%
SAMAD AL-SHAAN.....	393	0	0	3	396	113	509	22%
BIDIYA.....	219	0	0	8	227	79	306	26%
TOTAL:	5,805	221	166	146	6,338	1,246	7584	16%

(CONT) TAB 4-1A**NUMBER OF DELIVERIES & BIRTHS - 1990**

REGIONS HOSPITALS	DELIVERIES IN HEALTH UNITS					BORN BEFORE ARRIVAL	GRAND TOTAL	RATE OF BBA'S (PER 100 delivries)
	NORMAL	CAES SECT	FOR/VAC	OTHER	TOTAL			
NORTH BATINAH								
SOHAR.....	4010	214	129	128	4481	638	5119	12%
SAHAM.....	2917	1	10	29	2957	440	3397	13%
WADI SARAMI.....	49	0	0	3	52	2	54	4%
WADI HAWASNA.....	41	0	0	0	41	14	55	25%
HEEBL.(M).....	137	0	0	0	137	0	137	0%
TOTAL:	7,154	215	139	160	7,668	1,094	8762	12%
SOUTH BATINAH								
RUSTAQ.....	3204	86	71	96	3457	491	3948	12%
WADI BANI GHAFIR.....	257	0	0	2	259	82	341	24%
WADI MISTAL.....	44	0	0	1	45	16	61	26%
WADI HEMI.....	134	0	0	1	135	45	180	25%
WADI BANI KHAROOS.....	65	0	1	0	66	16	82	20%
WADI SAHTAN (HC).(*).....	157	0	0	0	157	0	157	0%
TOTAL:	3,861	86	72	100	4,119	650	4769	14%
DHAHIRA								
TANAM.....	2010	69	60	96	2235	209	2444	9%
BURAIMI.....	543	13	13	17	586	24	610	4%
YANKUL.....	559	0	5	12	576	107	683	16%
MAHDHA.....(M).....	0	0	0	0	0	0	0	0%
TOTAL:	3,112	82	78	125	3,397	340	3737	9%
MUSANDAM								
BUKHA.....	55	0	0	3	58	3	61	5%
BAYA.....	192	2	15	6	215	5	220	2%
KHASAB.....	290	12	9	2	313	17	330	5%
MADHA.....(M).....	17	0	0	0	17	0	17	0%
TOTAL:	554	14	24	11	603	25	628	4%
NATIONAL TOTAL:	39,751	2,266	923	1,191	44,131	5,252	49,383	11%

(M) = Maternity Centre

(HC) Health Centre

(*) Operational since August 1989

TABLE 4-1B

OUTCOME OF HOSPITAL DELIVERIES - 1990

REGIONS	B I R T H S						
	L I V E B I R T H S				STILL BIRTHS	GRAND TOTAL	SB's (per100 births)
	NORMAL	L.B.W.	OTHER	TOTAL			
HOSPITALS							
MUSCAT							
ROYAL.....	6382	844	95	7321	109	7,430	1.5%
KHOULA.....	5906	345	70	6321	70	6,391	1.1%
ASSAADA.....	58	0	0	58	2	60	3.3%
QURIYAT.....	884	92	3	979	7	986	0.7%
TOTAL:	13,230	1,281	168	14,679	188	14,867	1.3%
JANUBIA							
QABOOS.....	3040	178	22	3240	49	3,289	1.5%
TAWI ATTAIR.....	54	5	0	59	0	59	0.0%
RAKHYUT.....	2	0	0	2	0	2	0.0%
SUDH.....	41	1	0	42	0	42	0.0%
MADINAT AL-HAQ.....	37	0	0	37	0	37	0.0%
TOTAL:	3,174	184	22	3,380	49	3,429	1.4%
DHAKILYA							
SUMAIL.....	1248	127	7	1382	15	1,397	1.1%
NIZWA.....	1529	207	27	1763	40	1,803	2.2%
BAHLA.....	1085	140	4	1229	5	1,234	0.4%
HAIMA.....	41	2	0	43	1	44	2.3%
IZKI.....	697	85	2	784	2	786	0.3%
ADAM.....	324	18	2	344	2	346	0.6%
JABAL AKHDAR.....	65	11	1	77	0	77	0.0%
DUQUM.....	112	0	0	112	0	112	0.0%
TOTAL:	5,101	590	43	5,734	65	5,799	1.1%
SHARQIYA							
IBRA.....	1373	153	3	1529	23	1,552	1.5%
SUR.....	1831	141	2	1974	21	1,995	1.1%
B.B.BU ALI.....	921	56	4	981	6	987	0.6%
B.B.BU HASSAN.....	537	40	3	580	8	588	1.4%
SINAW.....	903	69	0	972	10	982	1.0%
MASIRAH.....	173	9	2	184	4	188	2.1%
WADI TAYEEN.....	340	24	1	365	2	367	0.5%
WADI BANI KHALID.....	133	12	1	146	2	148	1.4%
SAMAD AL-SHAAN.....	483	24	1	508	2	510	0.4%
BIDIYA.....	296	16	3	315	5	320	1.6%
TOTAL:	6,990	544	20	7,554	83	7,637	1.1%

(CONT)TABLE 4-1B**OUTCOME OF HOSPITAL DELIVERIES - 1990**

REGIONS	B I R T H S						
	L I V E B I R T H S				STILL BIRTHS	GRAND TOTAL	SB's (per100 births)
	NORMAL	L.B.W.	OTHER	TOTAL			
HOSPITALS							
NORTH BATINAH							
SOHAR.....	4658	395	19	5072	91	5,163	1.8%
SAHAM.....	3216	212	4	3432	14	3,446	0.4%
WADI SARAMI.....	46	7	0	53	1	54	1.9%
WADI HAWASNA.....	53	4	0	57	0	57	0.0%
HEEBI..(M).....	144	2	2	148	0	148	0.0%
TOTAL:	8,117	620	25	8,762	106	8,868	1.2%
SOUTH BATINAH							
RUSTAQ.....	3583	330	11	3924	50	3,974	1.3%
WADI BANI GHAFIR.....	307	30	0	337	4	341	1.2%
WADI MISTAL.....	46	13	0	59	2	61	3.3%
WADI HEMLI.....	167	13	0	180	0	180	0.0%
WADI BANI KHAROOS.....	80	5	0	85	0	85	0.0%
WADI SAHTAN (HC).(*)....	174	0	0	174	0	174	0.0%
TOTAL:	4,357	391	11	4,759	56	4,815	1.2%
DHAHIRA							
TANAM.....	2192	222	8	2422	38	2,460	1.5%
BURAIMI.....	553	48	6	607	5	612	0.8%
YANKUL.....	649	34	0	683	5	688	0.7%
MAHDHA.....(M).....	0	0	0	0	0	0	0.0%
TOTAL:	3,394	304	14	3,712	48	3,760	1.3%
MUSANDAM							
BUKHA.....	58	2	1	61	0	61	0.0%
BAYA.....	202	18	0	220	1	221	0.5%
KHASAB.....	303	29	0	332	1	333	0.3%
MADHA.....(M).....	20	0	0	20	0	20	0.0%
TOTAL:	583	49	1	633	2	635	0.3%
NATIONAL TOTAL:	44,946	3,963	304	49,213	597	49,810	1.2%

(M) = Maternity Centre

(*) Operational since August 1989

LIVE BIRTHS BY PLACE OF DELIVERY - 1990

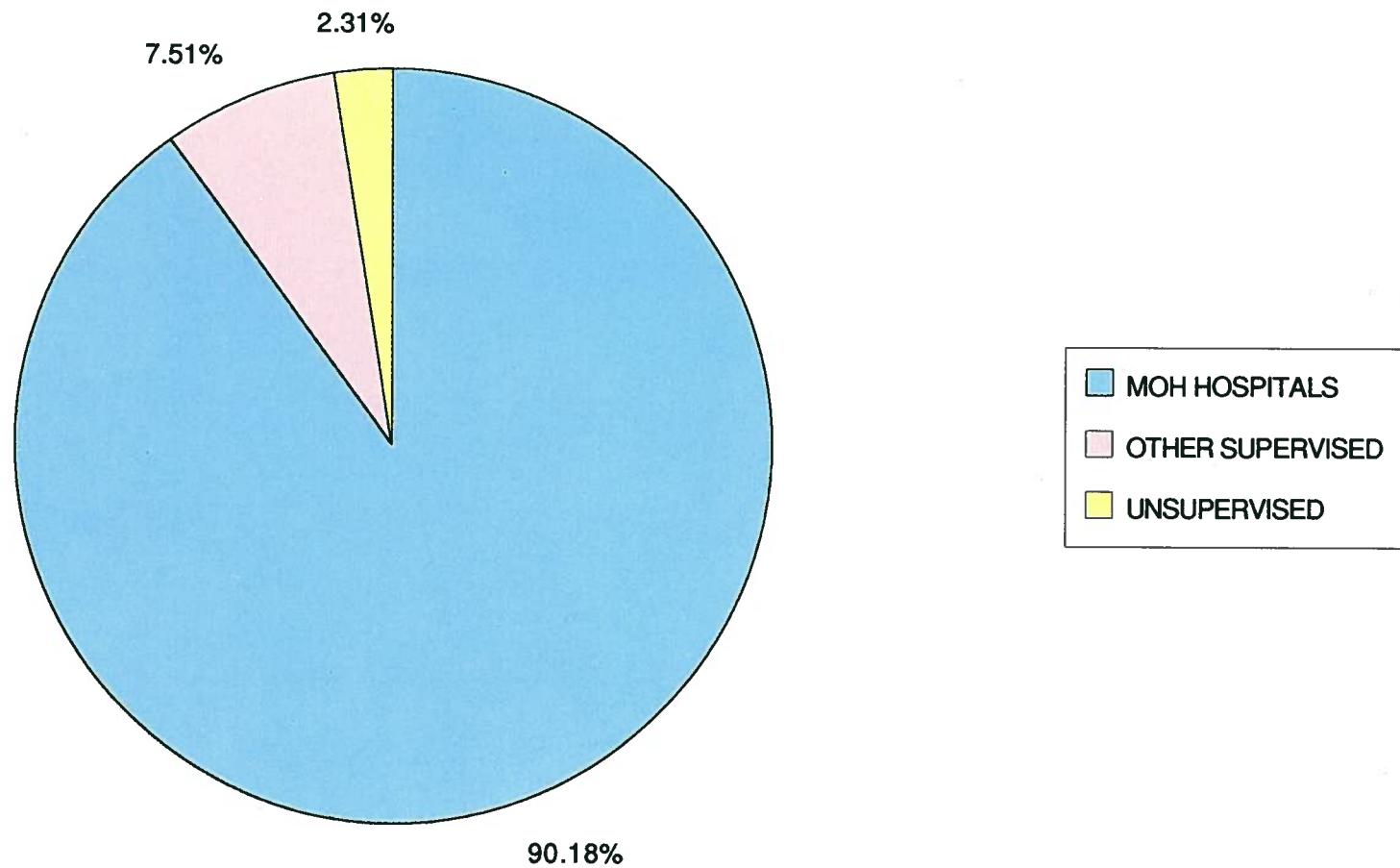


TABLE 4.2

OPERATIONS PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1990

REGIONS HOSPITALS	TYPE OF MAJOR OPERATIONS									TOTAL MAJOR OPERATIONS	MINOR OPERATIONS	GRAND TOTAL
	Gastro- intestinal	Genito- urinary	Obs.& Gynaec.	Ophthal- mology	Ortho- paedics	Plastic Surgery	ENT	Dental	Misc.			
MUSCAT												
ROYAL.....	1704	945	1120	0	587	0	0	0	909	5265	435	5700
KHOULA.....	357	2	574	188	981	717	0	0	61	2880	4043	6923
AL-NAHDHA.....	0	0	0	1141	0	0	974	180	0	2295	3438	5733
ASSAADA.....	0	0	0	0	0	0	0	0	0	0	26	26
QURIYAT.....	0	0	0	0	0	0	0	0	0	0	674	674
MUSCAT.....	0	0	0	0	0	0	0	0	0	0	7	7
TOTAL:	2061	947	1694	1329	1568	717	974	180	970	10440	8623	19063
JANUBIA												
QABOOS.....	327	31	234	151	104	9	282	0	45	1183	3960	5143
TAWI ATTAIR.....	0	0	0	0	0	0	0	0	0	0	36	36
RAKH-YUT.....	0	0	0	0	0	0	0	0	0	0	13	13
SUDH.....	0	0	0	0	0	0	0	0	0	0	34	34
MADINAT AL-HAQ.....	0	0	0	0	0	0	0	0	0	0	59	59
TOTAL:	327	31	234	151	104	9	282	0	45	1183	4102	5285
DHAKILYA												
SUMAIL.....	60	4	26	61	14	0	1	0	17	183	2705	2888
NIZWA.....	194	37	129	101	131	6	204	0	113	915	9143	10058
BAHLA.....	0	0	0	0	0	0	0	0	0	0	1756	1756
HAJMA.....	0	0	1	0	0	0	0	0	0	1	137	138
IZKI.....	0	0	0	0	0	0	0	0	0	0	879	879
ADAM.....	0	0	0	0	0	0	0	0	0	0	446	446
JABAL AKHDAR.....	0	0	0	0	0	0	0	0	0	0	168	168
DUQUM.....	0	0	0	0	0	0	0	0	0	0	77	77
TOTAL:	254	41	156	162	145	6	205	0	130	1099	15311	16410
SHARQIYA												
IBRA.....	92	39	90	127	12	0	0	0	39	399	2888	3287
SUR.....	125	26	136	113	25	0	75	0	27	527	3579	4106
B.B.BU ALI.....	60	8	64	26	0	0	0	0	1	159	1059	1218
B.B.BU HASSAN.....	0	0	0	0	0	0	0	0	0	0	289	289
SINAW.....	0	0	0	0	0	0	0	0	0	0	697	697
MASIRAH.....	9	0	4	0	0	0	0	0	0	13	267	280
WADI TAYEEN.....	0	0	0	0	0	0	0	0	0	0	158	158
WADI BANI KHALID.....	0	0	0	0	0	0	0	0	0	0	76	76
SAMAD AL-SHAAN.....	0	0	0	0	0	0	0	0	0	0	357	357
BIDIYA.....	0	0	0	0	0	0	0	0	0	0	181	181
TOTAL:	286	73	294	266	37	0	75	0	67	1098	9551	10649

(CONT) TABLE 4.2

OPERATIONS PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1990

REGIONS HOSPITALS	TYPE OF MAJOR OPERATIONS									TOTAL MAJOR OPERA- TIONS	MINOR OPERA- TIONS	GRAND TOTAL
	Gastro- intestinal	Genito- urinary	Obs.& Gynaec.	Ophthal- mology	Ortho- paedics	Plastic Surgery	ENT	Dental	Misc.			
BATINAH												
RUSTAQ.....	78	12	96	41	1	0	0	0	3	231	2721	2952
SOHAR.....	463	129	266	99	292	5	98	3	51	1406	5722	7128
SAHAM.....	0	0	0	0	0	0	0	0	0	0	633	633
WADI BANI GHAFIR.....	0	0	0	0	0	0	0	0	0	0	123	123
WADI SARAMI.....	0	0	0	0	0	0	0	0	0	0	52	52
WADI MISTAL.....	0	0	0	0	0	0	0	0	0	0	13	13
WADI HAWASNA.....	0	0	0	0	0	0	0	0	0	0	22	22
WADI BANI KHAROOS.....	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	541	141	362	140	293	5	98	3	54	1637	9286	10923
DHAHIRA												
TANAM.....	113	15	75	101	2	5	52	2	96	461	3159	3620
BURAIMI.....	39	9	14	122	3	0	0	0	84	271	1084	1355
YANKUL.....	0	0	0	0	0	0	0	0	0	0	303	303
WADI JIZZI.....	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL:	152	24	89	223	5	5	52	2	180	732	4546	5278
MUSANDAM												
BUKHA.....	0	0	0	0	0	0	8	0	0	8	81	89
BAYA.....	13	0	7	0	0	0	0	0	0	20	671	691
KHASAB.....	18	1	15	21	0	0	30	0	0	85	931	1016
TOTAL:	31	1	22	21	0	0	38	0	0	113	1683	1796
ALL HOSPITALS	3652	1258	2851	2292	2152	742	1724	185	1446	16302	53102	69404
MINOR OPERATIONS CARRIED OUT IN HCs & MCs										0	14936	14936
TOTAL MAJOR & MINOR OPERATIONS PERFORMED IN HOSPITALS, HCs & MCs										16302	68038	84340

TABLE 4.3**RADIOGRAPHY PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1990**

REGIONS HOSPITALS	TYPE OF X-RAYS				TOTAL
	PLAIN	IVP	BARIUM- MEAL	OTHERS	
MUSCAT					
ROYAL.....	47484	1327	845	8500	58156
KHOULA.....	85276	147	242	555	86220
AL-NAHDHA.....	16968	66	475	1233	18742
AR-RAHMA.....	7788	2	0	0	7790
IBN-SINA.....	935	410	286	338	1969
QURIYAT.....	3271	0	0	0	3271
MUSCAT.....	1608	0	0	0	1608
TOTAL:	163,330	1,952	1,848	10,626	177,756
JANUBIA					
QABOOS.....	44557	350	720	261	45888
TAWI ATTAIR.....	46	0	0	37	83
RAKHYUT.....	0	0	0	0	0
SUDH.....	0	0	0	0	0
MADINAT AL-HAQ..	0	0	0	0	0
TOTAL:	44,603	350	720	298	45,971
DHAKILYA					
SUMAIL.....	7833	47	16	13	7909
NIZWA.....	18519	224	160	175	19078
BAHLA.....	1011	0	0	4944	5955
HAIMA.....	271	2	1	634	908
DUQUM.....	46	0	0	37	83
IZKI.....	0	0	0	0	0
ADAM.....	1906	108	78	35	2127
TOTAL:	29,586	381	255	5,838	36,060
SHARQIYA					
IBRA	8889	65	86	30	9070
SUR.....	10956	159	222	49	11386
B.B.BU ALI.....	11104	107	34	3	11248
B.B.BU HASSAN.....	3350	1	3	0	3354
SINAW	1545	942	825	686	3998
MASIRAH.....	3469	12	33	5	3519
WADI TAYEEN.....	995	0	0	65	1060
SAMAD AL-SHAAN.	402	0	0	472	874
BIDIYA.....	2234	0	0	0	2234
TOTAL:	42,944	1,286	1,203	1,310	46,743

(CONT) TABLE 4.3**RADIOGRAPHY PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1990**

REGIONS HOSPITALS	TYPE OF X-RAYS				TOTAL
	PLAIN	IVP	BARIUM- MEAL	OTHERS	
NORTH BATINAH					
SOHAR.....	27164	181	292	360	27997
SAHAM.....	7230	0	0	0	7230
WADI HAWSINA.....	0	0	0	0	0
TOTAL:	34,394	181	292	360	35,227
SOUTH BATINAH					
RUSTAQ.....	14869	53	47	1304	16273
WADI HEMLI.....	184	75	128	54	441
WADI BANI GHAFIR....	0	0	0	0	0
WADI BANI KHAROOS	280	0	0	0	280
TOTAL:	15,333	128	175	1,358	16,994
DHAHIRA					
TANAM.....	16226	113	15	64	16418
BURAIMI.....	8577	36	46	33	8692
TOTAL:	24,803	149	61	97	25,110
MUSANDAM					
BUKHA.....	512	0	0	0	512
DIBBA.....	561	0	4	492	1057
KHASAB.....	5870	31	65	48	6014
TOTAL:	6,943	31	69	540	7,583
NATIONAL TOTAL:	361,936	4,458	4,623	20,427	391,444

TABLE 4.4**LABORATORY INVESTIGATIONS CARRIED OUT IN HEALTH INSTITUTIONS - 1990**

TYPE & NUMBER OF LABORATORY TESTS DONE										
REGIONS HOSPITALS/ HEALTH CENTRE	HAEMATO- LOGY	BLOOD GROUPING	BIOCHEM- ISTRY	BACTERIOLOG- CULTURAL	OTHER	HISTOLOGY	CYTOLOGY	REFERRALS	SPECIMENS	T O T A L
MUSCAT										
ROYAL.....	208,615	106,570	1,523,033	105,506	34,837	51,435	24,764	3,937		2,058,697
KHOULA.....	86,872	30,195	98,602		31,357			26,437	29,657	303,120
AL-NAHDHA.....	59,525	207	28,759		23,934			11,726	42,455	166,606
AR-RAHMA.....	37,113	3,942	32,167		18,712			4,640	19,958	116,532
ASSAADA.....	4,233	933	504		6,778			66	4,595	17,109
IBN-SINA.....	12,387	718	3,021		5,853			2,234	4,674	28,887
QURIYAT.....	13,279	1,162	1,721		11,694			272	8,253	36,381
MUSCAT.....	5,720	255	1,235		4,610			357	4,045	16,222
SEEB H.C.....	10,879	3,180	1,486	8,729	15,464			15	20,485	60,238
NEW AL KHOD H.C.....	1,219	372	124		1,658				1,974	5,347
TOTAL:	439842	147,534	1,690,652	114,235	154,897	51,435	24,764	49,684	136,096	2,809,139
JANUBIA										
QABOOS.....	129,582	9,070	104,430	8,290	70,865	3,849	777	1,397	74,229	402,489
TAWI ATTAIR.....	3,043	169	187		1,893			13	1,818	7,123
RAKHYUT*.....	678	89			681				434	1,882
SUDH.....	2,298	157	336		2,297				3,411	8,499
MADINAT AL-HAQ.....	3,258	227	196		3,416				2,121	9,218
DHALQUT H.C*.....	795	44			705				1,263	2,807
TOTAL:	139654	9756	105149	8290	79857	3849	777	1410	83276	432,018
DAKHILYA										
SUMAIL.....	34,571	3,532	9,578	2,590	21,386			772	18,301	90,730
NIZWA.....	67,451	7,920	19,436	7,343	29,122			2,266	37,001	170,539
BAHLA.....	33,414	2,210	3,562		15,705			668	18,734	74,293
HAIMA.....	5,330	217	754		3,977			39	3,150	13,467
IZKI.....	12,457	694	1,243		12,980			312	8,726	36,412
ADAM.....	14,859	435	1,500		7,573			328	9,091	33,786
JABAL AKHDAR.....	229	108			1,317			2	237	1,893
DUQUM.....	2,467	139	189		1,283				1,438	5,516
TOTAL:	170778	15255	36262	9933	93343	0	0	4387	96678	426,636

(CONT) TABLE 4.4

LABORATORY INVESTIGATIONS CARRIED OUT IN HEALTH INSTITUTIONS - 1990

TYPE & NUMBER OF LABORATORY TESTS DONE										
REGIONS HOSPITALS/ HEALTH CENTRE	HAEMATO- LOGY	BLOOD GROUPING	BIOCHEM- ISTRY	BACTERIOLOGY CULTURAL	OTHER	HISTOLOGY	CYTOLOGY	REFERRALS	SPECIMENS	TOTAL
SHARQIYA										
IBRA	38,706	5,058	7,464	2,313	21,532			1,188	19,964	93,912
SUR.....	32,392	4,236	9,585		23,942			1,881	19,642	93,991
B.B.BU ALI**.....	38,149	3,962	6,966		25,352			462	20,731	95,622
B.B.BU HASSAN.....	12,549	974	1,738		12,036			65	9,515	36,877
SINAW	27,939	1,775	5,405		14,893			257	17,716	67,985
MASIRAH.....	12,456	452	1,616		6,377			106	5,079	26,086
WADI TAYEEN.....	18,123	490	706		5,261			13	7,417	32,010
WADI BANI KHALID.....	3,365	210	289		1,664			1	1,964	7,493
SAMAD AL-SHAAN.....	11,750	1,019	33		8,386			9	7,286	28,483
BIDIYA.....	12,267	1,050	2,085		9,618				6,760	31,780
TOTAL:	207,696	19,226	35,887	2,313	129,061	0	0	3,982	116,074	514,239
NORTH BATINAH										
SOHAR.....	86,934	12,879	18,567	4,433	41,506			2,320	35,799	202,438
SAHAM.....	41,747	5,325	2,616	380	28,813				28,120	107,001
WADI SARAMI.....	5,169	78	282		908				1,743	8,180
WADI HAWASNA*.....		no lab. tech posted								0
TOTAL:	133,850	18,282	21,465	4,813	71,227	0	0	2,320	65,662	317,619
SOUTH BATINAH										
RUSTAQ.....	64,140	10,824	22,497		34,018			1,860	45,135	178,474
WADI MISTAL.....	1,057	30	46		170				328	1,631
WADI HEMLI.....	4,094	213	464		1,747				2,835	9,353
WADI BANI GHAFIR..	7,569	179	402		2,159				6,211	16,520
WADI BANI KHAROOS	4,592	184	571		2,088			5	2,190	9,630
TOTAL:	81,452	11,430	23,980	0	40,182	0	0	1,865	56,699	215,608

(CONT) TABLE 4.4

LABORATORY INVESTIGATIONS CARRIED OUT IN HEALTH INSTITUTIONS - 1990

TYPE & NUMBER OF LABORATORY TESTS DONE										
REGIONS HOSPITALS/ HEALTH CENTRE	HAEMATO- LOGY	BLOOD GROUPING	BIOCHEM- ISTRY	BACTERIOLOG CULTURAL	OTHER	HISTOLOGY	CYTOLOGY	REFERRALS	SPECIMENS	TOTAL
DHAHIRA										
TANAM.....	83,228	8,979	21,389	7,767	38,501			2,571	52,407	214,842
BURAIMI.....	31,745	3,236	5,815		28,036			583	14,270	83,685
YANKUL.....	15,751	995	650		5,656			98	8,418	31,568
WADI JIZZI*.....	4,713	124	181		1,469			4	1,547	8,038
TOTAL:	135,437	13,334	28,035	7,767	73,662	0	0	3,256	76,642	338,133
MUSANDAM										
BUKHA.....	2,980	152	708		3,000			2	1,130	7,972
DIBBA.....	5,325	500	773	28	4,004			1	5,140	15,771
KHASAB.....	18,729	1,921	5,472	1,241	20,644			303	23,354	71,664
TOTAL:	27,034	2,573	6,953	1,269	27,648	0	0	306	29,624	95,407
NATIONAL TOTAL:	1,335,743	237,390	1,948,383	148,620	669,877	55,284	25,541	67,210	660,751	51487 99

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- 1) Assaada Hospital was closed in November and December, 1990.
- 2) Laboratory technician was on leave in the following health units:
 - a) New Al Khod H.C. - November
 - b) Tawi Attair Hospital - April
 - c) Dhalqut H.C. - January
 - d) Wadi Bani Kharoos Hospital - December
 - e) Yankul Hospital - May
- 3) There was no laboratory technician posted in Wadi Mistal Hospital from September to December and in Wadi Hawasna Hospital throughout the year.

TABLE 4.5**DENTAL & OTHER ACTIVITIES IN MINISTRY OF HEALTH HOSPITALS - 1990**

REGIONS	TYPE OF DENTAL TREATMENTS			TOTAL DENTAL TREAT- MENTS	OTHER EYE ACTIVITIES	
	DENTAL EXTRAC- TIONS	DENTAL FILLINGS	OTHER DENTAL TREAT- MENTS		MEDICAL CHECKUPS	EYE TESTINGS
HOSPITALS						
MUSCAT						
ROYAL.....	689	1445	1205	3339	0	0
AL-NAHDHA.....	16409	7302	30263	53974	3370	2777
AR-RAHMA.....	0	0	0	0	3436	0
QURIYAT.....	2509	406	2717	5632	496	498
MUSCAT.....	2345	662	3097	6104	0	0
TOTAL:	21,952	9,815	37,282	69,049	7,302	3,275
JANUBIA						
QABOOS.....	11246	4152	7268	22666	1110	8792
TAWI ATTAIR.....	0	0	0	0	48	0
SUDH.....	0	0	237	237	40	0
TOTAL:	11,246	4,152	7,505	22,903	1,198	8,792
DHAKILYA						
SUMAIL.....	3900	996	5157	10053	1601	1760
NIZWA.....	8648	1487	4874	15009	1666	5704
BAHLA.....	0	0	0	0	1330	0
HAIMA.....	676	197	321	1194	20	0
DOQUM.....	0	0	0	0	56	0
JABAL AL-KHDHAR.....	0	0	0	0	379	0
IZKI.....	0	0	0	0	196	0
ADAM.....	1839	454	2719	5012	381	23
TOTAL:	15,063	3,134	13,071	31,268	5,629	7,487
SHARQIYA						
IBRA.....	5217	646	4465	10328	1722	2383
SUR.....	1974	661	7265	9900	4915	4514
B.B.BU ALI.....	2568	104	2839	5511	649	1145
B.B.BU HASSAN.....	0	0	1704	1704	780	728
SINAW.....	3518	0	6028	9546	1291	678
MASIRAH.....	0	0	0	0	112	143
WADI TAYEEN.....	218	8	2667	2893	314	261
WADI BANI KHALID.....	0	0	0	0	121	0
BIDIA.....	0	0	0	0	1474	174
SAMAD AL-SHAAN.....	0	0	0	0	822	0
TOTAL:	13,495	1,419	24,968	39,882	12,200	10,026

(CONT)TABLE 4.5**DENTAL & OTHER ACTIVITIES IN MINISTRY OF HEALTH HOSPITALS - 1990**

REGIONS	TYPE OF DENTAL TREATMENTS			TOTAL DENTAL TREAT- MENTS	OTHER EYE ACTIVITIES	
	DENTAL EXTRAC- TIONS	DENTAL FILLINGS	OTHER DENTAL TREAT- MENTS		MEDICAL CHECKUPS	EYE TESTINGS
HOSPITALS						
NORTH BATINAH						
SOHAR.....	12638	1404	12674	26716	1937	11244
SAHAM.....	6505	602	6872	13979	2657	2264
WADI SARAMI.....	0	0	351	351	65	0
WADI HAWASNA.....	0	0	359	359	11	0

TOTAL:	19,143	2,006	20,256	41,405	4,670	13,508

SOUTH BATINAH						
RUSTAQ.....	5588	1064	3366	10018	792	2439
WADI BANI GHAFFIR.....	0	0	1503	1503	102	0
WADI MISTAL.....	0	0	0	0	0	0
WADI HEMLI.....	0	0	1533	1533	64	0
WADI BANI KHAROOS.....	0	0	433	433	0	0

TOTAL:	5,588	1,064	6,835	13,487	958	2,439

DHAHIRA						
TANAM.....	5525	556	5944	12025	7032	2271
WADI AL-JIZZI.....	0	0	0	0	28	0
BURAIMI.....	3263	765	8909	12937	2723	7144

TOTAL:	8,788	1,321	14,853	24,962	9,783	9,415

MUSANDAM						
BUKHA.....	40	0	53	93	569	0
DIBBA.....	181	10	1585	1776	155	376
KHASAB.....	1205	345	996	2546	971	362

TOTAL:	1,426	355	2,634	4,415	1,695	738

NATIONAL TOTAL:	96,701	23,266	127,404	247,371	43,435	55,680

5. PREVENTIVE SERVICES

During 1990, the administration and delivery of preventive and promotive health services was the responsibility of the Directorate-General of Preventive Medicine. This included Maternal and Child Health Services, Environmental Health, Quarantine measures, Vector Control, and Health Education. The Department of Family and Community Health Programmes - a part of the Directorate-General of Preventive Medicine - managed several of the disease prevention programmes including the Expanded Programme of Immunization, the Tuberculosis Control Programme, the Prevention of Blindness Programme, the Diarrhoeal Diseases Control Programme and the Acute Respiratory Infection Control Programme.

At the end of 1990 (1989), There were 64 (60) Public Health Units, 4 (4) MCH Centres and 9 (9) Malaria Control Centres operating throughout the country. Their distribution is shown in Table 5.1.

TABLE 5.1

REGIONAL DISTRIBUTION OF PREVENTIVE MEDICINE FACILITIES - AS OF 31.12.1990

REGION	PUBLIC HEALTH UNIT	QUARANTINE UNITS			MCH CENTRES	MALARIA CONTROL CENTRES
		AIRPORTS	PORTS	BORDERS		
MUSCAT.....	3	1	2	-	1	-
JANUBIA.....	10	1	1	-	-	-
DHAKILYA....	11	-	-	-	-	2
SHARQIYA....	17	-	-	-	1	2
N. BATINAH...	6	-	-	1	-	1
S. BATINAH...	7	-	-	-	-	2
DHAHIRAH.....	7	-	-	1	-	1
MUSANDAM.....	3	-	-	-	-	1
TOTAL:(1990)	64	2	3	2	2	9
(1989)	60	2	3	2	4	9)

TABLE 5.2**ANTENATAL ATTENDANCES IN 1990**

HOSPITALS / HEALTH CENTRES BY REGION	Total Attendance						Mean No. of visit per pre- gnancy	Mean No. of visit per gravida	Mean No. of visit per multi gravida
	NEW CASES			FOLLOW UP					
	Prima	Multi	Total	Prima	Multi	Total			
MUSCAT.....	2,446	8,314	10,759	8,359	44,222	52,582	5.9	4.4	6.3
JANUBIA.....	432	3,509	3,941	2,414	21,166	23,580	7	6.6	7
DHAKILYA.....	749	6,554	7,303	3,622	29,657	33,279	5.6	5.8	5.5
SHARQIYA.....	866	6,660	7,526	4,711	32,153	36,864	5.9	6.4	5.8
BATINAH NORTH.....	936	9,679	10,615	4,157	39,324	43,481	5.1	5.4	5.1
BATINAH SOUTH.....	696	6,048	6,744	2,686	20,938	23,623	4.5	4.9	4.5
DHAHIRA.....	362	3,420	3,782	2,498	23,681	26,179	7.9	7.9	7.9
MUSANDAM.....	79	614	694	456	2,714	3,170	5.6	6.8	5.4
NATIONAL TOTAL....	6,567	44,798	51,365	28,904	213,855	242,758	5.7	5.4	5.8

EXPANDED PROGRAMME OF IMMUNIZATION (EPI)

The objective of the EPI is to fully immunize all children against the diseases of Tuberculosis (BCG), diphtheria, pertussis, tetanus and poliomyelitis (DPTP), and measles by their first birthday.

This was carried out under the management of the Department of Family and Community Health Programme of the Directorate-General of Preventive Medicine. Its main features are :-

- (a) To offer an immunization service in all the Ministry's hospitals and health centres.
- (b) To monitor the incidence of the six diseases in children and to investigate control measures when an outbreak occurs.
- (c) To improve coverage by defaulter retrieval and visiting distant/inaccessible communities. This is carried out by outreach teams based at public health units.

The number of immunization doses given in 1990 to children and females of child-bearing ages are shown in Table 5.3. A comparison over the last 9 years for the number of doses given to under 1 year children is shown in Table 5.4 and Figure 6.

As shown by the tables and figure, the coverage rate for all diseases increased significantly from 1981 to 1986. In 1985 BCG and DPTP-1 reached over 90% coverage by age 1 year, and have remained there since. Both the DPTP-3 and the measles (both given towards the end of the child's first year) have understandably taken longer to increase their coverage, as they both began from much lower initial levels in 1981, and require visits towards the end of the child's first year of life. They both passed the critical 80% mark in 1987 and have further improved to 95% and 96% respectively in 1990.

Immunization given in the age range 1-5 years further augment the 1-year old coverage. The indicator of a high level of immunization in the child bearing age women is that no case of Neonatal Tetanus has been reported since 1988. there has been a marked decline in the incidence of the six target diseases. EPI is committed to eradicating Poliomyelitis by 1995 and eliminating Neonatal Tetanus by 1991 from Oman.

TABLE 5.3 IMMUNIZATIONS GIVEN IN 1990**A) PRE-SCHOOL CHILDREN**

	AGE (years)			
	<u>Total</u>	<u>Under 1</u>	<u>1 - <2</u>	<u>2 - <6</u>
B C G.....	50573	50180	152	241
DPT & OPV (DPTP)				
Dose-1.....	52351	51790	320	241
Dose-2.....	53114	52462	493	159
Dose-3.....	52816	51543	1024	249
Booster....	47063	42938	4125
Measles	53972	51771	1802	399

B) Females of child-bearing ages

Tetanus	<u>Total</u>	<u>Pregnant</u>	<u>Other</u>
Dose-1.....	22065	18632	3433
Dose-2.....	18630	16882	1748
Booster....	6785	6049	736

**TABLE 5.4 IMMUNIZATION COVERAGE BY AGE 1 YEAR
1981-1990**

Year	TYPE OF IMMUNIZATION								
	Estimated	BCG		DPTP-1		DPTP-3		MEASLES	
	Live- births (^{'000s})	No. (^{'000s})	% *	No. (^{'000s})	% *	No. (^{'000s})	% *	No. (^{'000s})	% *
1981	43.3	24.3	56%	10.5	42%	8.0	19%	4.0	10%
1982	45.6	35.7	78%	23.1	52%	10.8	23%	10.6	23%
1983	48.0	37.3	78%	29.0	62%	14.5	3	15.8	35%
1984	49.5	39.0	79%	38.7	80%	21.4	45%	25.1	54%
1985	50.0	46.4	93%	45.3	93%	28.8	60%	31.3	66%
1986	50.6	50.7	100%	50.4	102%	40.4	83%	38.6	79%
1987	51.3	49.2	96%	50.1	99%	44.2	89%	43.0	87%
1988	52.0	49.0	94%	49.2	96%	45.4	90%	44.1	88%
1989	54	49.3	91%	51.8	97%	51.0	97%	48.9	93%
1990	55.6	50.2	90%	51.8	95%	51.5	95%	51.8	96%

DPTP-1 is the first dose of the DPT and OPV immunizations

DPTP-3 is the third (final) dose of the DPT and OPV immunizations

* % Coverage of the target populations, which are:

BCG - (All livebirths)

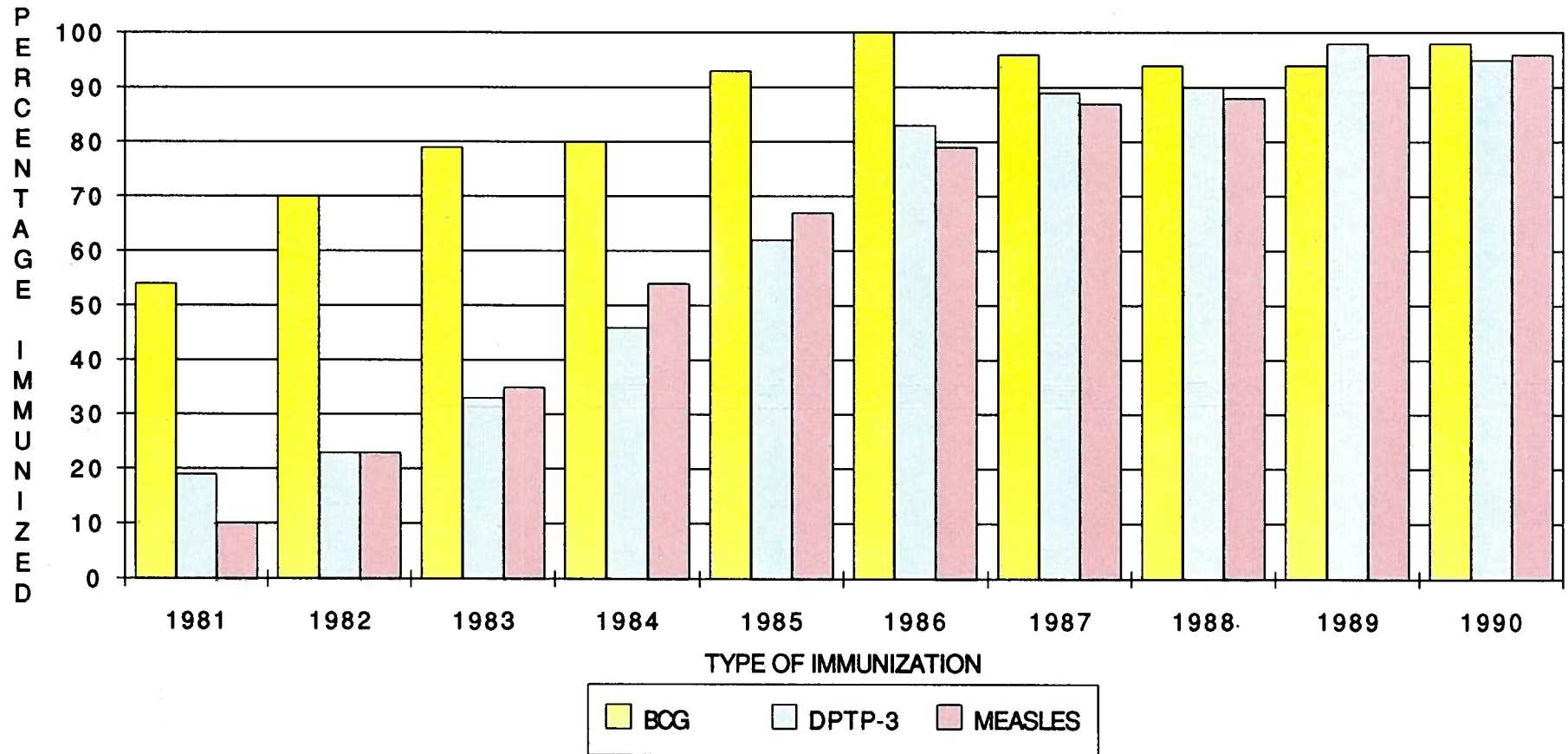
DPTP-1 - (Livebirths) minus (Half of the Infant deaths)
(as these will have died before the DPT-1 is given)

DPTP-3 - (Livebirths) minus (All Infant deaths)

Measles - (Livebirths) minus (All Infant deaths)

Note - It is estimated that between 1,000 and 1,500 babies are delivered in nearby countries and receive their BCG there. These are not included in this table, and would increase the BCG coverage by about 2%.

IMMUNIZATION COVERAGE BY AGE ONE YEAR **1981 - 1990**



EYE HEALTH CARE PROGRAMME (EHC)

C

Trachoma - the blinding eye disease - is still a major public health problem in Oman. Trachoma is endemic amongst the rural populations of the northern regions of Oman, where it is estimated that 2% -3% of the population suffer from moderate to severe trachoma and 10% -13% from mild trachoma; 3% are one eye blind and another 3% both eyes blind. Muscat and the Janubia Region, however, are very little affected by the disease.

Since the victims of the disease seldom seek treatment of their own accord, the EHC is an outreach programme into schools and communities to find treat them. EHC has, therefore, two approaches - a School Screening Programme and a Community Screening Programme. Under both programmes, cases detected are treated with appropriate drugs and serious cases refereed to a local ophthalmologist.

(i) School Screening Programme

In the school year 1989-90, school health visitors carried out this programme. Their activity levels and findings compared with those of the previous years are shown in Table 5.5.

(ii) Community Screening Programme

The Community Screening Programme was carried out by 7 EHC teams based in Nizwa, Sumail, Al-Hamra, Rustaq, Sur, Manah and Sohar. Their activity levels and findings for 1990 and three previous years are also shown in Table 5.5.

As shown in the Table, the results of 1990 are similar to those of the last three years for the Community Screening. However for the School Screening Programme, there has been a continual improvement in the status of the children's eye health since 1987.

TUBERCULOSIS CONTROL PROGRAMME

The goal of the Tuberculosis Control Programme is to detect and treat all new cases of tuberculosis in the Ministry of Health's institutions. It consists of three components:-

- (1) Diagnosis and treatment of cases, which is carried out by the Ministry's curative units (mainly hospitals).
- (2) Contact tracing and defaulter retrieval, which is implemented by preventive units.
- (3) Staff training, monitoring and supervision of the Control Programme, which is the responsibility of the Department of Family and community Health Programme office.

A statistical summary for the year 1990 and it's comparison with previous years is shown in Table 5.6.

The number of new cases has constantly declined from 861 in 1985 to 477 in 1988., an has remained constant over the last three years. From 1985 to 1987, however, the number of extra-pulmonary cases constantly increased, but showed a slight reduction in 1988. Part of the increasing number of extra-pulmonary cases is due to the improvement of diagnosis and reporting.

The number of defaulters dropped significantly between 1986 and 1987 from 424 to 275 and further to 170 in 1988; this decreased further to only 90 in 1990. Every effort is being made to retrieve the defaulters by both active and passive means especially those who were detected to be sputum positive initially.

TABLE 5.5**PREVENTION OF BLINDNESS PROGRAMME****Community Screening**

TRACHOMA SCREENING	1990	1989	1988	1987
Places visited.....	113	95	122	123
Persons examined.....	32,833	24,609	34,596	32,591
Prevalence discovered.....				
Normal.....	47%	53%	56%	51%
Conjunctivitis.....	9%	*	*	*
Mild trachoma.....	13%	14%	19%	18%
Moderate/severe trachoma.....	2%	3%	4%	3%
Thick lid trachoma.....	14%	16%	15%	14%
Corneal opacity.....	7%	7%	9%	6%
Cataract.....	1%	1%	1%	1%
Glaucoma.....	0.6%	0.1%	0.8%	1%
Blind (one or both eyes).....	6%	6%	6%	6%

* It's included in normal prevalence.

School Screening

TRACHOMA SCREENING	1989-90	1988-89	1987-88	1986-87
Schools screened.....	360	264	413	330
Students examined.....	44,241	27,012	106,175	55,575
Prevalence discovered				
Normal.....	83%	78%	72%	62%
Mild trachoma.....	13%	17%	20%	27%
Moderate/severe trachoma	3%	3%	4%	7%
Thick lid trachoma.....	1%	1%	3%	3%
Corneal opacity.....	0.1%	0.1%	0.2%	0.3%
Cataract.....	0.02%	0.03%	0.06%	0.06%
Glaucoma.....	-	-	0.01%	0.02%
Blind (one or both eyes).....	0.2%	0.3%	0.2%	0.2%
REFRACTION TESTING				
Schools visited.....	40	94	154	153
Students visited.....	19,300	51,000	60,500	58,600
Refraction tests.....	2,213	3,168	4,808	5,154
Defective vision detected.....	1,460	701	2,609	2,251
.....%	7.5%	5.4%	4.3%	3.8%

TABLE 5.6**TUBERCULOSIS RELATED STATISTICS - 1985-1990**

	1990	1989	1988	1987	1986	1985
New pulmonary cases detected....	379	370	379	502	669	778
Sputum positive.....	(160)	(147)	(177)	(153)	(222)	(258)
Sputum negative.....	(219)	(223)	(203)	(349)	(387)	(520)
Extra pulmonary cases.....	103	108	98	114	91	83
Total New Cases.....	482	478	477	616	700	861
Old cases restarting treatment.....	64	60	79	108	171	190
Cured cases reinfected.....	(22)	(31)	(35)	n.a.	n.a.	n.a.
Lost cases resuming trt.....	(42)	(29)	(44)	n.a.	n.a.	n.a.
Cases cured.....	365	373	469	447	446	483
Cases died.....	14	42	34	441	46	41
Cases lost (defaulters).....	90	108	170	275	424	444
Cases left country.....	46	31	39	35	43	40
Cases on treatment on 31st Dec...	406	437	463	619	696	784

(thousands)

Diagnostic tests	1990	1989	1988	1987	1986	1985
Sputum examinations.....	13.7	15.1	15.4	13.7	13.8	13.3
Mantoux tests.....	5.1	n.a.	5.8	5.4	4.3	4.0

MALARIA CONTROL PROGRAMME

D

During 1990 and 1989, 9 Malaria Control Units were operational; in addition to these, there were 63 malaria control teams attached to Public Health Units

In 1990, the geographical reconnaissance was started and/or updated in 314 villages. This is a little more than the 265 visited in 1989. The breeding places and spraying operations are shown in Table 5.7. House numbering and a household census were carried out in 7 villages.

Table 5.7 shows the summary of the house spraying operations. Larviciding operations continued to constitute the main vector control measures in the majority of the protected areas. In 1990 (1989) this activity covered 2.1 (1.5) million square meters of water surfaces weekly. Smear activity levels for 1990 and 1989 are as shown in Table 5.7.

The malaria incidence, as measured by passive case detection, is shown in Table 5.8. Although this had been progressively declining during the years 1981-1986, it fluctuated between 1987 and 1989 and in 1990 almost doubled to reach 26.6 thousand. Of the 1990 cases, 25 thousand were *P. falciparum*. These figures suggest a significant increase in the overall incidence of the disease in 1990.

Table 5.8 also shows the regional distribution of the cases detected in 1990. Both the number of cases and the slide positivity rate were highest in Dhahirah, followed by Dakhilya, Sharqiya and North and South Batinah. Just over 1.4 thousand cases were found in the Muscat region, although the slide positivity rate was lower - 4.6%.

Table 5.9 shows the prevalence in the general population, taken from a sample of normal households. This shows a national slide positivity rate of 2.1% almost 40% higher than the 1.5% rate of 1989. There are, however, wide variations from a 4.2% rate in the Dhahira region to almost zero in the Janubia and Musandam regions.

TABLE 5.7**MALARIA CONTROL****A) HOUSE SPRAYING OPERATIONS**

	1990	1989	1988	1987
Villages covered.....	107	152	104	66
Total population.....	22,000	49,500	34,100	34,500
Population protected.....	20,600	45,500	29,900	25,700
% of population protected.....	95%	92%	88%	74%
Total houses.....	5,799	12,371	8,788	8,043
Houses totally covered.....	3,515	7,490	5,061	4,022
Houses partially covered.....	1,790	3,935	2,617	1,946
% of coverage.....	94%	92%	87%	74%
Total number of rooms in houses.....	31,700	73,800	47,400	48,100
Number of rooms sprayed.....	28,200	63,600	41,200	35,700
% of coverage.....	89%	86%	87%	74%
Surface area covered (million m2).....	1.49	2.86	1.98	1.71
DDT 75% WDP consumption (kgs).....	3,618	7,093	5,238	4,725

B) SMEAR ACTIVITY**(thousands)**

	1990	1989	1988	1987
Total smears done.....	271	268	270	240
Passive case detection				
Malaria Units/Laboratory.....	7.6	8.1	9.7	11.7
Other health units.....	183.4	155.1	170.5	140.1
Surveys.....	67.4	99.3	81.8	87.4
Case contacts & follow-ups.....	6.8	5.2	8.2	1.2
Smears of those who came from				
East Africa and other countries.....	5.1	n.a.	n.a.	n.a.
Chloroquine allergy test.....	0.3	n.a.	n.a.	n.a.
Positive smears				
Number.....	32.7	17.9	24.8	15.4
Smear Positivity Rate.....	12.1%	6.7%	9.2%	6.4%

TABLE 5.8

Passive Case Detection Carried out by the General
Health Facilities with Laboratories during 1990

REGION	Blood Smears Taken	Positive Cases	Rate (%) (SPR)	Type of Malaria			Mixed Infection	% Rate of P.Falciparum
				Falciparum	Vivax	Malariae		
MUSCAT.....	32,182	1,469	4.6%	1,229	214	0	26	83.7%
JANUBIA.....	1,119	9	0.8%	3	6	0	0	33.3%
DAKHILYA.....	30,998	5,830	18.8%	5,343	486	0	1	91.6%
SHARQIYA.....	37,434	4,090	10.9%	3,569	519	0	2	87.3%
BATINAH.(N).....	28,205	3,043	10.8%	2,969	74	0	0	97.6%
BATINAH.(S).....	16,414	3,232	19.7%	3,215	17	0	0	99.5%
DHAHIRA.....	34,745	8,818	25.4%	8,590	227	0	1	97.4%
MUSANDAM.....	2,292	86	3.8%	48	36	0	2	55.8%
TOTAL.....	183,389	26,577	14.5%	24,966	1,579	0	32	93.9%

TABLE 5.9**Household Surveys Carried Out by the Malaria Control Section During 1990**

REGION	Blood Smears Slides	Positive Cases	Rate (%) (SPR)	Type of Malaria			Mixed Infection	% Rate of P.Falciparum
				Falciparum	Vivax	Malariae		
MUSCAT.....	8,167	104	1.3%	102	2	-	-	98.1%
JANUBIA.....	3,529	0	0.0%	0	0	-	-	0%
DAKHILYA.....	11,368	168	1.5%	166	1	-	1	98.8%
SHARQIYA.....	16,169	249	1.5%	236	13	-	-	94.8%
BATINAH.(N).....	7,568	209	2.8%	208	1	-	-	99.5%
BATINAH.(S).....	9,593	286	3.0%	283	3	-	-	99.0%
DHAHIRA.....	8,597	364	4.2%	359	5	-	-	98.6%
MUSANDAM.....	2,384	7	0.3%	5	2	-	-	71.4%
TOTAL.....	67,375	1,387	2.1%	1,359	27	0	1	98.0%

OTHER PUBLIC HEALTH ACTIVITIES

E

(i) School Health Services

These services which include medical check ups of the students, treatment of common diseases and vaccination against communicable diseases are being carried out by Directorate of School Health Services. During 1990 (1989), the Directorate of School Health Services visited a total of 637 (995) visits to schools, treating 45 thousand (53 thousand) students for various ailments and giving basic medical examinations to 4,902 (4,727) students.

(ii) Environmental Health Services

The Directorate of Environmental Health provides those services in Muscat which public health units provide in other regions. Such activities include inspection of markets, slaughter houses, water reservoirs etc. During 1990, 971 places were inspected in Muscat and 455 food and 3117 water samples were collected for analysis.

(iii) Bacteriological, Chemical, Microbiological and TB Laboratories

Analyses of food and water samples is the main function of these laboratories. During 1990 (1989), 575 (1,306) food and 4665 (5,575) water samples were analyzed by the Bacteriological and Chem laboratories; also, 458 (499) water tanks were inspected, 87 thousand (85 thousand) samples of urine, stool and blood taken from food-handlers were also analyzed and 2.5 thousand of infectious diseases. 83 samples of Schistosomiasis and 10 thousand of various samples were analyzed by the Microbiological labs. also, 3 thousand samples of sensitivity and cultural tests were analyzed by the T.B laboratories.

(iv) The activities of Surveillance and Diseases Control

a - Quarantine Activities :

There are 7 Health Checkposts at points of entry to Sultanate, which include 3 ports, 2 airports and 2 boarder checkpoints. During 1990 (1989), the port health units inspected 1,053 (1,582) vessels with 41 thousand (34 thousand) crew members. Airport health units checked 7,571 (7,571) planes with 85 thousand (84 thousand) crew members and 539 thousand (509 thousand) passengers. 1,075 (1,331) persons were vaccinated against cholera or yellow fever. At points entry into the Sultanate, 15,511 (13,133) food clearance certificates were issued.

b - Communicable Diseases Activities :

In this section there were 76 cases of infectious diseases were reported in Muscat, 26.7 thousand health certificates were issued, and 37.2 thousand persons were vaccinated against infectious diseases.

(v) Acute Respiratory Infections (ARI) and Control of Diarrhoeal Diseases (CDD)

The activities of these two programmes are shown in Tables 5.10 and 5.11

TABLE 5.10**ANNUAL REPORT ON THE CONTROL OF DIARRHOEAL DISEASES (CDD)****R E G I O N**

STATISTICS FOR 1990	NATIONAL TOTAL	MUSCAT	JANUBIA	DAKHILYA	SHARQIYA	N.BATINAH	S.BATINAH	DHAHIRA	MUSANDAM
Total Diarrhoea cases.....	196,120	29,680	13,770	29,171	36,614	43,139	23,447	16,819	3,480
Rate per 1000 population....	130	85	83	156	170	147	170	124	145
Dehydration of cases (%) No dehydration.....	92%	91%	89%	91%	92%	93%	96%	91%	91%
Mild/moderate.....	7%	3%	10%	8%	7%	6%	4%	9%	9%
Severe.....	1%	0%	1%	1%	1%	1%	0%	1%	0%
Cases admitted..... No.....	5244	109	556	798	1381	1684	350	240	126
to hospital..... %.....	2.7%	0.4%	4.0%	2.7%	3.8%	3.9%	1.5%	1.4%	3.6%
Cases treated.....No...	7097	980	1452	587	1227	498	291	994	1068
with antibiotics.....%.....	3.6%	3.3%	10.5%	2.0%	3.4%	1.2%	1.2%	5.9%	30.7%
Deaths reported.....No.....	8	0	1	3	1	1	1	1	0

TABLE 5.11**ANNUAL REPORT ON ACUTE RESPIRATORY INFECTIONS (ARI)**

STATISTICS FOR 1990	R E G I O N								
	NATIONAL TOTAL	MUSCAT	JANUBIA	DAKHILYA	SHARQIYA	N.BATINAH	S.BATINAH	DHAHIRA	MUSANDAM
Total ARI cases.....	712,311	90,048	88,074	96,817	143,714	130,357	75,242	74,508	13,551
Rate per 1000 population....	472	257	531	518	668	443	545	548	565
Severity of cases(%)...									
Mild.....	80%	79%	83%	81%	78%	80%	88%	78%	85%
Moderate.....	20%	21%	17%	20%	23%	20%	12%	23%	15%
Severe.....	1%	0%	0%	0%	0%	0%	0%	0%	0%
Cases admitted.....No.....	8,723	336	1,121	2,033	2,431	1,346	521	786	149
to hospital..... %.....	1.2%	0.4%	1.3%	2.1%	1.7%	1.0%	0.7%	1.1%	1.1%
Cases treated.....No.....	140,854	18,730	15,802	19,457	26,423	27,832	9,593	17,211	5,806
with antibiotics.....%.....	20%	21%	18%	20%	18%	21%	13%	23%	43%
Deaths reported.....No.....	49	0	4	1	6	32	3	3	0

6. MEDICAL EDUCATION & TRAINING

Medical education and training, both locally and abroad, is the responsibility of the Directorate-General of Medical Education & Training. This includes:-

- (a) Local education & training of nurses & other para-medical staff at the Institute of Health Services.
- (b) Post-graduate training of doctors & nurses abroad.
- (c) Training of para-medical and other staff abroad.

1 As shown below, the total enrollment at the Institute of Health Sciences has increased consistently over the last four years, with general nursing growing by about 50% each year.

	1990	1989	1988	1987
(a) General nursing.....	220	154	104	73
(b) Medical laboratory technicians	54	46	45	43
(c) Physiotherapy.....	29	24	13	6
(d) Radiography.....	35	30	23	9

Further details by course and stage are shown in Table 6.1.

The achievements of the Institute over the past 5 years are shown in Table 6.2. The number of graduates of the general nursing course has been somewhat erratic over this period ranging from 24 and 27 in 1984 and 1985 to between 10 and 20 since 1987. The number of Assistant Nurses had been more consistent with an average of 26 per year from 1984 to 1987; 1988 saw 39 graduates followed by only 12 in 1989 - the lowest number since the course began; in 1990 the number of graduates was 19. The number of medical laboratory technicians has remained between 6 and 12 since the first graduations in 1986. 1990 saw the first graduates of the radiography and physiotherapy courses, with 11 and 5 graduates respectively.

In addition, in 1990 (1989) the Institute of Health Sciences trained 37 (33) medical & para-medical and arranged training course for 161 (179) administrators & other staff locally. Also during 1990 (1989), 15 (34) medical & para-medical and 9 (12) other staff members were sent abroad for further training.

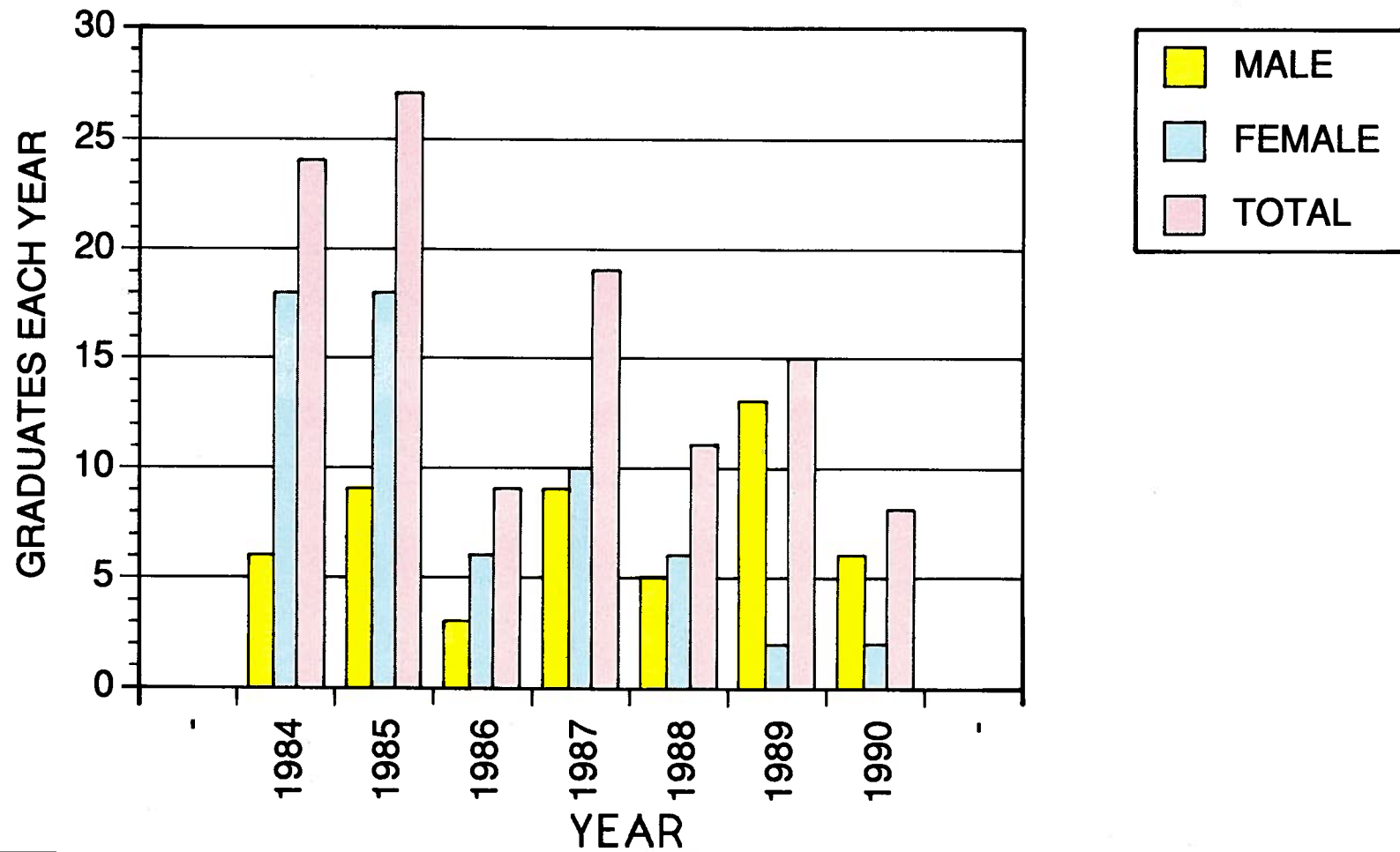
TABLE 6.1**ENROLMENT AT INSTITUTE OF HEALTH SCIENCES - 1990, 1989 & 1988****NUMBER OF STUDENTS ENROLLED**

COURSES	ACADAMIC YEAR 1990			TOTAL 1989	TOTAL 1988
	MALE	FEMALE	TOTAL		
<u>GENERAL NURSING</u>					
1st Year	17	61	78	71	49
2nd Year	20	47	67	46	33
3rd Year	13	33	46	29	7
Final Term	16	13	29	8	15
<u>MEDICAL LAB TECHNICIAN</u>					
1st Year	3	12	15	16	14
2nd Year	2	14	16	10	13
3rd Year	7	3	10	13	7
Final Term	7	6	13	7	11
<u>RADIOGRAPHY</u>					
1st Year	2	14	16	12	12
2nd Year	7	5	12	7	0
3rd Year	5	2	7	0	11
Final Term	0	0	0	11	0
<u>PHYSIOTHERAPY</u>					
1st Year	6	4	10	11	8
2nd Year	6	5	11	8	0
3rd Year	7	1	8	0	5
Final Term	0	0	0	5	0
TOTAL:	118	220	338	254	185

TABLE 6.2**GRADUATES FROM THE INSTITUTE OF HEALTH SCIENCES 1984 - 1990**

YEARS	NUMBER OF STUDENTS QUALIFIED														
	GENERAL NURSING			ASSISTANT NURSING			MEDICAL LABORATORY TECH.			X-RAY PHOTOGRAPHY			PHYSIOTHERAPIST		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
1984	6	18	24	7	21	28	-	-	-	-	-	-	-	-	-
1985	9	18	27	10	17	27	-	-	-	-	-	-	-	-	-
1986	3	6	9	6	22	28	3	5	8	-	-	-	-	-	-
1987	9	10	19	3	15	18	2	6	8	-	-	-	-	-	-
1988	5	6	11	11	28	39	6	6	12	-	-	-	-	-	-
1989	13	2	15	5	7	12	5	6	11	-	-	-	-	-	-
1990	6	2	8	12	6	18	2	4	6	8	3	11	3	2	5

**NURSES GRADUATING FROM THE INSTITUTE
OF HEALTH SCIENCES 1984 - 1990**



7. MEDICAL & HEALTH PERSONNEL

The total staff employed under the Ministry of Health at the end of 1990 is shown in Table 7.1. At that time, the Ministry employed 11,743 staff. This was only 2% more than the 11,525 at the end of 1989, as compared with an increase of 1% during the previous year. Of the total staff, 7,740 (66%) were medical/para-medical staff. Omanis constituted 52% of the total staff - the same as at the end of both 1989 and 1988. For medical & para-medical staff Omanis constituted 36%.

Details of all Ministry of Health medical and paramedical staff by sex and nationality are shown in Table 7.2. At the end of 1990, Omanis constituted 9% of physicians, 25% of dentists, 21% of pharmacists, 12% of nursing staff and 71% of other para medical staff. There was little change in these percentages from 1988 to 1990.

The numbers of medical personnel employed by the Ministry over the last five years is shown in Table 7.3. There has been a continuous increase in all categories, with the greatest increase occurring from 1986 to 1987 with the staffing of the new Royal hospital in Muscat.

The total numbers of medical and paramedical staff working in the Sultanate are shown in Table 7.4. About two thirds of all doctors are employed by the Ministry of Health, although 357 (23%) work in private clinics. Only 40% of dentists are Ministry of Health, with the highest proportion (42%) being in private practice. Pharmacists are primarily distributed in the private sector (75%), while the vast majority of nurses (82%) are employed by the Ministry of Health

8. HEALTH CARE PROVIDED BY OTHER DEPARTMENTS AND ORGANIZATIONS

In addition to the Ministry of Health which is the main agency responsible for health services, the Ministry of Defence, Royal Oman Police, Petroleum Development Oman and Sultan Qaboos University provide health care for their employees and dependants. The services provided by these organizations and their utilization is shown in Tables 8.1 to 8.3.

At the end of 1990 (1989), these four organizations had 5(4) hospitals and 42 (42) clinics with 727 (592) beds. At the end of 1990 (1989) , they employed 206 (159) physicians, 17 (18) dentists, 33 (28) pharmacists, 475 (311) nursing personnel and 927 (796) other paramedics. During 1990 (1989) they admitted 11.6 (9.8) thousand inpatients, and treated 635 (701) thousand outpatients. The major decrease occurred in the Royal Oman Police where outpatient decreased by 58%

Private companies and individuals also operate clinics, as shown by region in Table 8.4. At the end of 1990 (1989), there were 278 (264) general clinics, 24 (14) specialized clinics and 32 (39) dental clinics. The number of private pharmacies increased slightly from 145 in 1989 to 158 in 1990 .

TABLE 7.1**MEDICAL/PARA-MEDICAL AND OTHER STAFF EMPLOYED UNDER MINISTRY OF HEALTH - 31.12.1990**

CATEGORIES	O M A N I S			N O N - O M A N I S			T O T A L			% O F O M A N I S	
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	1990	1989
Medical & Para-medical.....	1,697	1,065	2,762	1,541	3,437	4,978	3,238	4,502	7,740	36%	36%
Administrative.....	828	168	996	193	63	256	1,021	231	1,252	80%	77%
Professional/Technical..... (Other than medical/para-medical)	206	2	208	279	0	279	485	2	487	43%	42%
Farrashes & Others.....	1,853	277	2,130	129	5	134	1,982	282	2,264	94%	94%
GRAND TOTAL :	4,584	1,512	6,096	2,142	3,505	5,647	6,726	5,017	11,743	52%	52%
PERCENTAGE OF TOTAL STAFF :											
1990	39%	13%	52%	18%	30%	48%	57%	43%	100%		
1989.....	39%	13%	52%	18%	30%	48%	57%	43%	100%		
1988	39%	13%	52%	19%	29%	48%	58%	42%	100%		

TABLE 7.2

MEDICAL AND PARA-MEDICAL STAFF AS OF 31.12.1990

CODE-CATEGORIES NO.	OMANIS			NON-OMANIS			TOTAL			PERCENTAGE OF OMANIS		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	1990	1989	1988
2 DOCTORS.....	69	17	86	659	249	908	728	266	994	9%	9%	8%
2.1 Administrators.....	9	0	9	1	0	1	10	0	10	90%	86%	88%
2.2 Consultants.....	5	0	5	42	6	48	47	6	53	9%	10%	11%
2.2 Sr.Specialists/ Specialists.....	10	5	15	88	28	116	98	33	131	11%	8%	9%
2.2 Junior Specialists.....	4	1	5	109	27	136	113	28	141	4%	4%	5%
2.3 Medical Practitioners.....	41	11	52	419	188	607	460	199	659	8%	9%	8%
3 DENTISTS.....	4	6	10	25	5	30	29	11	40	25%	24%	26%
4 PHARMACISTS.....	3	4	7	17	9	26	20	13	33	21%	15%	15%
5 NURSING STAFF/School H.V.....	182	224	406	152	2,954	3,106	334	3,178	3,512	12%	12%	12%
6-13&16 OTHER PARA-MED STFF.....	1,439	814	2,253	688	220	908	2,127	1,034	3,161	3	3	2
6- Health Assist/Med asst.....	18	0	18	81	2	83	99	2	101	18%	18%	18%
7- Physiotherapists.....	4	2	6	11	15	26	15	17	32	19%	7%	7%
8- Sanitary Inspect/Supervs/ Quarantine Supervisors.....	52	0	52	97	3	100	149	3	152	34%	33%	30%
9- Radiographers/X-Ray Tech.....	15	2	17	94	12	106	109	14	123	14%	10%	16%
10- Microbiologists/Lab Tech/ Chemists/Asst.....	29	34	63	146	114	260	175	148	323	20%	18%	14%
11- Assistant Pharmacists/ Dispensers.....	14	1	15	120	25	145	134	26	160	9%	10%	15%
12- Medical Orderlies.....	971	748	1,719	77	25	102	1,048	773	1,821	94%	94%	94%
13+16 Others.....	336	27	363	62	24	86	398	51	449	81%	80%	47%
GRAND TOTAL :	1,697	1,065	2,762	1,541	3,437	4,978	3,238	4,502	7,740	36%	36%	36%
PERCENTAGE OF TOTAL STAFF :												
1989	22%	14%	36%	20%	44%	64%	42%	58%	100%			
1988	22%	14%	36%	20%	44%	64%	42%	58%	100%			

TABLE 7.3**HEALTH PERSONNEL EMPLOYED BY THE MINISTRY OF HEALTH****1983 - 1990**

CATEGORIES	1983	1984	1985	1986	1987	1988	1989	1990
ADMINISTRATORS/ ADVISORS.....	6	7	7	8	9	9	8	10
CONSULTANTS.....	11	16	24	24	37	45	48	53
SNR SPECIALISTS/SPECIALISTS.....	87	90	95	108	122	136	130	131
JUNIOR SPECIALISTS.....	54	57	67	86	120	129	135	141
MEDICAL OFFICERS.....	307	402	445	448	548	588	598	659
DENTISTS.....	22	23	23	27	31	35	38	40
PHARMACISTS.....	16	18	22	23	25	26	27	33
NURSES.....	1386	1753	1947	2057	2973	3260	3274	3512
OTHER PARA-MEDICAL STAFF.....	2261	2490	2722	2819	3099	3285	3293	3161
TOTAL.....	4150	4856	5352	5600	6964	7513	7551	7740

MEDICAL AND PARAMEDICAL STAFF BY NATIONALITY 1983 - 1990

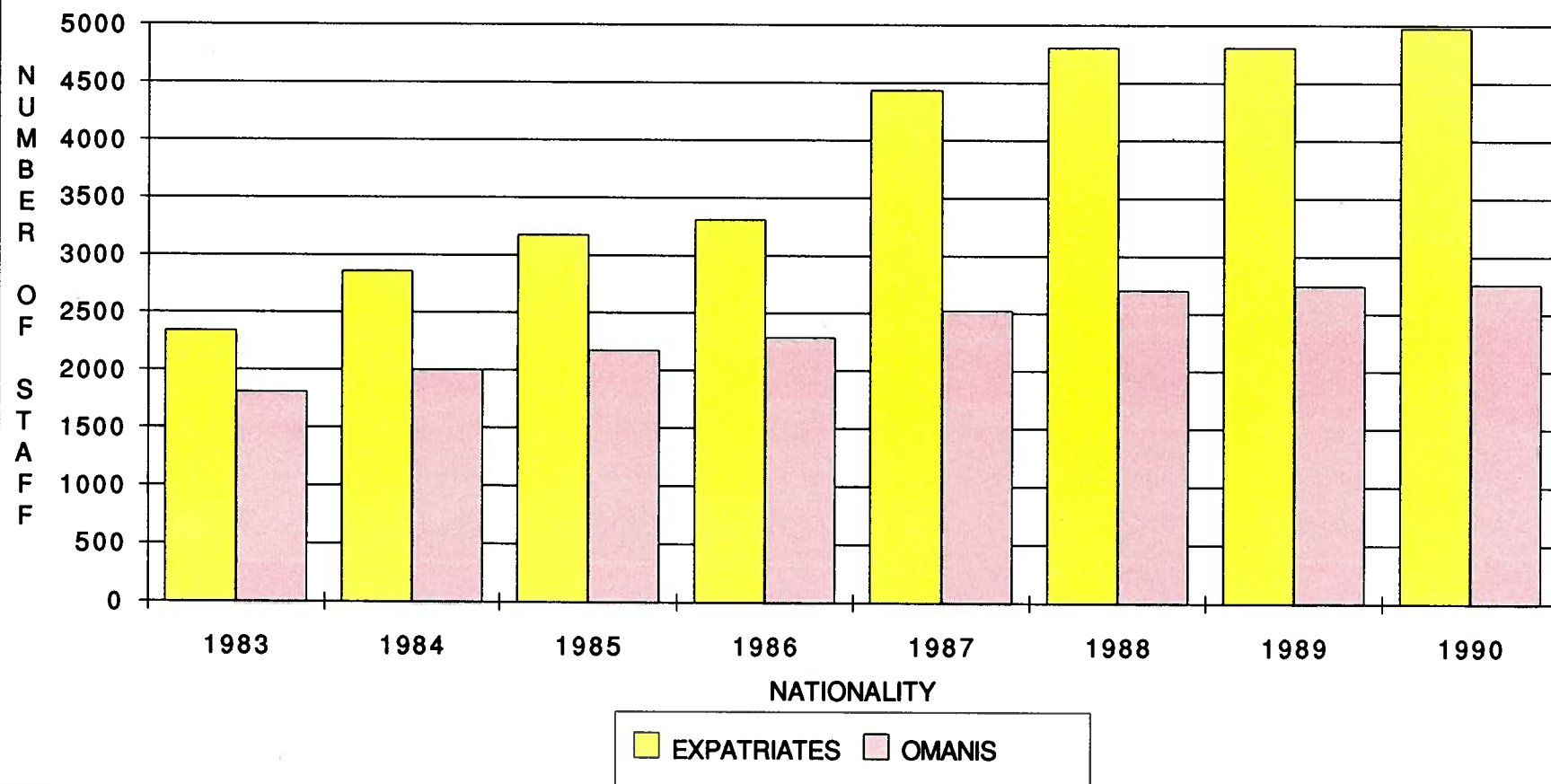


TABLE 7.4**TOTAL MEDICAL/HEALTH PERSONNEL - at end of 1990 and 1989**

STAFF CATEGORIES	MINISTRY OF HEALTH		FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOP- MENT OMAN		S. QABOOS UNIYERSITY' HOSPITAL		PRIVATE CLINICS		PRIVATE PHARMA- CIES		T O T A L		PERCENTAGE UNDER HEALTH MINISTRY	
	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989
DOCTORS.....	994	919	116	129	27	21	10	9	53	n.a	357	314	0	0	1557	1392	64%	66%
DENTISTS.....	40	38	15	16	2	2	0	0	0	n.a	42	41	0	0	99	97	40%	39%
PHARMACISTS.....	33	27	22	22	6	5	1	1	4	n.a	0	0	203	180	269	235	12%	11%
NURSES.....	3512	3392	139	230	90	88	36	37	210	n.a	299	281	0	0	4286	4028	82%	84%
OTHER PARA- MEDICAL STAFF.....	3161	3175	713	684	43	36	32	32	139	n.a	65	107	86	68	4239	4102	75%	77%
GRAND TOTAL.....	7740	7551	1005	1081	168	152	79	79	406	0	763	743	289	248	10450	9854	74%	77%

TABLE 8.1**HEALTH FACILITIES (NON-HEALTH MINISTRY ORGANIZATIONS) AS OF 31-12-1990**

FACILITIES	ARMED FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOPMENT OMAN		SULTAN QABOOS UNIVERSITY HOSPITAL		TOTAL	
HOSPITALS	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989*
Number.....	3	3	1	1	0	0	1	n.a	5	4
Beds.....	249	255	65	65	0	0	140	n.a	454	320
DISPENSARIES / CURATIVE CENTRES										
Number.....	27	27	4	4	11	11	0	n.a	42	42
Beds.....	234	234	0	0	39	38	0	n.a	273	272
DISTRIBUTION OF BEDS BY SPECIALITY:										
General.....	53	53	0	0	32	31	0	n.a	85	84
Surgery.....	58	58	10	10	0	0	24	n.a	92	68
Medicine.....	38	38	15	15	0	0	24	n.a	77	53
Obstet. & Gynae.....	24	30	12	12	5	5	17	n.a	58	47
Paediatrics.....	14	14	10	10	2	2	48	n.a	74	26
Isolation.....	22	22	0	0	0	0	0	n.a	22	22
Others.....	274	274	18	18	0	0	27	n.a	319	292
TOTAL BEDS.....	483	489	65	65	39	38	140	n.a	727	592

* Excluding S.Q.U.H

TABLE 8.2

MEDICAL & PARA-MEDICAL PERSONNEL EMPLOYED (NON-HEALTH MINISTRY ORGANIZATIONS)

AS OF 31.12.1990

CATEGORIES	FORCES MEDICAL SERVICES			ROYAL OMAN POLICE			PETROLEUM DEVELOPMENT OMAN			SULTAN QABOOS UNIVERSITY			T O T A L		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Medical Administrators/ Specialists.....	12	9	21	21	2	23	2	0	2	9	4	13	44	15	59
Medical Officers.....	81	14	95	2	2	4	8	0	8	27	13	40	118	29	147
Dentists.....	15	0	15	2	0	2	0	0	0	0	0	0	17	0	17
Staff Nurses/Health Visitor/ Mid Wife.....	35	104	139	15	75	90	28	8	36	24	186	210	102	373	475
Health Assistants.....	0	0	0	0	0	0	9	0	9	0	0	0	9	0	9
Sanitary Inspectors.....	9	0	9	0	0	0	4	0	4	0	0	0	13	0	13
Sanitary Assistants.....	13	0	13	0	0	0	0	0	0	0	0	0	13	0	13
Laboratory Technicians/ Assistant Lab Technicians.....	28	1	29	7	4	11	3	0	3	24	18	42	62	23	85
Radiographers/X-Ray Tech/ Assist X-Ray Technicians.....	18	1	19	5	2	7	0	1	1	9	2	11	32	6	38
Dental Technicians/ Asst. Dental Technicians.....	18	0	18	3	3	6	0	0	0	0	2	2	21	5	26
Physiotherapists.....	10	2	12	1	2	3	0	1	1	0	2	2	11	7	18
Pharmacists.....	21	1	22	5	1	6	1	0	1	2	2	4	29	4	33
Assistant Pharmacists.....	29	0	29	0	0	0	1	0	1	5	5	10	35	5	40
Medical Orderlies.....	534	5	539	3	12	15	10	0	10	52	20	72	599	37	636
Others.....	40	5	45	1	0	1	3	0	3	0	0	0	44	5	49
GRAND TOTAL:	863	142	1005	65	103	168	69	10	79	152	254	406	1149	509	1658

TABLE 8.3**UTILIZATION OF HEALTH SERVICES(NON-HEALTH MINISTRY ORGANIZATIONS) - 1990 & 1989**

ACTIVITIES	FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOPMENT OMAN		SULTAN QABOOS UNIVERSITY HOSPITAL		TOTAL	
	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989*
INPATIENTS										
Number of staffed beds.....	483	489	65	65	39	38	140	n.a	727	592
Total Discharges.....	7,045	6,635	3,145	2,953	223	241	1219	n.a	11,632	9,829
Deaths.....	155	0	9	8	0	0	7	n.a	171	8
Total patient days.....	52,558	55,362	16,370	n.a.	673	841	9346	n.a	78,947	n.a.
Mean length of stay.....	7.0	8.0	5	n.a.	3	3.0	8	n.a	7	n.a.
Bed Occupancy rate.....	30%	31%	69%	n.a.	5%	6%	18%	n.a	30%	n.a.
Total deliveries.....	1,251	965	626	618	120	60	1	n.a	1,998	1,643
Livebirths.....	1,246	950	622	616	118	60	1	n.a	1,987	1,626
Stillbirths.....	5	15	4	2	2	n.a.	0	n.a	11	17
Major Operations done.....	303	284	40	70	0	0	55	n.a	398	354
Minor Operations done.....	2,612	2,174	1,149	993	16	11	240	n.a	4,017	3,178
OUTPATIENTS										
Patients treated in OPD.....	487,900	461,222	79,551	189,501	54,539	50,501	12913	n.a	634,903	701,224
Daily average number.....	1,337	1,264	218	519	149	138	35	n.a	1,739	1,921

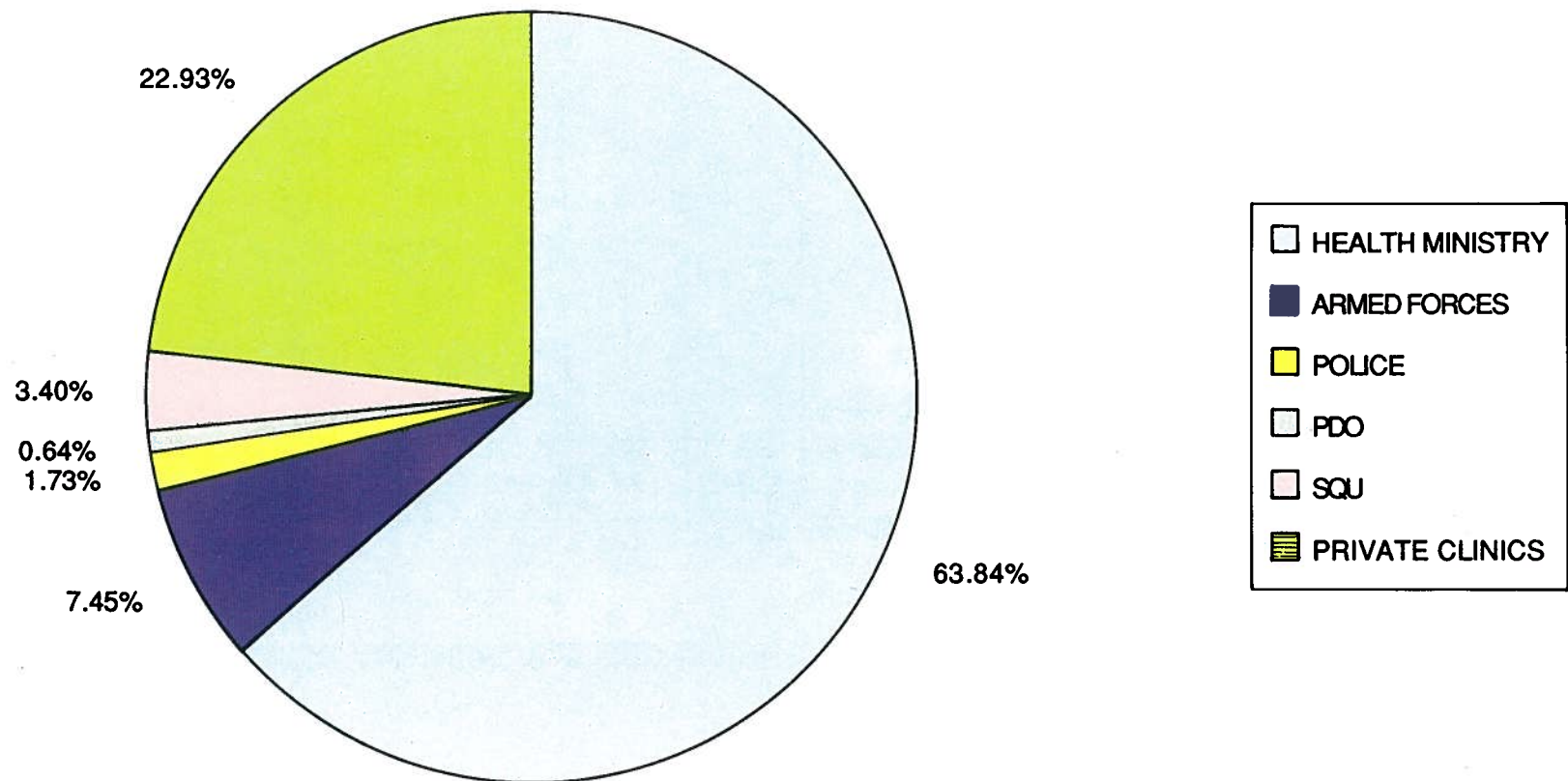
* Sultan Qaboos University's Hospital is not included.

TABLE 8.4

NUMBER OF CLINICS AND MEDICAL PERSONNEL IN THE PRIVATE SECTOR BY REGIONS - 31.12.1990

REGIONS	NUMBER OF CLINICS					NUMBER OF MEDICAL AND PARAMEDICAL PERSONNEL EMPLOYED									
	TYPE OF CLINIC			TOTAL CLINIC		PRIVATE PHARMACIES		DOCTORS		DENTISTS	PHARMACISTS	NURSES	OTHER PARAMEDICALS	TOTAL PERSONNEL	
	GENERAL	SPECIAL	DENTAL	1990	1989			SPECIALISTS	GENERAL					1990	1989
MUSCAT.....	66	14	15	95	87	69	61	22	103	25	112	61	104	427	406
JANUBIA.....	12	2	4	18	16	18	17	4	11	4	18	11	13	61	57
DAKHILYA.....	19	0	3	22	23	10	9	0	19	3	10	15	7	54	53
SHARQIYA.....	30	0	3	33	30	15	13	0	32	3	15	4	3	57	62
BATINAH.....	92	1	7	100	96	31	31	1	107	7	31	63	14	223	209
DHAHIRA.....	17	7	0	24	24	14	13	8	26	0	16	13	5	68	60
MUSANDAM.....	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1
TOTAL :	236	24	32	292	276	158	145	35	298	42	203	167	146	891	848
PRIVATE COMPANIES :	42	0	0	42	41	0	0	0	24	0	0	132	5	161	143
GRAND TOTAL	278	24	32	334	317	158	145	35	322	42	203	299	151	1052	991

DISTRIBUTION OF DOCTORS BY SECTOR - 1990



9. FINANCE

The initial 1990 budget allocation for the Ministry of Health was R.O 104.5 - a 23% increase from the RO 85.1 million of 1989. This included RO 77.9 million for recurrent expenditure and RO 26.5 million for development expenditure. The recurrent expenditure increased by 12% from 1987, but then increased by 23% in 1990; this gives an average growth rate of 7.1%.

The breakdown of the recurrent expenditure for the last four years is detailed below:-

	1990	1989	1988	1987
		(million rials)		
(i) Salaries allowances ect.....	51.2	46.1	40.4	39.2
(ii) Furniture, equipment, vehicles etc.....	3.8	1.6	2.0	1.8
(iii) Supplies, materials,repairs, maintenance & Miscellaneous.....	22.9	22.8	29.2	22.8
Total.....	77.9	70.4	71.7	63.8

The recurrent expenditure for 1990 was distributed as follows:-

	<u>1990</u> (million rials)
Nationally administered programmes.....	21.8
Health Services Development Programmes.....	0.3
<u>Directorates-General</u>	
Royal Hospital.....	19.5
<u>Regional Health Services:</u>	
Muscat.....	11.7
Janubia.....	4.6
Dakhilya.....	4.6
Sharqiya.....	5.8
North Batinah.....	3.4
South Batinah.....	2.3
Dhahira.....	2.7
Directorate of Musandam.....	1.2
TOTAL.....	77.9

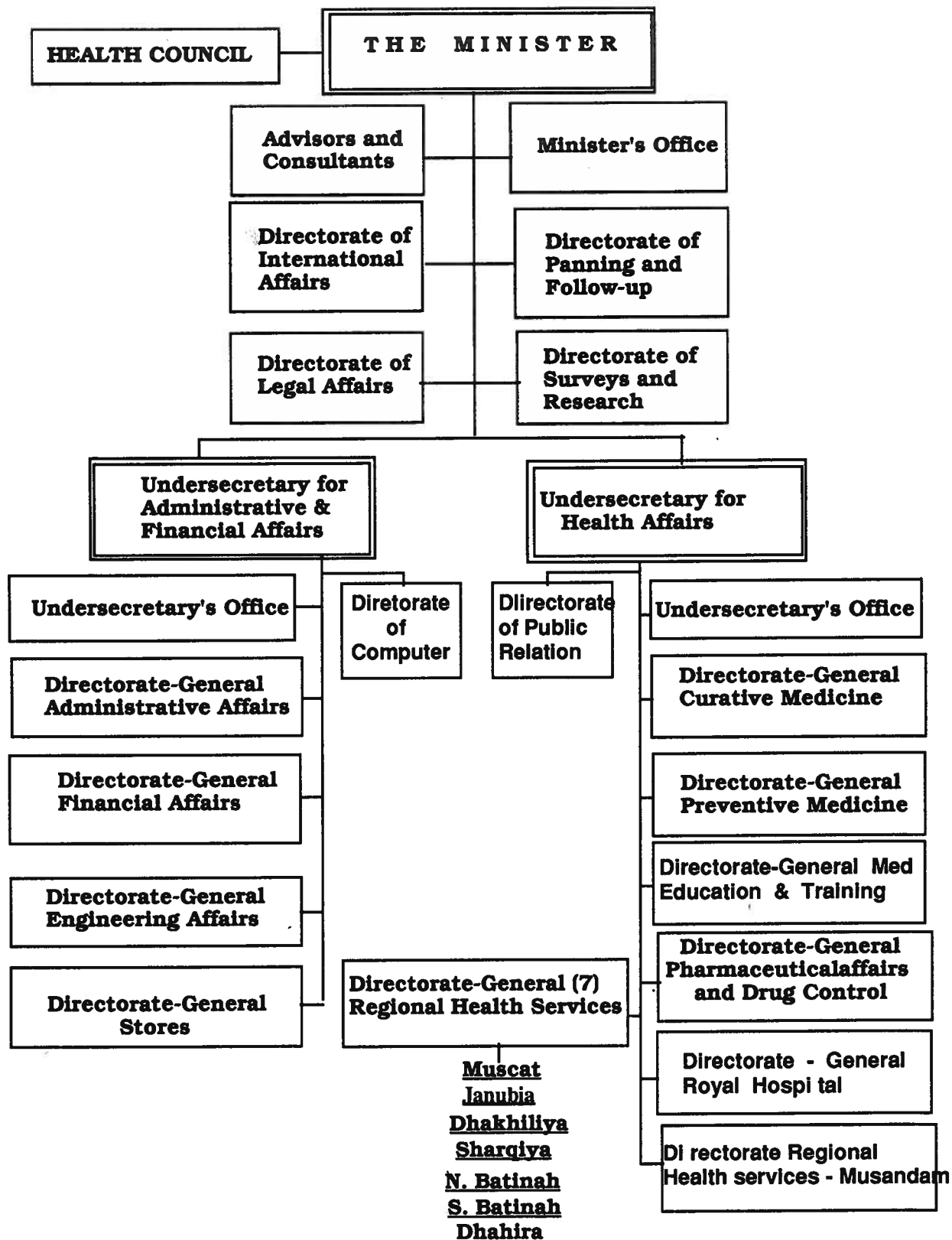
ADMINISTRATIVE DIVISIONS OF THE SULTANATE

REGIONS	Wilayats	Centres
(1) MUSCAT	Muscat	MUSCAT
	Quriyat	QURIYAT
(2) JANUBIA	Salalah Thumarait Taqah Rakhyut Mirbat Shellen Sudh Dhalqut	SALALAH
	Nizwa Bahla Adam Al Hamra Haima Manah	NIZWA
(3) DAKHILYA	Sumail Izki Bidbid	SUMAIL
	Ibra Al Mudhaibi Bidiyah Al Qabel Dima & Al Tayeen	IBRA
(4) SHARQIYA	Sur Masirah Al Kamil & Al Wafi Jaalan Bani bu Ali Jaalan Bani bu Hassan Wadi Bani Khalid	SUR

(cont) ADMINISTRATIVE DIVISIONS OF THE SULTANATE

REGION	Wilayats	Sub-Regions
(5) NORTH BATINAH	Sohar Shinas Liwa Saham Al Khabura Al Suwaiq	SOHAR
(6) SOUTH BATINAH	Rustaq Nakhal Wadi al Maawil Al Awaabi Al Masnah Birka	RUSTAQ
(7) DHAHIRA	Ibri Yankul Dhank	IBRI
	Buraimi Mahdha	BURAIMI
(8) MUSANDAM	Khasab Bukha Dibba al Baya Madha	KHASAB

ORGANIZATION CHART OF THE MINISTRY OF HEALTH



HEALTH INSTITUTIONS OF REGIONS AND SUB-REGIONS

REGIONS	HOSPITALS	HEALTH CENTRES	MCH CENTRES (M)=Maternity Centre	PUBLIC HEALTH UNITS	MALARIA CONTROL CENTRES	WILAYAT
(1) MUSCAT	MUSCAT ASSAADA AR RAHMA AL NAHDHA KHOULA IBN SINA ROYAL QURIYAT	AL AMIRAT SEEB AL KHOD (old) AL KHOD (new) DAGMAR SIYA HAIL AL GHAFI MAZARA YETI	MUTTRAH	QURIYAT SIYA MAZARA		Muscat Quriyat
(2) JANUBIA	QABOOS RAKHYUT SUDH MADINAT AL HAQ TAWI ATTAIR	AL KAHIL ASHUWAIMIYAH DHALQUT GHADOW HADBEEN HAKHAF HASIK JIBJAT KHADRAFI ALHALLANYAT LIQBI MAKINAT SHAHAN MARSIDOD MIRBAT MUDHAI PORT RAYSUT QEIRON HEIRITI RIMA SHAHIB ASSAIB SHARBITHAT SHELEEM SOGHARA TAQA TEYTUM THAMRAIT UMBUSHEQ MUGSHAN		SALALAH TAWI ATTAIR RAKHYUT SUDH MADINAT AL-HAQ DHALQUT JIB JAT QEIRON HEIRITI GHADOW MIRBAT		Salalah Thumarait Taqah Rakhyut Mirbat Shellen Sudh Dhalqut

HEALTH INSTITUTIONS OF REGIONS AND SUB-REGIONS

REGIONS	HOSPITAL	HEALTH CENTRES	MCH CENTRES (M)=Maternity Centre	PUBLIC HEALTH UNITS	MALARIA CONTROL CENTRES	WILAYAT
(3) DAKHILYA	NIZWA BAHLA ADAM HAIMA JABAL AKHDAR DUQUM	AL HAMRA MANAH AL GHAFAT AL MAMoor BARKAT AL MOUZ BISIYA		NIZWA BAHLA ADAM AL-HAMRA DUQUM BISIYA HAIMA	ADAM	Nizwa Bahla Adam Al Hamra Haima Manah
	SUMAIL IZKI	FANJA WADI MAHRAM WADI BANI RAUWAHA QURIYATEEN		SUMAIL IZKI WADI MAHRAM QURIYATEEN	WADI B. RAUWAHA	Sumail Izki Bidbid
(4) SHARQIYA	IBRA BIDIYAH WADI TAYEEN SINAW SAMAD AL SHAAN WADI BANI KHALID	AL MUDHAIBI AL DREEZ MUDHERIB AL AFLAJ MAHOOT (OLD AL HALJ) AL DHAMIR AL AYOUN	IBRA	MUDHERIB BIDIYAH AL AFLAJ SAMAD AL SHAAN WADI TAYEEN WADI BANI KHALID	IBRA MUDHAIBI	Ibra Al Mudhaibi Badiyah Al Qabel Dima & Al-Tayeen
	SUR MASIRAH B.B. BU ALI B.B. BU HASSAN	TIWI RAS AL HAD AIGA WADI BANI JABER QUMAILA AL ASHKARA AL SUWAIH AL RUWAIIS AL WAFI AL GHAINA AL KAMIL FALAJ AL MASHAIKH		SUR TIWI MASIRAH B.B. BU ALI B.B. BU HASSAN QUMAILA AL ASHKARA AL RUWAIIS AL GHAINA AL KAMIL FALAJ AL MASHAIKH		Sur Masirah Al Kamil & Al-Wafi Jaalan Bani Bu-Ali Jaalan Bani Bu-Hassan Wadi Bani Khalid

HEALTH INSTITUTIONS OF REGIONS AND SUB-REGIONS

REGION	HOSPITAL	HEALTH CENTRES	MCH CENTRES (M)=Maternity Centre	PUBLIC HEALTH UNITS	MALARIA CONTROL CENTRES	WILAYAT
(5) NORTH BATINAH	SOHAR SAHAM WADI SARAMI WADI HAWASNA	SUWAIQ KHABURA LIWA SHINAS ABU BAQRA WADI SHAFAN MASHAIQ KHATMAT MALAHA	HAIBI (M)	SAHAM SOHAR WADI SARAMI WADI HAWASNA WADI SHAFAN LIWA	MASNAH SHINAS	Sohar Shinas Liwa Saham Al Khabura Al Suwaiq
(6) SOUTH BATINAH	RUSTAQ WADI MISTAL WADI HEMLI WADI BANI GHAFIR WADI BANI KHAROOS	BIRKA MASNAH AWABI NAKHAL WADI SAHTAN AFI HOQEN		RUSTAQ WADI BANI KHAROOS WADI MISTAL WADI BANI GHAFIR WADI HEMLI WADI SAHTAN HOQEN	RUSTAQ	Rustaq Nakhai Wadi al Maawil Al Awaabi Al Masnah Birka
(7) DHAHIRA	TANAM YANKUL	IBRI SUNAINA MUQNIYAT MAMUR HAJEERMAT DHANK WADI FIDA		TANAM SUNAINA DHANK WADI FIDA	YANKUL	Ibri Yankul Dhank
	BURAIMI WADI JIZZI	AL FAYADH	MAHDHA (M)	BURAIMI WADI JIZZI AL FAYADH		Buraimi Mahdha
(8) MUSANDAM	KHASAB DIBBA (old BAYA) BUKHA	LIMA KUMZAR BUKHA	MADHA (M)	KHASAB KUMZAR LIMA	BAYA	Khasab Bukha Daba al Baya Madha
TOTAL	47	91	2 + (3)	64	9	