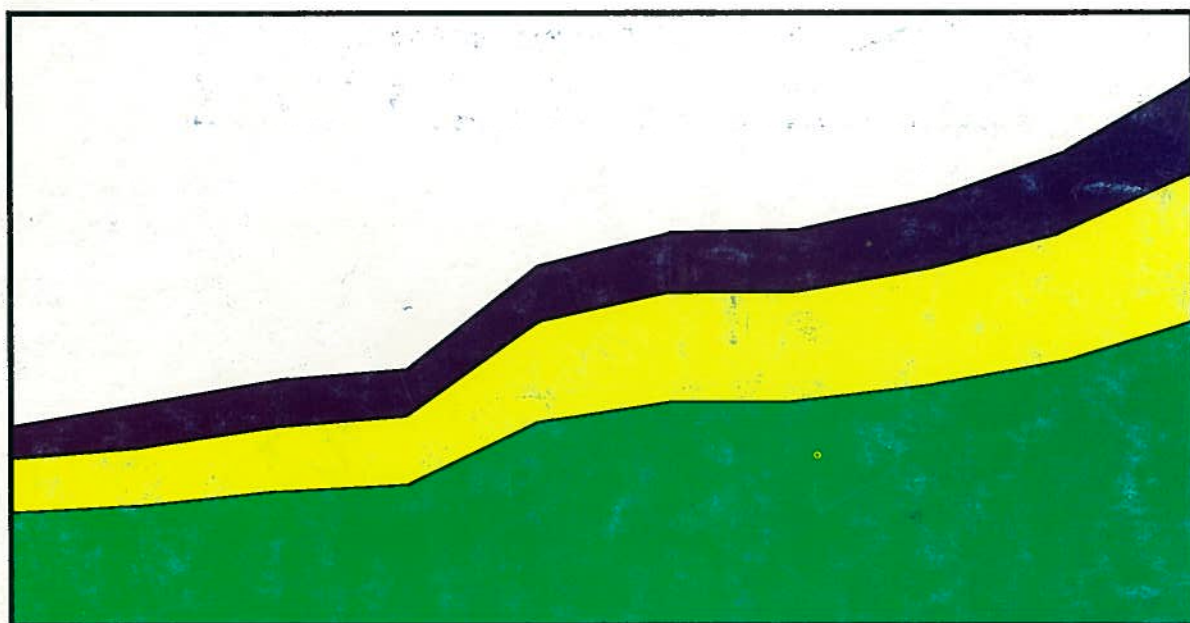




**MINISTRY OF HEALTH
SULTANATE OF OMAN**

ANNUAL STATISTICAL REPORT

1992 A.D. 1412 / 1413 A.H.



**Prepared by :
Directorate - General of Planning**

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H.M. Qaboos bin Said, Sultan of Oman

PREFACE

This is the Annual Statistical Report of the Ministry of Health, which provides a summary of the information used in the management and planning of our health services. It gives comparisons both between regions and over time, to show our achievements in improving the provision of a comprehensive health service. It also shows, through morbidity and mortality information, the effect that these achievements have had on improving the health of the people. It further shows where developments and improvements are needed to ensure that the best health care is provided to all the people of the Sultanate.

Now that the prevention of major childhood diseases has been achieved, we are looking to the prevention of adult diseases through the promotion of healthy life styles. We have recognized the need for health programmes to tackle the non-communicable diseases such as cardiovascular disease, diabetes and cancer. With the control or eradication of the major infectious diseases, Oman is now at a stage where such non-communicable diseases are becoming of increasing significance. As well as providing services for their early diagnosis and treatment, we are also looking to the primary prevention of such diseases. This includes both promotion of healthy life styles and, through education of the public, a reduction in the risk factors, which include smoking, poor eating habits and insufficient exercise.

We now have computerised information in every region, to provide managers at the local and regional levels with the information they need both for day to day management of the health services, as well as for planning for the future. The availability of information is also being further improved through a computer network within the Ministry of Health (which will be extended to every region within the next few years) and the development of Wilayat information systems. This improved access to information will help to improve the provision of health services at all levels.

The health of the people is of great importance to His Majesty Sultan Qaboos, and we will continue to pursue our goal of excellence in the provision of health services to all his people.

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

Mohammed bin Hassan bin Ali

Undersecretary for Planning Affairs

FOREWORD

At the end of 1992, the Health Ministry operated 46 hospitals with a total of 3,560 beds. New paediatric wards were opened in the Ibra, Sur, Sumail and Bahla hospitals and the 12 bedded hospital in Wadi Jizzi (Dhahira region) began accepting inpatients. During 1992 the construction of an 18 bed hospital at Wadi Heebi was completed and is currently being equipped. Construction of new hospitals continued in Rustaq (248 beds), Buraimi (142 beds) and Ibri (248 beds). The designs of the new 382 bed hospital in Sohar and the 280 bed hospital in Nizwa were at a final stage and their construction is expected to begin in 1993.

To cope with the increasing need for local maternity services, maternity facilities were installed in twelve health centres. At the end of 1992, the Ministry had 24 health centres with maternity beds, compared with just 12 at the end of 1991. In addition to these, there were 86 health centres without beds by the end of 1992, four more than in 1991 - thus bringing the total to 110 health centres, an increase of 16 over 1991. The health centres continued to provide all aspects of primary health care - curative, preventive and promotive - to the communities in which they are located. Mobile medical teams also provided access to health care for the smaller isolated communities.

To provide a range of specialist services at the local level, two polyclinics at Shinas and Suwaiq were opened in December 1992. A further two polyclinics (in Birka and Musnah) are expected to open early in 1993, and a third (at Bausher) is currently under construction.

The provision of preventive services continued to expand in 1992 to improve the health of the general population, especially mothers and children. In 1992, the Expanded Programme of Immunization (EPI) fully immunized 96% of all infants before they reached the age of one year against the diseases of tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, measles and viral hepatitis B. Consequently, in 1992, there was only one case of diphtheria, and no cases of poliomyelitis or neonatal tetanus. Measles outbreaks occurred in Dhofar, Dakhilya and North Sharqiya.

The Malaria Control Programme was upgraded to a Malaria Eradication Programme in 1992, and concentrated on the North Sharqiya region, where an intensive programme virtually eliminated the vector mosquito and hence brought the numbers of new cases down to an all time low. This method of eradication is expected to be repeated in the Batinah regions in 1993. The incidence of confirmed cases of malaria in the whole Sultanate fell to just under 15 thousand in 1992 - less than half the 32 thousand cases of 1990.

Trachoma remains a major public health problem with no signs of improvement in adults over the past six years, although an encouraging feature is the reduced prevalence among school-children over the last four years.

The screening of school-children at entry to primary school continued in the 1991/92 school year in four regions and, under the new School Health Programme, was extended to all regions by the start of the 1992/93 school year.

Water quality was still a problem in 1992 with 10% of water samples tested found to be chemically unfit and 20% bacteriologically unfit - both figures being similar to those of 1991.

The number of medical and para-medical personnel employed under the Ministry of Health grew by 12% in 1992 compared with a growth of 7.6% in 1991. At the end of 1992 (1991) there were 1,382 (1,167) physicians, 66 (54) dentists, 49 (37) pharmacists, 4,442 (3,855) nurses and 3,520 (3,322) para-medical personnel. Including health staff in other organizations and the private sector, the Sultanate had one doctor per 840 population, and one nurse per 320 population, improvements of 10% and 8% respectively over the rates of 1991.

The training of nurses and technicians at the Institute of Health Sciences continued to develop. To cope with the growing need, the extended facilities at the Institute became operational at the start of the 1992/93 academic year. In addition, the Regional Nursing Schools in five regions continued to take new students, as did the Institute of Assistant Pharmacists and the Oman Institute of Public Health, both of which opened in 1991. In total, 892 students were enrolled in the Ministry's Institutions at the start of the 1992/93 academic year. Periodical Workshops, Symposia and Seminars for medical and para-medical workers were held during the year.

The budget of the Ministry of Health to provide all the above services in 1992 totalled RO 178.1 million - a 32% increase over the RO 134.5 million of 1991. Recurrent expenditure increased by 17% from RO 85.8 million to RO 100.8 million, while development expenditure increased by 59% from RO 48.7 million to RO 77.3 million.

This annual statistical report contains information on both morbidity and the provision and utilization of health services in the Sultanate. Any suggestions for the improvement of the content or the presentation of the report would be most welcome.

Mohammed Baqer bin Moosa bin Ali
Director-General
Directorate-General of Planning

INDEX OF TABLES & CHARTS

Table No.	(All tables relate to Ministry of Health Institutions except where otherwise stated)	Page
------------------	--	-------------

GENERAL STATISTICS

1.1	Estimated national vital rates : 1980 - 1992	5
1.2	Health Services Provision Indicators : 1986 - 1992	6

DISTRIBUTION AND UTILIZATION

2.1	Regional Distribution of Curative Units (31-12-1992)	8
2.2	Distribution of Hospital beds by Specialty (31-12-1992)	10-11
2.3	Hospital administrative statistics by hospital - 1992	14-16
2.4	Attendances in Hospital Out-Patient Departments - 1992	18-19
2.5	Attendances by Type of Clinic - 1992	20
2.6	Health Centres with beds as of 31-12-1992	21
2.7	Attendances in Health Centres - 1992	22-24
2.8	Attendances in Health Centres by Type of clinic - 1992	25

MORBIDITY

3.1	Inpatient Morbidity - 1992 & 1991	29
3.2	In-Patient Morbidity by Region	30-31
3.3	In-Patient Morbidity Rates per 10,000 popn by Region	32-33
3.4	Notifiable diseases by region - 1992	34
3.5	Notifiable diseases : 1985 - 1992	35
3.6	Patients treated abroad - 1992	37

OTHER HOSPITAL ACTIVITIES

4.1	Deliveries in Hospitals & Maternity Centres - 1992	40-41
4.2	Outcome of Hospital Deliveries - 1992	42-43
4.3	Major Operations performed by type and sex - 1992	44-45
4.4	Minor Operations performed - 1992	46
4.5	Radiography performed in Hospitals - 1992	47-48
4.6	Laboratory investigations carried out in Hospitals-1992	49-51
4.7	Dental and other activities in Hospitals - 1992	52-53

PREVENTIVE MEDICINE

5.1	Regional Distribution of Preventive Units (31-12-1992)	56
5.2	Ante-natal and post-natal services by Region - 1992	57
5.3	Expanded Programme of Immunization - doses given in 1992	58
5.4	Expanded Programme of Immunization Coverage (1981-1992)	59
5.5	Expanded Programme of Immunization Coverage by Region	61
5.6	Eye Health Care Programme - 1987 to 1992	62
5.7	Tuberculosis prevention programme - 1985 to 1992	64
5.8	Control of Diarrhoeal diseases (CDD) by Region - 1992	65
5.9	Acute Respiratory Infections (ARI) by Region - 1992	66
5.10	Protein-Energy Malnutrition (PEM) by Region - 1992	67
5.11	Malaria control activities - 1988 to 1992	69
5.12	Malaria passive case detection by Region - 1992	70
5.13	Malaria school survey (6-9 years) by Region - 1992	70
5.14	School Health Services - 1992	73
5.15	Water Quality Testing by Region - 1992	74

Table No.	(All tables relate to Ministry of Health Institutions except where otherwise stated)	Page
------------------	--	-------------

TRAINING

6.1	Enrolment at Ministry of Health Training Institutes	76
6.2	Graduates from Institute of Health Sciences (1984-1992)	77

PERSONNEL

7.1	Ministry of Health Manpower by Category and Nationality	82-83
7.2	Ministry of Health Manpower by Category and Region	84-85
7.3	Medical & Para-medical Personnel . - 1983 to 1992	87
7.4	Total Medical & Para-medical staff (in Ministry of Health, other Organizations and the Private Sector) 1992 & 1991	88

NON HEALTH MINISTRY ORGANIZATIONS

8.1	Health Facilities - 1992 & 1991	91
8.2	Health-related Personnel employed as of 31-12-1992	92
8.3	Utilization of health services - 1992 & 1991	93

PRIVATE SECTOR

8.4	Number of Clinics and Pharmacies and Medical Personnel in the Private Sector by Region (31-12-1992)	94
-----	---	----

FINANCE

9.1	Recurrent expenditure by type & budget location	95
-----	---	----

C H A R T S

1.	Ministry of Health Hospital beds : 1983 - 1992.	9
2.	Total Hospital Beds by Regions : 31.12.1992	12
3.	Rates of Hospital Beds by Region : 31.12.1992	13
4.	Discharges from Hospitals : 1986 - 1992	17
5.	Outpatient Attendance : 1983 - 1992	26
6.	Major Operations by Type - 1992	39
7.	Immunization coverage : 1982 - 1992	60
8.	Nursing graduates from the IHS : 1984-1992	78
9.	Total graduates from the IHS by type : 1989 - 1992	79
10.	Medical & Para-Medical staff : 1985 - 1992	81
11.	Ministry of Health staff by category - 1992	86
12.	Distribution of doctors by sector - 1992	89
13.	Ministry of Health budget : 1987-1992	96
	Organization Chart of Ministry of Health	97
	Health Institutions by Type & Region	98-100

INTRODUCTION

Geographical Features

The Sultanate of Oman occupies most of the south-eastern corner of the Arabian Peninsula and has a coast-line stretching almost 1,700 km from the Straits of Hormuz in the north to the frontier with the Republic of Yemen in the south. 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 area of Oman is 344,000 sq.km, of which mountains (of height 450 metres or more) constitute 45,000 sq.km, the coastal plains just 9,000 sq.km, and the rest (290,000 sq. km) are wadis (dry river beds) and desert areas.

The climate is varied. From April to October it is hot and dry in the interior regions, and hot and humid along the coast with maximum temperatures ranging from 36 to 48°C. From November to March, the temperature is much cooler, maxima ranging from 25 to 35°C. A temperate climate all year occurs in elevated regions of the Western Hajar (see below). Rainfall is low and erratic in all but the southern region, averaging 50 - 100 mm per year. In winter, however, rain can cause flooding of many wadis in both rural and urban areas. The climate in the southern region is more consistent with maximum temperatures ranging from 25 to 35°C, but is characterized by heavy monsoon rains from June to September.

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.

Government Administration

The Sultanate of Oman is divided into 59 Wilayats, each administered by a Wali; in addition, the capital region of Muscat, the southern region of Dhofar and the northern region of Musandam are each administered by a Governor.

The Wilayats are grouped into 9 regions; the regions of Batinah and Sharqiya have each been further divided into two for health administration, giving a total of ten health regions. The health regions (with main administrative towns) are thus :-

- (1) Muscat
- (2) Dhofar (Salalah)
- (3) Dakhilya (Nizwa)
- (4) North Sharqiya (Ibra)
- (5) South Sharqiya (Sur)
- (6) North Batinah (Sohar)
- (7) South Batinah (Rustaq)
- (8) Dhahirah (Ibri)
- (9) Musandam (Khasab)
- (10) Al Woustah (Hayma)

Health Administration

The Ministry of Health is the main provider of health care in the country. There are three other government organizations - the Ministry of Defence, the Royal Oman Police and Petroleum Development Oman (PDO) - who provide medical care only to their employees and their dependants. The University Hospital of the Ministry of Education opened in 1990 and at present caters for the primary health care needs of the university students and staff. It also provides both secondary care services to the nearby population of Al Khod and certain tertiary care services for the whole Sultanate in co-operation with the Royal Hospital. No private hospitals exist in Oman. Primary health care is also provided by private physicians who work in their own clinics.

Each region is responsible for the administration of its own health services through its Regional Health Office and Regional Director-General. This has led to the integration of both curative and preventive services to provide a comprehensive health care service to the whole community. The administrative structure is shown in Appendix 1.

(a) Directorate-General of Health Affairs (DGHA)

This Directorate-General is an amalgamation of the two previous Directorates-General of Curative Medicine and Preventive Medicine. The provision of health care is thus administered nationally through a single administrative unit. Its responsibilities include planning, monitoring and supervision of all primary, secondary and tertiary care services. It is responsible for the organization of preventive and promotive programmes provided at all health units. Its departments include:

- a) Family & Community Health (consisting of the nine PHC programmes of MCH, EPI, CDD, ARI, TB, Eye health care, Oral health care, Nutrition, and Epidemiological studies).
- b) Disease Surveillance and Control
- c) Environmental Health.
- d) Health education.
- e) Malaria Eradication.
- f) School Health
- g) Public Health Laboratories.

(b) Directorate-General of Regional Health Services

Responsibility for the provision of health services lies with the Director-General of each of the eight health regions.

- (i) At the local level, a health centre headed by a physician provides basic health care. With the need for local maternity services in remote areas, several health centres have a few maternity beds. Small hospitals at the local level have from 12 to 20 beds for general medicine and maternity, as well as an outpatient service. Other local hospitals have between 24 and 49 beds and provide additional inpatient, casualty and emergency services. All these local health units also provide preventive services including maternal and child health (MCH) and environmental sanitation, in order to provide comprehensive primary care services.
- (ii) At the district and regional levels, there are district hospitals with 50 to 100 beds and regional hospitals with 100 or more beds. These hospitals have extensive inpatient and out-patient services, including specialized services in medicine, surgery, paediatrics and maternity.
- (iii) At the national level, the three major hospitals in Muscat - the Royal, Khoula and Al Nahdha - provide tertiary care and act as national referral hospitals. The Ibn Sina is the country's only psychiatric hospital. (The Royal Hospital has its own Director-General).

Over 95% of the entire population of Oman now has ready access to the permanent health facilities of the Ministry of Health. Mobile medical teams visit the more isolated communities with limited access to provide both preventive and curative health services.

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 twelve 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 in the Sultanate.

The most noticeable features of Table 1.1 are the high birth rates and hence high natural increase rates. The birth rate of 42.2 per 1,000 population in 1992 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 25 per 1,000 livebirths in 1992. The combination of the high birth rate and the low overall death rate results in a very high estimated natural increase rate of 3.5%. 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 6 years. Each indicator has continued to improve over this period.

TABLE 1.1**ESTIMATED OMANI NATIONAL POPULATION STATISTICS 1980-1992****(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	31	6.3	7.7	3.7
1990	44.7	29	6.3	7.6	3.7
1991	43.9	27	6.3	7.5	3.6
1992	42.2	25	6.3	7.4	3.5

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 SERVICE PROVISION INDICATORS : 1986 - 1992**

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

INDICATOR	1986	1987	1988	1989	1990	1991	1992
TOTAL BEDS.....	3,348	3,455	3,859	3,952	4,158	4,315	4,487
TOTAL DOCTORS.....	1,096	1,243	1,371	1,392	1,557	1,810	2,096
TOTAL NURSES.....	2,533	3,467	3,810	3,866	4,286	4,856	5,575
TOTAL DENTISTS.....	80	83	96	97	99	118	142
TOTAL PHARMACISTS.....	224	227	235	235	269	288	348
HOSPITAL BEDS/10,000 POPN.....	24.4	25.0	27.2	26.9	27.5	27.7	25.4
DOCTORS/10,000 POPULATION.....	8.0	9.0	9.7	9.5	10.3	11.6	11.9
NURSES/10,000 POPULATION.....	18.5	25.1	26.8	26.3	28.4	31.1	31.5
DENTISTS/10,000 POPULATION.....	0.6	0.6	0.7	0.7	0.7	0.8	0.8
PHARMACISTS/10,000 POPN.....	1.6	1.6	1.7	1.6	1.8	1.8	2.0
POPULATION/HOSPITAL BED.....	410	400	370	370	360	360	390
POPULATION/DOCTOR.....	1,250	1,110	1,040	1,060	970	860	840
POPULATION/NURSE.....	540	400	370	380	350	320	320
POPULATION/DENTIST.....	17,100	16,600	14,800	15,200	15,300	13,200	12,500
POPULATION/PHARMACIST.....	6,100	6,100	6,000	6,300	5,600	5,400	5,100

2 DISTRIBUTION AND UTILIZATION OF HEALTH SERVICES

Table 2.1 show the regional distribution of the health units. At the end of 1992 there were 46 hospitals, 24 health centres with beds and 86 health centres without beds.

At the end of 1992, the hospitals by themselves had a total of 3,560 beds compared with 3,473 at the end of 1991. Their distribution by region, hospital and specialty is shown in Table 2.2 and Figures 2 & 3 . 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 under-provision 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, with the trend over the last six years shown in Figure 4. Over 202 thousand patients were discharged from the 46 hospitals in 1992 - a 7.0% increase over the 190 thousand in 1991; this increase is the higher than the country's population growth rate, suggesting that utilization rates per person have also increased. On average, the hospitals cared for 2,505 inpatients per day, who stayed for an average of 4.5 days. This meant that the hospital beds were occupied, on average, 70% of the year - almost the same as for the last three years. Smaller hospitals, with less demand had, on average, much lower occupancy rates.

The utilization of hospital outpatient services is shown in Table 2.4 and Figure 5. A total of 6.8 million patients were seen during 1992, which was a 4.3% increase over the 6.6 million in 1991. The hospitals with the highest daily attendances in 1992 were the Sohar Hospital in North Batinah (1,572 per day), the Qaboos Hospital in Salalah (1,501 per day), and the Al Nahdha Hospital (1,196) and the Royal Hospital (1,143) in Muscat. The attendances at each type of clinic in each region is shown in Table 2.5. General practice and Accident and Emergency combined accounted for one half of the patient attendances, the next highest being Paediatrics (12%).

The distribution of health centres with beds is shown in Table 2.6. The numbers have increased significantly in 1992 to provide maternity care to the communities with difficult access to hospitals. The utilization of the health centres and mobile medical teams is shown in Table 2.7. A total of 3.6 million patients were seen during 1992 - a 5.5% increase over the 3.4 million in 1991. The busiest clinics were the Amirat and the Seeb in Muscat, the Suwaiq and Khabura in North Batinah, and the Birka and Masnah in South Batinah, each of which saw an average of over 400 patients each day of the year.

Thus, in hospital outpatient departments and health centres combined, a total of 10.4 million outpatients were seen for both curative and preventive purposes. For "curative" reasons (i.e. excluding preventive clinics such as antenatal, postnatal, child health and immunization) there were about 9.5 million visits - an average of 5.4 visits per person per year.

TABLE 2.1**REGIONAL DISTRIBUTION OF CURATIVE UNITS AS OF 31.12.1992**

R E G I O N S	HOSPITALS	HEALTH CENTRES WITH BEDS	HEALTH CENTRES WITHOUT BEDS	T O T A L
MUSCAT.....	7	0	10	17
DHOFAR.....	5	13	20	38
DAKHILYA.....	6	0	10	16
NORTH SHARQIYA.....	6	0	6	12
SOUTH SHARQIYA.....	4	0	12	16
NORTH BATINAH	4	3	8	15
SOUTH BATINAH	5	1	6	12
DHAHIRA.....	4	2	9	15
MUSANDAM.....	3	3	1	7
AL WOUSTAH.....	2	2	4	8
T O T A L	46	24	86	156

Note: The Table does not include two Health Centres (Seefa and Ramlat Muqshan) which were opened but had not started functioning during 1992

Fig 1 MINISTRY OF HEALTH BEDS 1983-1992
(Hospitals and Health Centres)

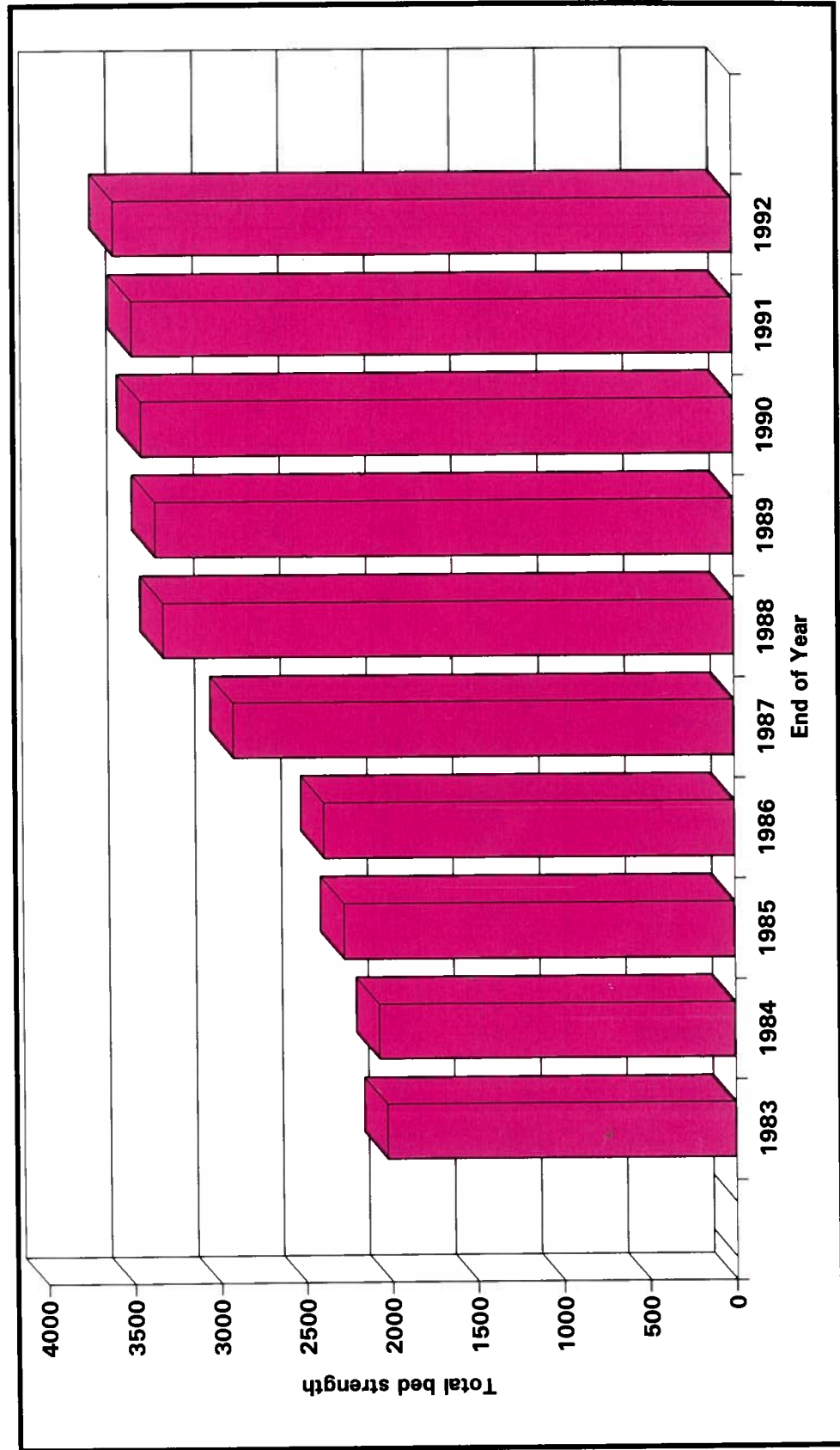


TABLE 2.2

HOSPITAL BEDS BY SPECIALTY AND REGION AS OF 31ST DEC 1992

REGION HOSPITAL	TOTAL BEDS	B E D S B Y S P E C I A L T Y						
		PAEDI ATRIC (a)	ADULT MEDICAL (b)	ADULT SURGICAL (c)	ADULT MIXTURE (d)	OBS. GYNAE	ICU CCU	OTHER (e)
MUSCAT								
ROYAL.....	635	131	136	171	0	129	32	36
KHOULA.....	419	67	0	176	0	145	7	24
AL-NAHDA.....	205	32	22	107	0	0	4	40
IBN-SINA.....	81	0	81	0	0	0	0	0
AR-RAHMA.....	80	0	62	0	0	0	0	18
QURIYAT.....	37	13	16	0	0	8	0	0
MUSCAT.....	2	0	0	0	0	0	0	2
TOTAL:	1459	243	317	454	0	282	43	120
DHOFAR								
QABOOS.....	316	69	84	80	0	53	4	26
MADINAT AL-HAQ.....	18	5	0	0	13	0	0	0
SUDH.....	18	5	0	0	13	0	0	0
RAKHYUT.....	18	5	0	0	13	0	0	0
TAWI ATTAIR.....	6	0	0	0	6	0	0	0
TOTAL:	376	84	84	80	45	53	4	26
DHAKILYA								
NIZWA.....	175	63	21	37	0	41	5	8
SUMAIL.....	88	32	18	0	20	10	0	8
BAHLA.....	65	33	16	0	0	12	0	4
ADAM.....	30	9	0	0	13	6	0	2
IZKI.....	20	6	0	0	8	6	0	0
JABAL AKHDAR.....	4	2	0	0	0	2	0	0
TOTAL:	382	145	55	37	41	77	5	22
NORTH SHARQIYA								
IBRA	98	40	19	21	0	18	0	0
SINAW	41	12	0	0	14	8	0	7
WADI DIMA & TAYEEN ...	35	12	15	0	0	6	0	2
BIDIYA.....	26	8	0	0	12	6	0	0
SAMAD AL-SHAAN.....	27	11	0	8	0	8	0	0
WADI BANI KHALID.....	13	4	6	0	0	3	0	0
TOTAL:	240	87	40	29	26	49	0	9
SOUTH SHARQIYA								
SUR.....	137	41	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
MASIRAH.....	29	9	0	0	20	0	0	0
TOTAL:	288	94	57	58	20	51	0	8

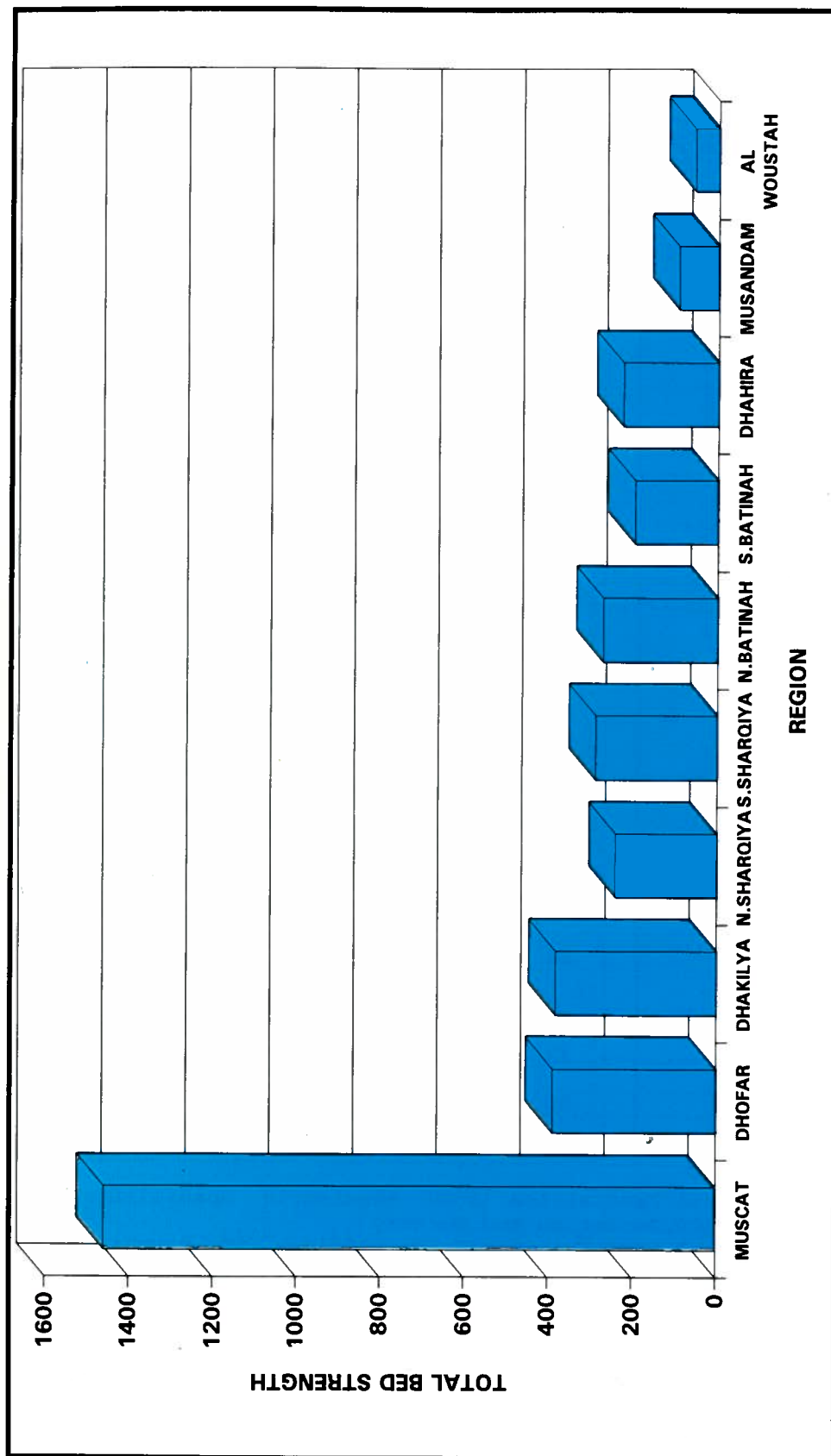
(CONT) TABLE 2.2

HOSPITAL BEDS BY SPECIALTY AND REGION AS OF 31ST DEC 1992

REGION HOSPITAL	TOTAL BEDS	B E D S B Y S P E C I A L T Y						
		PAEDI ATRIC (a)	ADULT MEDICAL (b)	ADULT SURGICAL (c)	ADULT MIXTURE (d)	OBSTE GYNA	ICU CCU	OTHER (e)
NORTH BATINAH								
SOHAR.....	181	66	18	43	0	39	5	10
SAHAM.....	58	16	16	7	0	18	0	1
WADI AL-HAWASNA.....	14	6	5	0	0	3	0	0
WADI SARAMI.....	12	0	9	0	0	3	0	0
TOTAL:	265	88	48	50	0	63	5	11
SOUTH BATINAH								
RUSTAQ.....	130	41	16	24	0	41	2	6
WADI BANI GHAFFIR.....	16	5	0	0	7	3	0	1
WADI BANI KHAROOS.....	16	6	0	0	7	3	0	0
WADI MISTAL.....	14	6	0	0	6	2	0	0
WADI HEMLI.....	14	6	5	0	0	3	0	0
TOTAL:	190	64	21	24	20	52	2	7
DHAHIRA								
TANAM.....	123	34	0	0	54	35	0	0
BURAIMI.....	75	17	20	26	0	8	1	3
YANKUL.....	9	3	3	0	0	3	0	0
WADI AL JIZZI.....	12	5	0	4	0	3	0	0
TOTAL:	219	59	23	30	54	49	1	3
MUSANDAM								
KHASAB.....	50	10	10	10	0	8	0	12
DIBBA.....	26	0	0	0	24	0	2	0
BUKHA.....	13	0	12	0	0	0	0	1
TOTAL:	89	10	22	10	24	8	2	13
AL-WOUSTAH								
HAIMA.....	40	9	10	8	0	8	0	5
DUQUM.....	12	6	6	0	0	0	0	0
TOTAL:	52	15	16	8	0	8	0	5
NATIONAL TOTAL:.....	3560	889	683	780	230	692	62	224

- (a) Includes General Paediatrics, SCBU, Paediatric Specialities of Orthopaedics Nuerosurgery, ICU, Isolation and Nursery
- (b) Includes General Medicine, Renal, Dermatology, TB, Psychiatry and Isolation
- (c) Includes General Surgery, Orthopaedics, Plastic, Neruosurgery, Ophthalmology Nephrology/Urology, ENT, Dental and Post-cardiac
- (d) Includes beds shared between medical and surgical specialties
- (e) Includes Daycare, VIP, Private, Observation and not classified

**Fig 2. MINISTRY OF HEALTH HOSPITAL BEDS
BY REGION 31-12-1992**



**Fig 3. MINISTRY OF HEALTH HOSPITAL BEDS
RATES PER 1000 POPULATION - 1992**

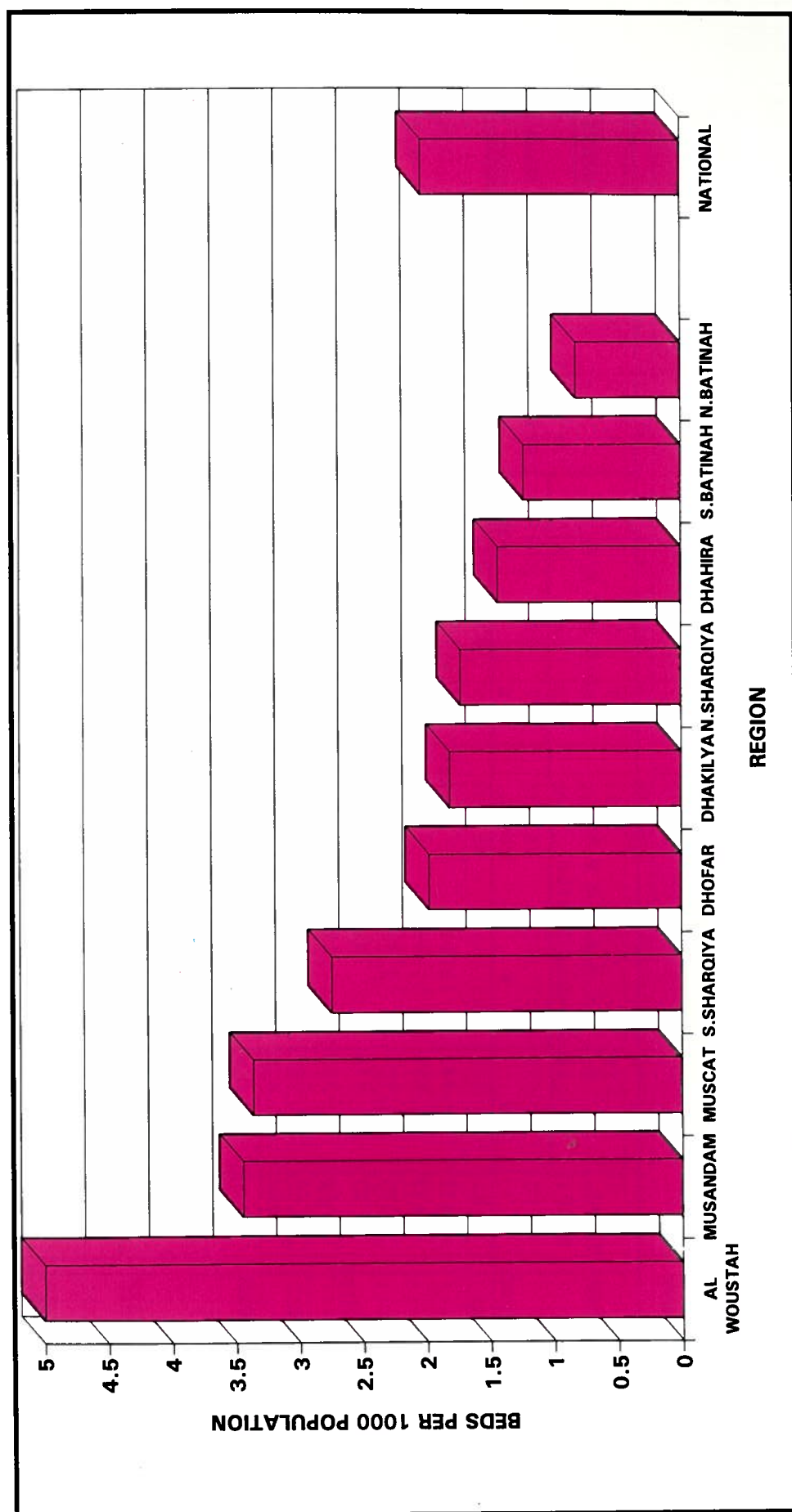


TABLE 2.3

MINISTRY OF HEALTH HOSPITALS - 1992
HOSPITAL INPATIENT ADMINISTRATIVE STATISTICS

HOSPITAL	REGION	TOTAL BEDS	D I S C H A R G E S (Including Deaths)			D E A T H S			TOTAL PATIENT DAYS	HOSPITAL STATISTICS			
			M	F	TOTAL	M	F	TOTAL		% OCCUPANCY	MEAN STAY	AVERAGE PATIENTS PER DAY	
MUSCAT													
ROYAL.....		635	10,493	14,666	25,159	391	297	688	175,299	75%	7.0	479	
KHOULA.....		419	6,218	11,073	17,291	101	44	145	107,521	70%	6.2	294	
AL-NAHDA.....		205	2,954	2,074	5,028	1	2	3	30,318	40%	6.0	83	
IBN-SINA.....		81	376	223	599	1	0	1	35,657	120%	59.5	97	
AR-RAHMA.....		80	395	217	612	30	8	38	20,668	71%	33.8	56	
QURIYAT.....		37	1,087	2,288	3,375	15	6	21	9,000	66%	2.7	25	
TOTAL		1,457	21,523	30,541	52,064	539	357	896	378,463	71%	7.3	1,034	
DHOVAR													
QABOOS.....		316	7,278	10,817	18,095	98	71	169	94,672	82%	5.2	259	
MADINAT AL-HAQ.....		18	374	431	805	0	1	1	2,178	33%	2.7	6	
SUDH.....		18	306	438	744	1	1	2	2,500	38%	3.4	7	
RAKHYUT.....		18	164	210	374	0	0	0	1,646	25%	4.4	4	
TAWI ATTAIR.....		6	154	158	312	0	0	0	710	32%	2.3	2	
TOTAL		376	8,276	12,054	20,330	99	73	172	101,706	74%	5.0	278	
DAKHILYA													
NIZWA.....		175	4,559	6,120	10,679	60	49	109	49,418	77%	4.6	135	
SUMAIL.....		88	2,226	3,458	5,684	28	22	50	21,100	66%	3.7	58	
BAHLA.....		65	1,441	3,374	4,815	17	9	26	14,164	60%	2.9	39	
ADAM.....		30	550	964	1,514	10	3	13	5,558	51%	3.7	15	
IZKI.....		20	924	2,053	2,977	2	3	5	6,875	94%	2.3	19	
JABAL AKHDAR.....		4	33	94	127	0	0	0	230	16%	1.8	1	
TOTAL		382	9,733	16,063	25,796	117	86	203	97,345	70%	3.8	266	

JABAL AKHDAK.....	382	9,733	16,063	25,796	117	86	203	97,345	70%	3.8	1.0	266
TOTAL												

(CONT) TABLE 2.3

MINISTRY OF HEALTH HOSPITALS - 1992
HOSPITAL INPATIENT ADMINISTRATIVE STATISTICS

REGION HOSPITAL	TOTAL BEDS	D I S C H A R G E S (Including Deaths)			D E A T H S			TOTAL PATIENT DAYS	HOSPITAL STATISTICS		
		M	F	TOTAL	M	F	TOTAL		% OCCUP -ANCY	MEAN STAY	AVERAGE PATIENTS PER DAY
NORTH SHARQIYA											
IBRA.....	98	2,918	4,458	7,376	50	26	76	24,315	68%	3.3	66
SINAW.....	41	1,683	2,809	4,492	24	8	32	12,162	81%	2.7	33
W.DIMA & TAYEEN....	35	808	1,246	2,054	0	2	2	5,593	44%	2.7	15
BIDIYA.....	26	1,103	1,432	2,535	7	4	11	5,297	56%	2.1	14
SAMAD AL-SHAAN.....	27	558	1,120	1,678	3	0	3	4,925	50%	2.9	13
WADI BANI KHALID...	13	169	347	516	3	0	3	1,294	27%	2.5	4
TOTAL	240	7,239	11,412	18,651	87	40	127	53,586	61%	2.9	146
SOUTH SHARQIYA											
SUR.....	137	2,990	5,855	8,845	47	41	88	36,707	73%	4.2	100
B.B.B. BU ALI.....	70	2,212	3,862	6,074	21	12	33	21,914	86%	3.6	60
B.B.B. BU HASSAN.....	52	1,526	2,003	3,529	7	7	14	10,761	57%	3.0	29
MASIRAH.....	29	733	887	1,620	2	6	8	6,444	61%	4.0	18
TOTAL	288	7,461	12,607	20,068	77	66	143	75,826	72%	3.8	207
NORTH BATINAH											
SOHAR.....	181	6,501	11,742	18,243	131	74	205	56,863	86%	3.1	155
SAHAM.....	58	2,289	5,256	7,545	38	15	53	16,118	76%	2.1	44
WADI AL-HAWASNA....	14	82	143	225	0	0	0	678	13%	3.0	2
WADI SARAMI.....	12	168	265	433	1	0	1	1,015	23%	2.3	3
TOTAL	265	9,040	17,406	26,446	170	89	259	74,674	77%	2.8	204
SOUTH BATINAH											
RUSTAQ.....	130	3,777	8,087	11,864	75	56	131	39,776	84%	3.4	109
W.B.GHAFFIR.....	16	224	533	757	1	1	2	2,570	44%	3.4	7
WADI B. KHAROOS....	16	104	226	330	1	1	2	2,035	35%	6.2	6
WADI MISTAL.....	14	80	153	233	2	2	4	1,803	35%	7.7	5
WADI HEMLY.....	14	270	428	698	0	0	0	2,017	39%	2.9	6
TOTAL	190	4,455	9,427	13,882	79	60	139	48,201	69%	3.5	132

(CONT) TABLE 2.3

MINISTRY OF HEALTH HOSPITALS - 1992
HOSPITAL INPATIENT ADMINISTRATIVE STATISTICS

REGION HOSPITAL	TOTAL BEDS	D I S C H A R G E S (Including Deaths)			D E A T H S			TOTAL PATIENT DAYS	HOSPITAL STATISTICS		
		M	F	TOTAL	M	F	TOTAL		% OCCUP- -ANCY	MEAN STAY	AVERAGE PATIENTS PER DAY
DHAHIRA											
TANAM.....	123	5,248	7,651	12,899	62	52	114	41,474	92%	3.2	113
BURAIMI.....	75	2,393	2,833	5,226	31	13	44	21,342	78%	4.1	58
YANKUL.....	9	114	717	831	0	0	0	1,299	39%	1.6	4
WADI JIZZI*.....	12	14	26	40	0	0	0	61	8%	1.5	1
TOTAL	219	7,769	11,227	18,996	93	65	158	64,176	80%	3.4	175
MUSANDAM											
KHASAB.....	50	1,272	1,291	2,563	14	8	22	8,912	49%	3.5	24
DIBBA	26	725	871	1,596	5	2	7	5,182	54%	3.2	14
BUKHA.....	13	321	325	646	0	1	1	1,475	31%	2.3	4
TOTAL	89	2,318	2,487	4,805	19	11	30	15,569	48%	3.2	43
AL-WOUSTAH											
HAJMA	40	461	489	950	1	0	1	5,261	36%	5.5	14
DUQUM	12	400	462	862	0	1	1	2,158	49%	2.5	6
TOTAL	52	861	951	1,812	1	1	2	7,419	39%	4.1	20
NATIONAL TOTAL	3,558	78,675	124,175	202,850	1,281	848	2,129	916,965	70%	4.5	2,505

* Wadi Jizzi started inpatient services in November, 1992.

(THIS TABLE DOES NOT INCLUDE HEALTH CENTRES WITH BEDS AND MUSCAT HOSPITAL WITH 2 BEDS)

FIG 4 MINISTRY OF HEALTH HOSPITALS
INPATIENT DISCHARGES - 1983 - 1992

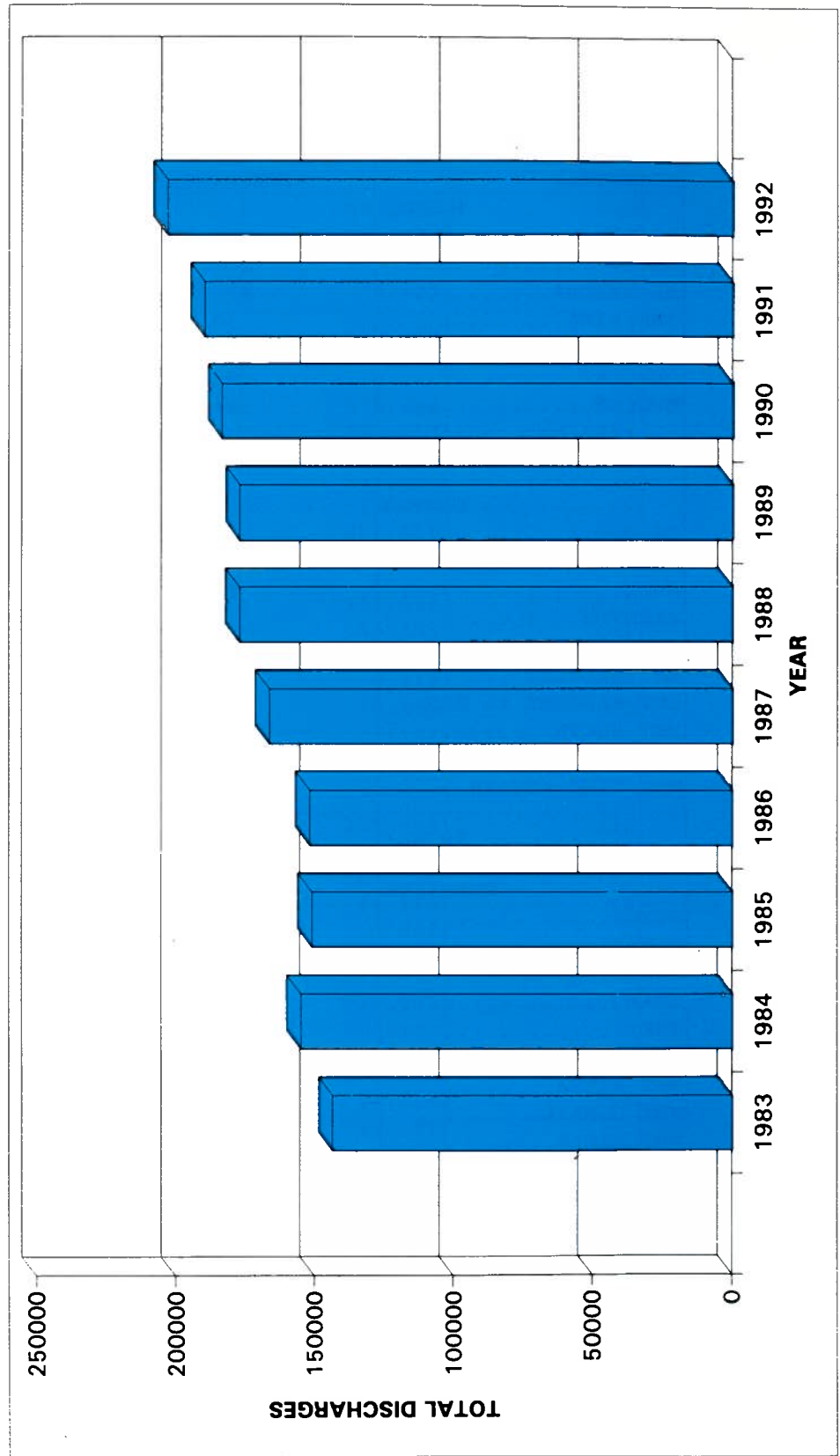


TABLE 2.4

**ATTENDANCE IN OUT-PATIENT DEPARTMENTS
OF HEALTH MINISTRY HOSPITALS - 1992**

HOSPITALS	REGIONS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE *
MUSCAT			
ROYAL.....		418,286	1,143
KHOULA.....		202,681	554
AL-NAHDHA.....		437,668	1,196
IBN-SINA.....		33,164	91
AR-RAHMA.....		128,400	351
QURIYAT.....		98,094	268
MUSCAT.....		94,037	257
TOTAL:		1,412,330	3,859
DHOFAR			
QABOOS.....		549,299	1,501
MADINAT AL-HAQ.....		31,778	87
SUDH.....		26,534	72
RAKHYUT.....		6,829	19
TAWI ATTAIR.....		27,070	74
MMT SALALAH.....		13,944	38
MMT MADINAT AL HAQ...		2,804	8
MMT SUDHA.....		1,305	4
MMT RAKHYUT.....		3,013	8
MMT TAWI ATTAIR.....		1,457	4
TOTAL:		664,033	1,814
DAKHILYA			
NIZWA.....		372,013	1,016
SUMAIL.....		209,723	573
BAHLA.....		184,443	504
ADAM.....		84,166	230
IZKI.....		118,610	324
JABAL AKHDAR.....		20,250	55
MMT NIZWA.....		1,307	4
MMT SUMAIL.....		3,337	9
MMT BAHLA.....		5,357	15
MMT ADAM.....		773	2
MMT JABAL AKHDAR.....		1,621	4
TOTAL:		1,001,600	2,737
NORTH SHARQIYA			
IBRA		230,812	631
SINAW		216,923	593
WADI TAYEEN.....		55,746	152
BIDIYA.....		90,264	247
SAMAD AL-SHAAN.....		96,808	265
WADI BANI KHALID.....		27,278	75
MCH IBRA.....		5,150	14
TOTAL:		722,981	1,975

(CONT)TABLE 2.4

ATTENDANCE IN OUT-PATIENT DEPARTMENTS
OF HEALTH MINISTRY HOSPITALS - 1992

HOSPITALS	REGIONS	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE *
SOUTH SHARQIYA			
SUR.....		260,029	710
B.B.BU ALI.....		251,611	687
B.B.BU HASSAN.....		108,589	297
MASIRAH.....		73,254	200
TOTAL:		693,483	1,895
NORTH BATINAH			
SOHAR.....		575,404	1,572
SAHAM.....		290,427	794
WADI HAWASNA.....		14,599	40
WADI SARAMI.....		10,826	30
TOTAL:		891,256	2,435
SOUTH BATINAH			
RUSTAQ.....		302,644	827
WADI BANI GHAFIR..		66,253	181
WADI BANI KHAROOS..		22,050	60
WADI MISTAL.....		9,710	27
WADI HEMLI.....		34,845	95
TOTAL:		435,502	1,190
DHAHIRA			
TANAM.....		337,488	922
BURAIMI.....		283,617	775
YANKUL.....		104,324	285
WADI JIZZI.....		34,376	94
MMT YANKUL.....		683	2
MMT TANAM.....		12,479	34
TOTAL:		772,967	2,112
MUSANDAM			
KHASAB.....		110,210	301
DIBBA.....		74,314	203
BUKHA.....		14,961	41
MMT DIBBA.....		52	0
TOTAL:		199,537	545
AL WOUSTAH			
HAIMA.....		17,606	48
DUQUM.....		29,069	79
MMT HAIMA.....		4,812	13
MMT DUQUM.....		3,511	10
TOTAL:		54,998	150
NATIONAL TOTAL:		6,848,687	18,712

NOTE

*Total attendances divided by 366 days.

TABLE 2.5

ATTENDANCES IN HOSPITALS BY TYPE OF CLINIC - 1992

TYPE OF CLINIC	TOTAL	MUSCAT	DHOVAR	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATINAH	SOUTH BATINAH	DHAHRA	MUSANDAM	AL WOUSTAH
General Practice.....	2,577,571	507,072	334,786	246,089	458,497	305,938	157,922	151,026	223,801	150,618	41,822
A & E/ Casualty.....	982,750	213,221	53,686	200,290	0	562	305,234	95,708	114,049	0	0
General Medicine.....	298,965	58,488	23,913	63,820	20,421	20,775	25,442	7,485	71,177	7,444	0
General Surgery.....	194,590	57,502	5,855	20,683	32,785	26,263	10,223	4,591	31,520	5,168	0
Paediatrics.....	806,629	99,339	59,690	169,967	84,559	139,346	124,221	38,579	77,082	10,168	3,678
Ophthalmology.....	249,703	57,004	30,527	32,506	18,758	31,274	33,997	13,349	28,253	4,035	0
ENT.....	148,473	43,236	19,068	16,848	0	18,864	13,751	6,100	21,770	8,836	0
Orthopaedics.....	106,663	45,804	10,477	15,537	0	13,288	13,948	3,102	4,507	0	0
Obs & Gynae.....	178,611	40,882	23,822	22,336	5,069	29,695	33,145	6,539	14,518	2,516	89
Dental.....	246,743	52,456	28,862	35,158	22,669	20,223	38,151	13,328	32,152	2,799	945
Dermatology.....	190,462	66,476	26,988	20,396	9,581	16,030	20,246	6,392	22,215	2,138	0
Antenatal.....	205,235	55,927	8,740	33,959	18,285	18,558	23,060	19,955	22,681	3,106	964
Postnatal.....	17,679	1,244	482	5,417	4,352	358	1,035	1,785	2,770	8	228
Child Health.....	207,916	*	945	60,555	30,670	13,712	3,339	45,027	47,603	0	6,065
Immunization.....	268,969	31,179	21,496	45,509	15,957	20,669	65,562	17,748	46,941	2,701	1,207
Others**	167,728	82,500	14,696	12,530	1,378	17,928	21,980	4,788	11,928	0	0
TOTAL	6,848,687	1,412,330	664,033	1,001,600	722,981	693,483	891,256	435,502	772,967	199,537	54,998

* Included in paediatrics.

** Others include urology, psychiatry, chest clinic, physiotherapy, diabetic clinic, hypertension clinic, infertility clinic, VIP clinic and staff clinic.

TABLE 2.6

**HEALTH CENTRES WITH BEDS
AS ON 31st DECEMBER 1992**

HEALTH CENTRE	REGION	TOTAL BEDS
DHOFAR		
MIRBAT.....		1
TAQAH.....		1
THUMRAIT.....		1
SHELEEM.....		1
TEYTEM.....		1
GHADOW.....		1
DHALQUT.....		1
JIBJAT.....		1
MAKINAT SHAHAN.....		1
HASIK.....		1
ASAWAMIYAH.....		1
HADBEEN.....		1
MUQSHAN.....		1

TOTAL:		13

NORTH BATINAH		
HEEBI.....		2
WADI BANI OMAR.....		2
WADI JAHAWIR.....		2

TOTAL:		6

SOUTH BATINAH		
WADI SAHTAN.....		6

TOTAL:		6

DHAHIRA		
MAHADHA		2
WADI AL AIN.....		4

TOTAL:		6

MUSANDAM		
LIMA.....		1
KUMZAR.....		1
MADHA.....		2

TOTAL:		4

AL WOUSTAH		
KAHIL.....		1
WADI HAITHAM.....		2

TOTAL:		3

NATIONAL TOTAL:		38

TABLE 2.7

ATTENDANCES IN HEALTH CENTRES -1992

HEALTH CENTRE	REGION	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE *
MUSCAT			
SEEB.....		234,026	639
AMIRAT.....		162,024	443
YETI.....		29,710	81
SIYA.....		27,476	75
NEW AL KHODH.....		81,394	222
DAGMAR.....		21,998	60
OLD AL KHODH.....		12,633	35
MAZARA.....		17,482	48
HAIL AL GHAF.....		20,530	56
WADI AL ARBEEN*.....		3,070	20
MMT YETI.....		1,266	3
TOTAL:		611,609	1,671
DHOFAR			
MIRBAT.....		46,163	126
TAQA.....		50,938	139
THUMRAIT.....		23,269	64
SHAHIB ASSAIB.....		21,245	58
QEIRON HEIRITI.....		22,465	61
SHELEEM.....		14,992	41
TEYTUM.....		12,823	35
GHADOW.....		10,179	28
DHALQUT.....		15,180	41
JIBJAT.....		15,049	41
MAKINAT SHAHAN.....		15,456	42
HAIGHAF.....		11,738	32
KHADRAFI.....		5,437	15
HASIK.....		7,158	20
UMBUSHEQ.....		5,404	15
MUDHAI.....		8,542	23
ASHUWAIMIYAH.....		5,421	15
HADBEEN.....		7,879	22
HALANIYAT.....		3,565	10
PORT RAYSUT.....		1,959	5
SHARBITHAT.....		5,494	15
MARSADIT.....		2,097	6
SWAB*.....		1,925	7
MUQSHAN.....		2,622	7
JUFFA.....		3,702	10
JAHNEEN.....		3,500	10
HALOOF.....		1,938	5
AL MASHASH.....		920	3
AL HOFRA.....		596	2
HARWEEB*.....		301	10
TOSINAT*.....		602	19
METAN*.....		102	3
BETHANAH*.....		122	5
MMT THUMRAIT.....		6,486	18
MMT Q. HEIRITI.....		2,486	7
MMT SHELEEM.....		2,036	6
MMT DHALQUT.....		1,514	4
MMT MUDHAI.....		1,480	4
MMT MUQSHAN.....		86	1
TOTAL:		342,871	937

ATTENDANCES IN HEALTH CENTRES -1992

HEALTH CENTRE	REGION	TOTAL ATTENDANCES	DAILY AVERAGE ATTENDANCE *
DAKHILYA			
HAMRA.....		95,955	262
FANJA.....		66,268	181
MANAH.....		52,184	143
BISIYA		46,761	128
QURIYATEEN.....		32,739	89
GHAFAT.....		40,664	111
MAMMOOR.....		36,141	99
WADI BANI RAUWAHA.....		31,129	85
BARKAT AL MOUZ.....		33,872	93
WADI MAHRAM.....		16,495	45
TOTAL:		452,208	1,236
NORTH SHARQIYA			
MUDHAIBI.....		57,334	157
MUDHERIB.....		11,369	31
AFLAJ.....		14,621	40
DREEZ.....		9,065	25
DHAHIR.....		8,719	24
AL AYOON.....		11,591	32
TOTAL:		112,699	308
SOUTH SHARQIYA			
KAMIL.....		37,075	101
ASHKARA.....		38,142	104
WAFI.....		34,729	95
GHAINA.....		21,565	59
FALAJ AL MASHAIKH.....		12,938	35
RUWAIS.....		23,639	65
RAS AL HAD.....		21,763	59
AIGA.....		15,549	42
TIWI.....		16,079	44
QUMAILA**.....		14,125	39
SUWAIH**.....		14,160	39
WADI BANI JABER.....		5,436	15
TOTAL:		255,200	697
NORTH BATINAH			
SUWAIQ.....		187,391	512
LIWA.....		121,782	333
KHABURA.....		204,129	558
SHINAS.....		116,887	319
HEEBI		29,275	80
ABU BAQRA.....		25,545	70
KHATMAT MALAHA		8,962	24
MASHAIQ		10,998	30
WADI SHAFAN.....		5,081	14
WADI BANI OMAR*.....		13,343	40
WADI JAHAWIR.....		17,902	49
TOTAL:		741,295	2,025

(CONT)TABLE 2.7

ATTENDANCES IN HEALTH CENTRES -1992

HEALTH CENTRE	REGION	TOTAL ATTENDANCE	DAILY AVERAGE ATTENDANCE *
SOUTH BATINAH			
BIRKA.....		208,624	570
MASNAH.....		211,004	577
AFI.....		45,504	124
NAKHAL.....		45,676	125
AWABI.....		38,560	105
HOQEIN.....		32,733	89
WADI SAHTAN.....		41,870	114
TOTAL:		623,971	1,705
DHAHIRA			
IBRI.....		64,948	177
DHANK.....		53,475	146
MUQNIYAT.....		46,207	126
HAJEERMAT.....		43,018	118
MAMUR.....		17,083	47
MAHADHA		21,659	59
WADI FIDA		16,905	46
SUNAINA.....		11,384	31
FAYADH.....		9,071	25
JEAT AL AMERI*.....		270	1
WADI AL AIN & HAJER*.....		12,019	99
MMT DHANK.....		825	2
MMT MUQNIYAT.....		6,504	18
MMT SUNAINA.....		2,889	8
TOTAL:		306,257	837
MUSANDAM			
MADHA		23,426	64
LIMA.....		15,382	42
KUMZAR.....		8,037	22
BUKHA.....		13,008	36
TOTAL:		59,853	164
AL WOUSTAH			
KAHIL.....		17,137	47
LIQBI.....		9,921	27
SOGHARA.....		4,432	12
MAHOOT.....		42,481	116
RIMA.....		2,514	7
WADI HAITHAM*.....		1,048	34
MMT KAHIL.....		983	3
TOTAL:		78,516	215
NATIONAL TOTAL:.....		3,584,479	9,794

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

NOTES

* Total attendances divided by 366 days except for the following newly-opened health centres:
Wadi Al Arbeen, 153 days; Swab, 275 days; Harweeb, Tosinat, Metan, 31 days; Bethanah, 24 days;
Wadi Bani Omar, 335 days; Jeat Al Ameri, 184 days; and Wadi Al Ain & Hajer, 122 days.

** Closed in July and August.

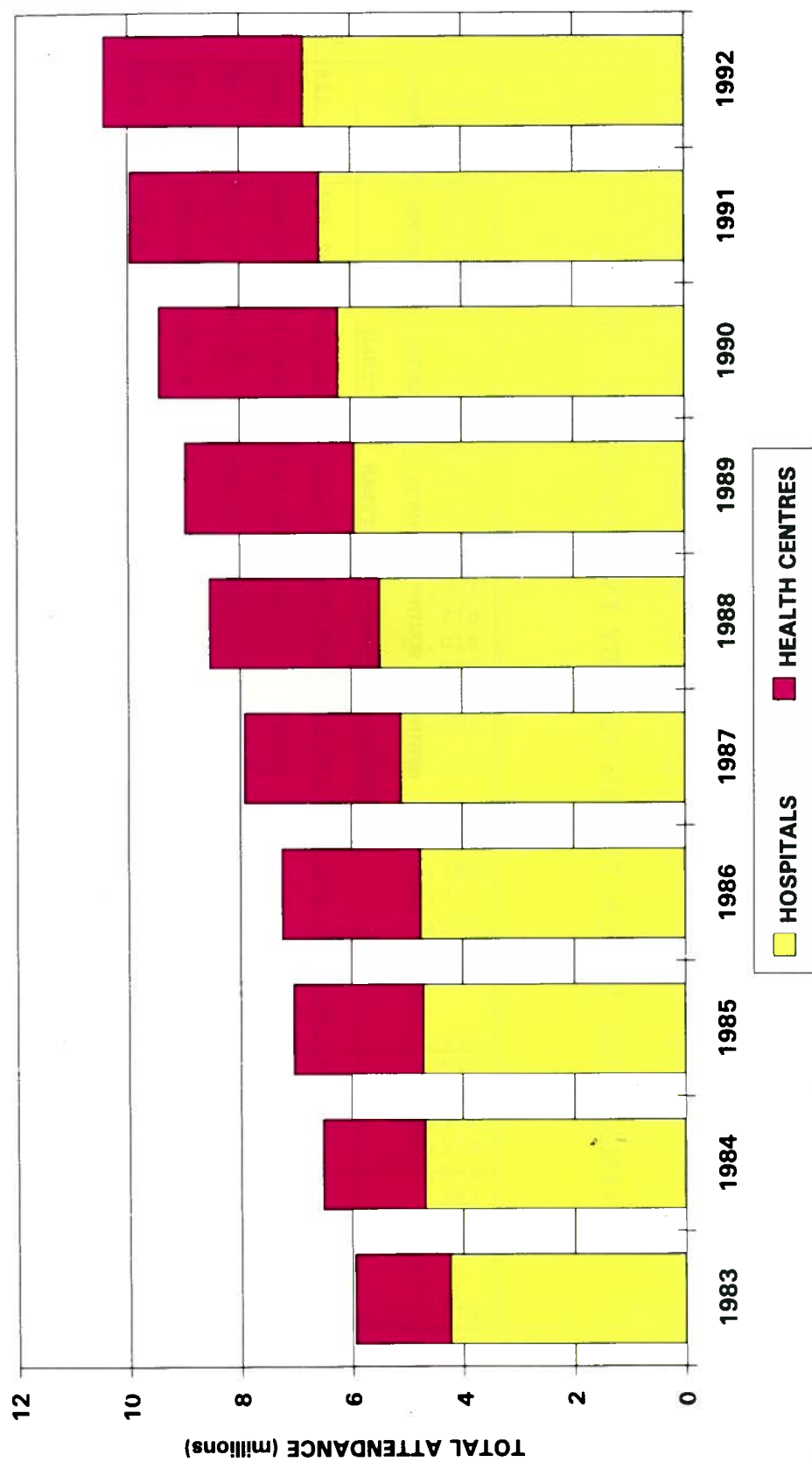
TABLE 2.8

ATTENDANCES IN HEALTH CENTRES BY TYPE OF CLINIC - 1992

TYPE OF CLINIC	TOTAL	MUSCAT	DHOFAR	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATINAH	SOUTH BATINAH	DHAHRA	MUSANDAM	WOUSTAH
General Practice...	3,105,170	565,209	333,060	388,748	105,178	230,660	570,723	502,239	275,604	57,229	76,520
Antenatal.....	100,200	13,356	4,208	10,874	3,619	7,643	31,717	20,222	6,448	1,040	1,073
Postnatal.....	18,435	2,321	244	2,953	179	638	7,004	3,665	1,335	64	32
Child Health.....	193,492	0	3,413	29,815	2,918	10,220	64,529	67,896	13,657	179	865
Immunization.....	147,090	30,723	1,261	19,818	805	5,808	51,948	26,569	9,213	919	26
Others*.....	20,092	0	685	0	0	231	15,374	3,380	0	422	0
TOTAL	3,584,479	611,609	342,871	452,208	112,699	255,200	741,295	623,971	306,257	59,853	78,516

* Others include dental, ophthalmology and school health.

Fig 5 OUTPATIENT ATTENDANCE
1983 - 1992



3 MORBIDITY

The morbidity groups of all inpatients discharged from hospitals in 1992 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 1992, accounting for 34% of all female discharges.

Of the disease groups, those of the respiratory system (Group 8) accounted for the highest proportion of cases with over 27 thousand patients. Admissions for complications of pregnancy rose to become the second principal cause of admission while admission for infectious diseases (Group 1) remained about the same as in 1991 to rank a close third. The reduction in infectious diseases was mainly due to a continued decrease in the number of malaria cases which continued to fall from its high of 6,828 in 1990 through 4,353 in 1991 to only 2,916 in 1992. The main cause of infectious diseases continued to be gastroenteritis and diarrhoea, whose admissions increased by 8% in 1992.

The next highest cause of inpatient admission was injuries and poisoning for which 16.7 thousand cases were admitted. This was an 11% increase over 1991, thus continuing the increasing trend seen since 1988. The causes with more than 1,000 admissions were poisonings and 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 1992, i.e. the workload on the hospitals in each region. However, in order to compare the regional morbidity patterns, Table 3.3 shows the rate of admissions per 10,000 population in each region. (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.)

Thus admission rates for gastroenteritis and diarrhoea are highest by far in Sharqiya (both North and South) and Musandam, while being relatively low in Muscat. This can either reflect a varying incidence of severe cases or different treatment and admission policies. As expected, the admission rates for malaria vary quite considerably around the country, ranging from under 5 in Muscat and Dhofar to over 30 in Batinah and Dhahira; admission rates in Sharqiya fell dramatically from 53 in 1991 to only 12 in North Sharqiya and 3 in South Sharqiya.

While respiratory disease (Group 8) have the highest admission rates, there is considerable variation around the country. Some of the variations in individual disease groups may be due to differences in classification, but still the total admission rate for Group 8 varies from under 100 in Muscat, North and South Batinah to over 300 in South Sharqiya, Musandam and Al Woustah. Again these may be reflective of either different incidence rates of severe cases of the disease or (more likely) different hospital admission policies.

The rates for normal deliveries have some interesting variations. As in 1991, they are lowest in both Dhofar and Al Woustah for no apparent reason. The lower rates in Dhahira and Musandam can be explained by some of the deliveries of these regions taking place in nearby hospitals of the U.A.E. Rates in other regions are similar.

The numbers of cases of notifiable diseases reported in each region in 1992 are shown in Table 3.4. Under the new disease surveillance system in operation since 1991, the cases were checked for duplication and assigned to their regions of residence. Hence the data quite accurately reflect the true incidence in each region. Outbreaks of measles occurred in Muscat, Dhofar, Dakhilya and North Sharqiya during 1992, while epidemics of both mumps and chickenpox occurred throughout the country (similar to 1991). The higher rates of tuberculosis in the Muscat region are associated with the high expatriate population. Brucellosis continued to be confined to the Dhofar region, which also had the one case of rabies of the year.

The trends in notifiable disease from 1985 to 1992 are shown in Table 3.5. While the notifications of some diseases have continued to decline consistently (e.g. tuberculosis) most appear to have reached their endemic levels with fluctuations up or down each year (e.g. typhoid, amoebiasis, brucellosis, measles, mumps). The increase in leprosy in 1992 may be partly due to an improved case reporting system.

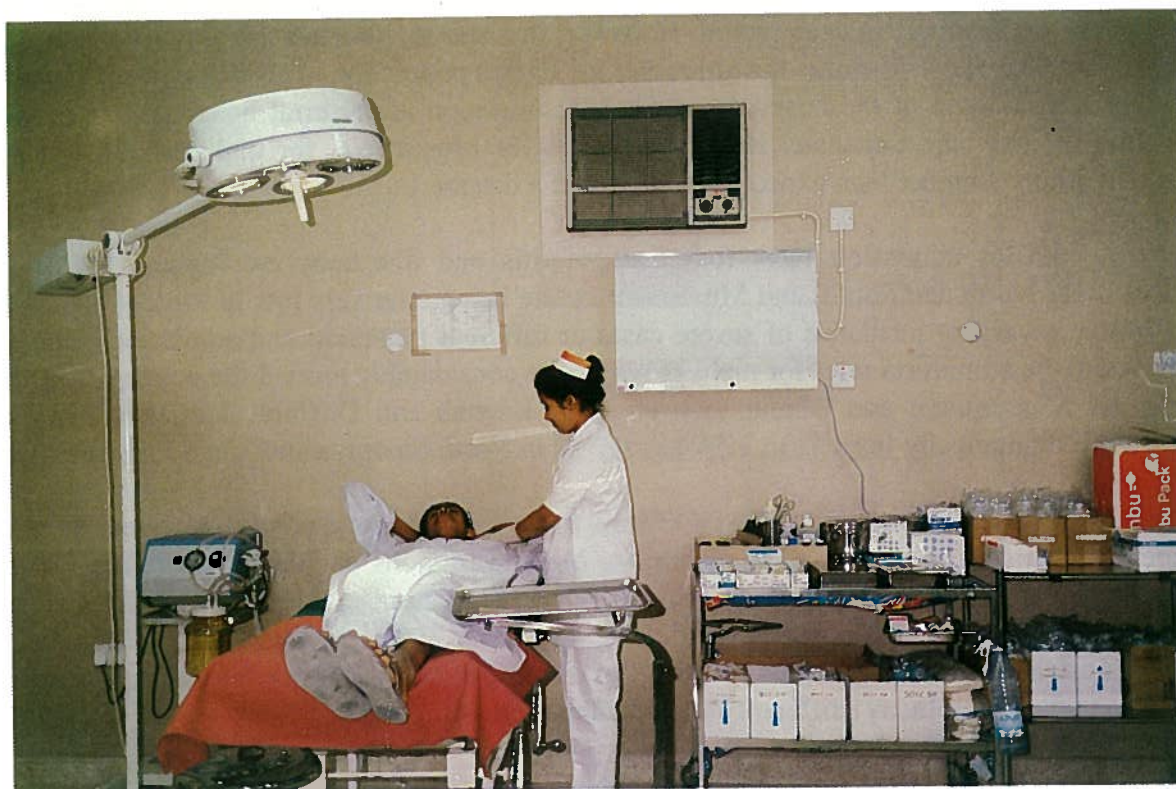


Table 3.1

**INPATIENT MORBIDITY STATISTICAL REPORT
GENERAL GROUPS
ALL HOSPITALS**

ICD GROUP CODE	DISEASE / CONDITION	TOTAL DISCHARGES IN 1992 (alive and dead)			TOTAL DISCHARGES		% CHANGE	
		MALE	FEMALE	TOTAL	1991	1990	1991- 1992	1990- 1991
1-	INFECTIOUS AND PARASITIC DISEASES	10,205	8,453	18,658	18,930	20,651	-1%	-8%
2-	NEOPLASMS	1,054	1,096	2,150	2,215	2,110	-3%	5%
3-	ENDOCRINE, NUTRITIONAL, METABOLIC & IMMUNITY DISORDERS	1,996	2,694	4,690	4,224	3,026	11%	40%
4-	DISEASES OF THE BLOOD & BLOOD-FORMING ORGANS	1,900	1,785	3,685	4,056	3,832	-9%	6%
5-	MENTAL DISORDERS	708	783	1,491	1,411	1,327	6%	6%
6-	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	3,528	2,677	6,205	6,034	5,877	3%	3%
7-	DISEASES OF THE CIRCULATORY SYSTEM	6,613	5,323	11,936	10,593	9,439	13%	12%
8-	DISEASES OF THE RESPIRATORY SYSTEM	15,396	12,432	27,828	25,919	23,137	7%	12%
9-	DISEASES OF THE DIGESTIVE SYSTEM	6,206	5,096	11,302	10,160	9,764	11%	4%
10-	DISEASES OF THE GENITOURINARY SYSTEM	4,016	5,475	9,491	8,459	8,618	12%	-2%
11-A	COMPLICATIONS OF PREGNANCY & BIRTH	0	18,981	18,981	17,188	17,138	10%	0%
11-B	NORMAL DELIVERY	0	42,366	42,366	41,168	40,946	3%	1%
12-	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	3,396	1,914	5,310	4,789	4,548	11%	5%
13-	DISEASES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	1,926	1,500	3,426	3,079	3,009	11%	2%
14-	CONGENITAL ANOMALIES	1,083	685	1,768	1,571	1,574	13%	0%
15-	CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	2,674	2,323	4,997	4,274	3,797	17%	13%
16-	SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS	5,164	4,302	9,466	8,344	8,392	13%	-1%
17-	INJURIES AND POISONING	11,661	5,076	16,737	15,061	14,165	11%	6%
18-	(V-CODES) OTHER REASONS FOR CONTACT WITH HEALTH SERVICES	1,149	1,214	2,363	2,007	1,851	18%	8%
	TOTAL	78,675	124,175	202,850	189,482	183,201	7.1%	3.4%

TABLE 3.2

**MORBIDITY OF INPATIENT DISCHARGES IN 1992 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES**

TOTAL DISCHARGES IN 1992												
DIS. GROUP BTL CODE	DISEASE / CONDITION	NATIONAL TOTAL	MUSCAT	DHOFAR	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATINAH	SOUTH BATINAH	DHAHIRA	MUSANDAM	AL WOUSTAH
1-	INFECTIOUS AND PARASITIC DISEASES	18,658	1,744	2,145	2,244	2,770	2,170	2,796	1,583	2,331	560	315
B019.1	Acute gastro-enteritis and diarrhoea.....	7,946	658	865	1,044	1,428	1,196	1,109	503	843	259	41
B049.5	Other viral diseases.....	2,189	18	221	293	522	195	168	287	243	127	115
B052	Malaria.....	2,916	121	26	258	164	35	1,063	491	732	14	12
2-	NEOPLASMS.....	2,150	1,546	192	117	32	57	50	55	84	14	3
3-	ENDOCRINE, NUTRITIONAL, METABOLIC & IMMUNITY DISORDERS.....	4,690	983	407	878	330	474	503	540	443	115	17
B181	Diabetes mellitus.....	2,407	536	288	259	192	274	313	102	344	93	6
B192	Other protein-calorie malnutrition.....	1,508	67	26	602	115	76	161	370	66	14	11
4-	DISEASES OF THE BLOOD & BLOOD-FORMING ORGANS	3,685	841	234	785	259	223	545	251	419	118	10
B200	Anaemias.....	2,847	709	184	617	230	213	204	215	371	94	10
5-	MENTAL DISORDERS	1,491	593	250	157	149	182	1	28	75	45	11
6-	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....	6,205	2,656	520	747	306	438	490	274	661	91	22
B231	Cataract.....	1,341	617	103	163	51	115	67	66	150	9	0
7-	DISEASES OF THE CIRCULATORY SYSTEM	11,936	3,005	975	1,585	1,089	1,037	1,834	543	1,457	363	48
B26	Hypertensive diseases.....	2,960	496	203	365	324	404	441	61	490	150	26
B27	Ischaemic heart diseases.....	4,427	1,090	393	553	253	330	1,122	84	498	94	10
B28	Diseases of pulmonary circulation & heart NOS.....	2,630	831	206	433	368	179	0	260	297	52	4
8-	DISEASES OF THE RESPIRATORY SYSTEM	27,828	4,036	3,942	3,842	3,635	3,753	2,652	1,233	3,138	847	750
B310	Acute tonsillitis.....	1,808	51	157	319	311	245	160	44	349	147	25
B312	Other acute upper respiratory infections.....	6,535	29	927	489	1,060	964	1,508	84	1,253	193	28
B315	Chronic diseases of tonsils and adenoids.....	1,442	1,101	187	4	12	31	36	2	25	36	8
B319	Non-specific diseases of the upper respiratory tract.....	1,699	356	57	114	108	67	198	389	136	47	227
B320	Acute bronchitis & bronchiolitis.....	3,119	210	514	733	353	574	128	242	145	126	54
B321	Pneumonia.....	4,759	612	626	1,281	496	815	277	204	319	99	30
B323	Bronchitis, chronic & unspecified, emphysema & asthma.....	5,400	616	992	561	931	861	290	208	534	219	188

MORBIDITY OF INPATIENT DISCHARGES IN 1992 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES

DIS. GROUP BTL CODE	DISEASE / CONDITION	TOTAL DISCHARGES IN 1992										AL WOUSTAH
		NATIONAL TOTAL	MUSCAT	DHOFAR	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATINAH	SOUTH BATINAH	DHAHIRA	MUSANDAM	
9-	DISEASES OF THE DIGESTIVE SYSTEM	11,302	2,947	1,199	1,359	1,375	1,119	1,222	522	1,125	358	76
B342	Appendicitis.....	1,966	533	263	251	136	90	339	79	219	45	11
B343	Hernia of abdominal cavity.....	1,431	627	103	148	46	133	184	65	99	23	3
B349.1	Gastritis and duodenitis.....	2,811	137	261	454	593	409	297	110	382	136	32
B349.3	Diseases of other parts of digestive system.....	2,605	274	377	334	446	313	202	228	314	100	17
10-	DISEASES OF THE GENITOURINARY SYSTEM	9,491	3,079	618	1,069	780	1,225	1,178	450	784	233	75
B35	Diseases of urinary system.....	4,809	1,461	351	542	575	597	451	281	359	127	65
B37	Diseases of female genital organs.....	3,373	1,236	189	436	166	552	265	122	316	83	8
11-A	COMPLICATIONS OF PREGNANCY & BIRTH	18,981	5,981	1,950	2,321	1,654	2,084	2,010	1,522	1,150	231	78
B38	Abortions.....	6,616	1,920	397	773	615	633	947	588	616	108	19
B39	Direct obstetric causes.....	9,549	3,269	1,104	1,057	844	1,287	664	661	531	98	34
B40	Indirect obstetric causes.....	2,816	792	449	491	195	164	399	273	3	25	25
11-B	NORMAL DELIVERY.....	42,366	9,863	3,223	5,217	3,235	3,711	8,598	4,331	3,499	551	138
12-	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	5,310	2,725	394	498	408	319	392	222	236	67	49
13-	DISEASES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE..	3,426	1,407	442	288	148	272	497	70	150	132	20
14-	CONGENITAL ANOMALIES	1,768	1,347	114	78	49	50	18	67	42	3	0
15-	CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	4,997	1,477	632	782	313	473	554	396	316	36	18
B452	Slow fetal growth, fetal malnutrition & immaturity.....	1,733	424	106	253	87	148	460	171	69	11	7
16-	SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS	9,466	1,802	1,565	1,062	796	1,006	1,048	441	1,429	296	21
B460	Pyrexia of unknown origin.....	1,382	54	347	77	116	288	257	84	120	34	5
B462	Renal colic	1,496	96	221	401	186	132	108	76	245	28	3
B464	Epigastric pain.....	1,295	237	254	91	59	125	386	9	122	14	2
B469.0	Convulsions.....	1,299	628	194	109	35	100	157	42	31	3	0
17-	INJURIES AND POISONING.....	16,737	4,170	1,496	2,767	1,323	1,474	2,045	1,354	1,631	373	104
B472	Fracture of humerus, radius & ulna.....	1,343	512	113	148	25	78	269	77	97	22	2
B53	Poisoning & toxic effects.....	2,175	172	206	379	301	298	341	152	254	44	28
B55	Other injuries, early complications of trauma.....	3,171	528	191	883	458	413	2	292	259	128	17
18-	(V-CODES) OTHER REASONS FOR CONTACT WITH HEALTH SERVICES.	2,363	1,862	32	0	0	1	13	0	26	372	57
	TOTAL.....	202,850	52,064	20,330	25,796	18,651	20,068	26,446	13,882	18,996	4,805	1,812

TABLE 3.3

**RATES OF INPATIENT DISCHARGES IN 1992 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES**

DIS. GROUP BTL CODE		DISEASE / CONDITION	RATES OF DISCHARGES PER 10,000 POPULATION IN 1992										
			NATIONAL TOTAL	MUSCAT	DHOFAR	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATNAH	SOUTH BATNAH	DHAHIRA	MUSANDAM	AL WOUSTAH
1-		INFECTIOUS AND PARASITIC DISEASES :	105	40	109	106	199	207	84	99	148	207	286
B019.1		Acute gastro-enteritis and diarrhoea.....	45	15	44	49	103	114	34	31	54	96	37
B049.5		Other viral diseases.....	12	0	11	14	38	19	5	18	15	47	105
B052		Malaria.....	16	3	1	12	12	3	32	31	47	5	11
2-		NEOPLASMS.....	12	36	10	6	2	5	2	3	5	5	3
3-		ENDOCRINE, NUTRITIONAL, METABOLIC & IMMUNITY DISORDERS.....	26	23	21	42	24	45	15	34	28	43	15
B181		Diabetes mellitus.....	14	12	15	12	14	26	9	6	22	34	5
B192		Other protein-calorie malnutrition.....	9	2	1	29	8	7	5	23	4	5	10
4-		DISEASES OF THE BLOOD & BLOOD-FORMING ORGANS :	21	19	12	37	19	21	16	16	27	44	9
B200		Anaemias.....	16	16	9	29	17	20	6	13	24	35	9
5-		MENTAL DISORDERS :	8	14	13	7	11	17	0	2	5	17	10
6-		DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....	35	61	26	35	22	42	15	17	42	34	20
B231		Cataract.....	8	14	5	8	4	11	2	4	10	3	0
7-		DISEASES OF THE CIRCULATORY SYSTEM :	67	69	49	75	78	99	55	34	93	134	44
B26		Hypertensive diseases.....	17	11	10	17	23	38	13	4	31	56	24
B27		Ischaemic heart diseases.....	25	25	20	26	18	31	34	5	32	35	9
B28		Diseases of pulmonary circulation & heart NOS.....	15	19	10	21	26	17	0	16	19	19	4
8-		DISEASES OF THE RESPIRATORY SYSTEM :	157	93	200	182	262	357	80	77	200	314	682
B310		Acute tonsillitis.....	10	1	8	15	22	23	5	3	22	54	23
B312		Other acute upper respiratory infections.....	37	1	47	23	76	92	46	5	80	71	25
B315		Chronic diseases of tonsils and adenoids.....	8	25	9	0	1	3	1	0	2	13	7
B319		Non-specific diseases of the upper respiratory tract.....	10	8	3	5	8	6	6	24	9	17	206
B320		Acute bronchitis & bronchiolitis.....	18	5	26	35	28	55	4	15	9	20	115
B321		Pneumonia.....	27	14	32	61	36	78	8	13	20	11	90
B323		Bronchitis, chronic & unspecified, emphysema & asthma.....	30	14	50	27	67	82	9	13	34	81	171
		(Population estimates used (thousands)).....	1,772	434	197	211	139	105	331	160	157	27	11

(CONT) TABLE 3.3

**RATES OF INPATIENT DISCHARGES IN 1992 BY MAJOR DISEASE GROUPS AND REGIONS
AND INDIVIDUAL DISEASE GROUPS WITH 1,000 OR MORE DISCHARGES**

RATES OF DISCHARGES PER 10,000 POPULATION IN 1992												
DIS. GROUP BTL CODE	DISEASE / CONDITION	NATIONAL TOTAL	MUSCAT	DHOFA	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATINAH	SOUTH BATINAH	DHAHIRA	MUSANDAM	AL WOUJSTAH
9-	DISEASES OF THE DIGESTIVE SYSTEM :	64	68	61	64	99	107	37	33	72	133	69
B342	Appendicitis.....	11	12	13	12	10	9	10	5	14	17	10
B343	Hernia of abdominal cavity.....	8	14	5	7	3	13	6	4	6	9	3
B349.1	Gastritis and duodenitis.....	16	3	13	22	43	39	9	7	24	50	29
B349.3	Diseases of other parts of digestive system.....	15	6	19	16	32	30	6	14	20	37	15
10-	DISEASES OF THE GENITOURINARY SYSTEM :	54	71	31	51	56	117	36	28	50	86	68
B35	Diseases of urinary system.....	27	34	18	26	41	57	14	18	23	47	59
B37	Diseases of female genital organs.....	19	28	10	21	12	53	8	8	20	31	7
11-A	COMPLICATIONS OF PREGNANCY & BIRTH :	107	138	99	110	119	198	61	95	73	86	71
B38	Abortions.....	37	44	20	37	44	60	29	37	39	40	17
B39	Direct obstetric causes.....	54	75	56	50	61	123	20	41	34	36	31
B40	Indirect obstetric causes.....	16	18	23	23	14	16	12	17	0	9	23
11-B	NORMAL DELIVERY.....	239	227	164	247	233	353	260	271	223	204	125
12-	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE :	30	63	20	24	29	30	12	14	15	25	45
13-	DISEASES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE..	19	32	22	14	11	26	15	4	10	49	18
14-	CONGENITAL ANOMALIES :	10	31	6	4	4	5	1	4	3	1	0
15-	CONDITIONS ORIGINATING IN THE PERINATAL PERIOD :	28	34	32	37	23	45	17	25	20	13	16
B452	Slow fetal growth, fetal malnutrition & immaturity.....	10	10	5	12	6	14	14	11	4	4	6
16-	SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS :	53	42	79	50	57	96	32	28	91	110	19
B460	Pyrexia of unknown origin.....	8	1	18	4	8	27	8	5	8	13	5
B462	Renal colic.....	8	2	11	19	13	13	3	5	16	10	3
B464	Epigastric pain.....	7	5	13	4	4	12	12	1	8	5	2
B469.0	Convulsions.....	7	14	10	5	3	10	5	3	2	1	0
17-	INJURIES AND POISONING.....	94	96	76	131	95	140	62	85	104	138	95
B472	Fracture of humerus, radius & ulna.....	8	12	6	7	2	7	8	5	6	8	2
B53	Poisoning & toxic effects.....	12	4	10	18	22	28	10	10	16	16	25
B55	Other injuries, early complications of trauma.....	18	12	10	42	33	39	0	18	16	47	15
18-	(V-CODES) OTHER REASONS FOR CONTACT WITH HEALTH SERVICES.	13	43	2	0	0	0	0	0	2	138	52
	TOTAL.....	1,145	1,200	1,032	1,223	1,342	1,911	799	868	1,210	1,780	1,647

TABLE 3.4

NOTIFIABLE DISEASES BY REGION - 1992

ICD CODE	TOTAL	MUSCAT	DHOFA	DAKHILYA	NORTH SHARQIYA	SOUTH SHARQIYA	NORTH BATNAH	SOUTH BATNAH	DHAHRA	MUSANDAM	AL WOUSTAH
GROUP A DISEASES (IMMEDIATE reporting)											
001 Cholera.....	0	0	0	0	0	0	0	0	0	0	0
020 Plague.....	0	0	0	0	0	0	0	0	0	0	0
032 Diphtheria.....	1	1	0	0	0	0	0	0	0	0	0
036 Meningococcal infection.....	7	2	1	0	0	0	0	3	0	0	0
045 Acute poliomyelitis.....	0	0	0	0	0	0	0	0	0	0	0
055 Measles.....	1,834	251	814	309	254	10	7	76	28	1	84
056 Rubella.....	211	72	2	29	19	1	18	29	26	0	15
060 Yellow fever.....	0	0	0	0	0	0	0	0	0	0	0
071 Rabies.....	1	0	1	0	0	0	0	0	0	0	0
080 Louse-borne typhus.....	0	0	0	0	0	0	0	0	0	0	0
087 Relapsing fever.....	0	0	0	0	0	0	0	0	0	0	0
771.3 Tetanus neonatorum.....	0	0	0	0	0	0	0	0	0	0	0
GROUP B DISEASES (Routine reporting)											
002 Typhoid fever.....	102	45	17	8	15	4	0	4	3	6	0
002.1-9 Paratyphoid fevers.....	22	16	1	1	2	0	0	1	0	1	0
003 & 005 Food poisoning (Including Salmonella).....	338	108	14	141	22	6	5	5	35	0	2
022 Anthrax.....	0	0	0	0	0	0	0	0	0	0	0
023 Brucellosis.....	371	1	368	2	0	0	0	0	0	0	0
030 Leprosy.....	36	12	7	6	4	2	3	2	0	0	0
033 Pertussis (Whooping Cough).....	45	3	20	1	8	1	1	0	11	0	0
037 Tetanus (Excluding neonatal).....	10	4	0	1	1	2	2	1	0	0	0
061 Dengue.....	0	0	0	0	0	0	0	0	0	0	0
70 Viral hepatitis- Total.....	1,485	152	147	451	130	75	71	118	281	39	1
070.3 Viral hepatitis-(Australia Antigen Pos).....	368	55	56	62	32	41	12	32	46	6	1
070.1 Viral hepatitis - A.....	767	38	67	276	74	29	43	65	57	32	0
070.5 Viral hepatitis - (Others).....	330	59	24	113	24	5	16	7	143	0	0
085 Leishmaniasis.....	14	0	9	5	0	0	0	0	81	1	0
120 Schistosomiasis.....	6	3	2	1	0	0	0	0	0	0	0
125 Filariasis.....	0	0	0	0	0	0	0	0	0	0	0
125.7 Dracunculiasis(Guinea Worm Infection).....	+1	0	0	+1	0	0	0	0	0	0	0
320.0 Haemophilus Meningitis.....	4	0	0	4	0	0	0	0	0	0	0
320.321,32 Meningitis (All Others).....	49	10	8	12	7	3	2	5	2	0	0
GROUP C DISEASES (For information only)											
004 Shigellosis (Bacillary dysentery).....	1,680	703	53	58	225	77	88	191	212	58	15
006 Amoebiasis.....	2,766	158	29	260	139	641	30	257	932	318	2
008-009 Acute Gastro-Enteritis and Diarrhoea.....	193,709	37,200	12,074	20,538	17,428	14,647	37,293	29,889	18,140	4,298	2,202
010-018 Tuberculosis.....	348	133	66	28	7	22	42	32	13	4	1
10 TB Primary complex.....	19	3	0	0	1	5	1	8	1	0	0
052 Chicken Pox.....	22,600	5,614	3,487	1,798	2,146	1,143	2,111	3,900	1,593	769	39
072 Mumps.....	10,655	1,851	909	1,488	784	1,265	1,204	1,580	1,302	103	169
076 Trachoma.....	10,142	2,017	37	4,128	1,190	265	849	366	1,155	13	122
084 Malaria(clinical).....	17,272	1,205	23	1,301	381	81	5,904	2,701	5,431	19	226
084 Malaria (confirmed cases).....	14,827	1,489	22	**1332	399	22	2,832	3,007	5,658	16	**
090-097 Syphilis.....	377	145	93	19	1	18	61	9	25	6	0
098 Gonococcal Infections.....	639	196	103	25	2	79	65	15	54	39	61
487 Influenza.....	61,244	31,965	18	13,073	4,729	198	391	5,161	4,338	468	903

* Imported case.

** Malaria cases of Al Wousta region are included in Dakhiliya region.

+ Imported case.
 ** Malaria cases of Al Wousta region are included in Dakhliya region.

TABLE 3.5

NOTIFICATIONS OF INFECTIOUS DISEASES 1985 - 1992

(ICD-9) BTL No.	DISEASE	1985	1986	1987	1988	1989	1990	1991	1992
010	Cholera.....	0	0	0	0	0	1(i)	0	0
011	Typhoid fever.....	244	168	131	117	178	167	100	102
012	Shigellosis (bacillary dysentery) *	4,276	3,332	2,457	2,224	2,979	2,540	1,971	1,680
013	Food poisoning (including salmonella).....	319	262	221	208	147	174	259	338
014	Amoebiasis *	3,787	4,048	3,833	3,833	5,436	5,393	5,105	2,766
019.0	Paratyphoid fevers.....	21	26	36	36	25	84	21	22
02	Tuberculosis (all forms) **	1,229*	700	616	477	478	482	442	348
031	Brucellosis.....	260	186	229	292	224	183	350	371
032	Leprosy *	32	21	6	15	18	13	17	36
033	Diphtheria **	6	4	0	0	0	0	2	1
034	Whooping cough.....	765*	207*	5**	16**	25**	49**	26	45
036	Meningococcal infection.....	9	7	126	41	33	32	27	7
037	Tetanus (other than neonatal)	64	24	10	11	11	10	8	10
039.0	Anthrax.....	0	1	2	2	1	0	0	0
040	Acute poliomyelitis.....	33	9**	6**	118**	5**	0	4	0
042	Measles *	3,675	2,001	3,804	6,052	4,255	1,262	276	1,834
043	Rubella *	10	1	77	175	54	27	8	211
046	Viral hepatitis *	2,118	2,223	1,826	1,688	1,390	1,176	1,066	1,465
047	Rabies.....	0	0	0	0	0	0	1	1
049.1	Chicken-pox *	5,955	8,814	14,616	23,381	16,729	7,041	17,779	22,600
049.3	Mumps *	18,040	8,778	5,192	11,169	15,167	11,375	15,654	10,655
052	Malaria (clinical).....	n.a	n.a.	n.a.	51,187	39,762	62,029	37,360	17,272
052	Malaria (confirmed)**	16,348	16,420	15,437	24,780	17,867	32,720	18,262	14,827
053	Leishmaniasis.....	23	17	32	11	27	12	3	14
060	Syphilis.....	12	2	5	8	5	4	196	377
061	Gonococcal infection.....	8	10	6	5	6	10	574	639
072	Schistosomiasis *	5	47	17	44	43	29	9	6
074	Filarial infection *	20	7	19	82	42	1	1	0
322	Influenza *	91,373	83,604	101,358	120,208	98,731	82,012	51,933	61,244
459.1	Tetanus neonatorum **	11	11	8	1	0	0	1	0

Notes:
 Statistics from 1985 -1990 are hospital inpatient cases except where indicated.
 * Outpatient cases
 ** Confirmed cases
 (i) - Imported case
 n.a. - Not available
 Starting 1991, the new Communicable Disease Surveillance monthly reporting system was introduced categorizing these diseases into Group A, B, & C as shown in Table 3.4.

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 1992 are shown in Table 3.6, along with comparisons with the previous two years.

A total of 231 patients were treated abroad in 1992, which was a significant 30% lower than the 328 of 1991 (itself 22% lower than the 418 in 1990). The reduction was mainly due to the Royal Hospital now treating cardiac cases, the numbers treated overseas falling by 50% each year from 259 in 1990 to 125 in 1991 to only 65 in 1992. In 1992 no cases were sent abroad for nephrology or urology compared with 23 in 1991, again due to the advance treatment available at the Royal Hospital.

Neoplasms now account for the highest number of cases (98) and constituted 42% of all cases in 1992, while Cardiac (28%) and Ophthalmic (16%) conditions were the other main causes for treatment abroad.

The principal countries used overall were the United Kingdom (52%) and India (41%).

TABLE 3.6

PATIENTS TREATED ABROAD BY DISEASE AND COUNTRY OF TREATMENT - 1992

CONDITIONS TREATED	U.K	INDIA	JORDAN	KUWAIT	* OTHER COUNTRIES	TOTAL CASES		
						1992	1991	1990
Cardiac.....	59	1	5	0	0	65	125	259
Neoplasms.....	4	87	1	6	0	98	104	53
Ophthalmic.....	36	0	1	0	1	38	37	29
Neurology.....	2	1	0	0	0	3	7	17
Nephrology & Urology.....	0	0	0	0	0	0	23	18
Orthopaedics.....	5	5	0	0	0	10	10	10
Haematology.....	0	1	0	0	0	1	6	20
Gastro-Intestinal/abdominal.....	0	0	0	0	0	0	2	3
ENT.....	2	0	0	0	0	2	1	1
Liver diseases.....	2	0	0	0	0	2	3	1
Chest inc. tuberculosis.....	2	0	0	0	0	2	0	0
Endocrinology inc thyroid.....	0	0	0	0	0	0	0	4
Plastic surgery.....	0	0	0	0	1	1	5	2
Vascular disease/surgery.....	2	0	0	0	0	2	0	1
Metabolic Disorder.....	5	0	0	0	0	5	5	0
Other Investigations.....	2	0	0	0	0	2	0	0
TOTAL.....	121	95	7	6	2	231		
	1991	136	167	17	0	8	328	
	1990	172	109	115	0	22		418

* (Australia, Russia)

4 OTHER HOSPITAL ACTIVITY

a) Deliveries and Births.

Details of the deliveries carried out in hospitals and health centres with beds in 1992 are shown in Table 4.1. A total of 47.1 thousand deliveries took place in hospitals and maternity centres in 1992 - a 4.6% increase over the 45.1 thousand of 1991. Of these deliveries, 90% were spontaneous cephalic vaginal deliveries, 2.5% were assisted and 5% were by Caesarean section. The rate of caesarean sections was highest in both the Royal and Khoula hospitals, as they are the referral hospitals for high risk cases from all over the Sultanate. Apart from the Royal, Khoula, Qaboos and Nizwa hospitals, the ratio of emergency:elective Caesarian Sections was over 20:1.

The outcome of the deliveries is shown in Table 4.2. There were 47.8 thousand births of which 610 (1.3%) were stillbirths (a similar rate to 1991). There was limited variation in the stillbirth rate across the hospitals and regions of the Sultanate, although the rate at the Nizwa hospital was again almost double the national average (high stillbirth rates have been observed there for the last five years). Of the 47.2 thousand livebirths, 3.8 thousand (8.1%) were of low birth weight (Under 2,500 gms) - a similar rate to 1991. The rate was highest at 11.2% in the Royal Hospital due to the referral of high risk deliveries; there was only a limited variation across the remainder of the country.

b) Other activities

Table 4.3 and Figure 6 show the numbers of major operations performed in hospitals in 1992 by type of operation and sex. The total of 18.4 thousand was a significant 18% higher than the 15.6 thousand of 1991. There were 63 thousand minor operations performed - an 8.7% increase over 1991.

Table 4.4 shows the amount of radiography performed in each hospital in 1992. A total of 453 thousand procedures took place - a 10% increase over 1991, thus continuing the 8-10% annual increase which has occurred since 1988. The main increase occurred in plain x-rays at the Khoula Hospital (up 21%). In North Batinah, a 62% increase in the Saham hospital was balanced by a 29% drop in the Sohar Hospital.

Table 4.5 shows the number of laboratory tests undertaken in 1992. The total 6.0 million was 6% higher than the 5.6 million of 1991. The change varied considerably around the country - 18% fewer tests were done at the Royal, compared with 65% more at the Izki Hospital, and 48% more at Sohar Hospital.

The use of dental services is shown in Table 4.6. 248 thousand treatments were carried out in 1992 - a 4.6% increase over 1991, but similar to the 247 thousand in 1990. The ratio of extractions : fillings was 3.5:1 an improvement on the 4.3 :1 of the previous three years. A significant improvement took place in Sharqiya (North and South) where the ratio improved from 8.7 extractions: 1 filling to only 2.3:1.

Fig 6 MAJOR OPERATIONS PERFORMED
By Type of Operation - 1991 & 1992

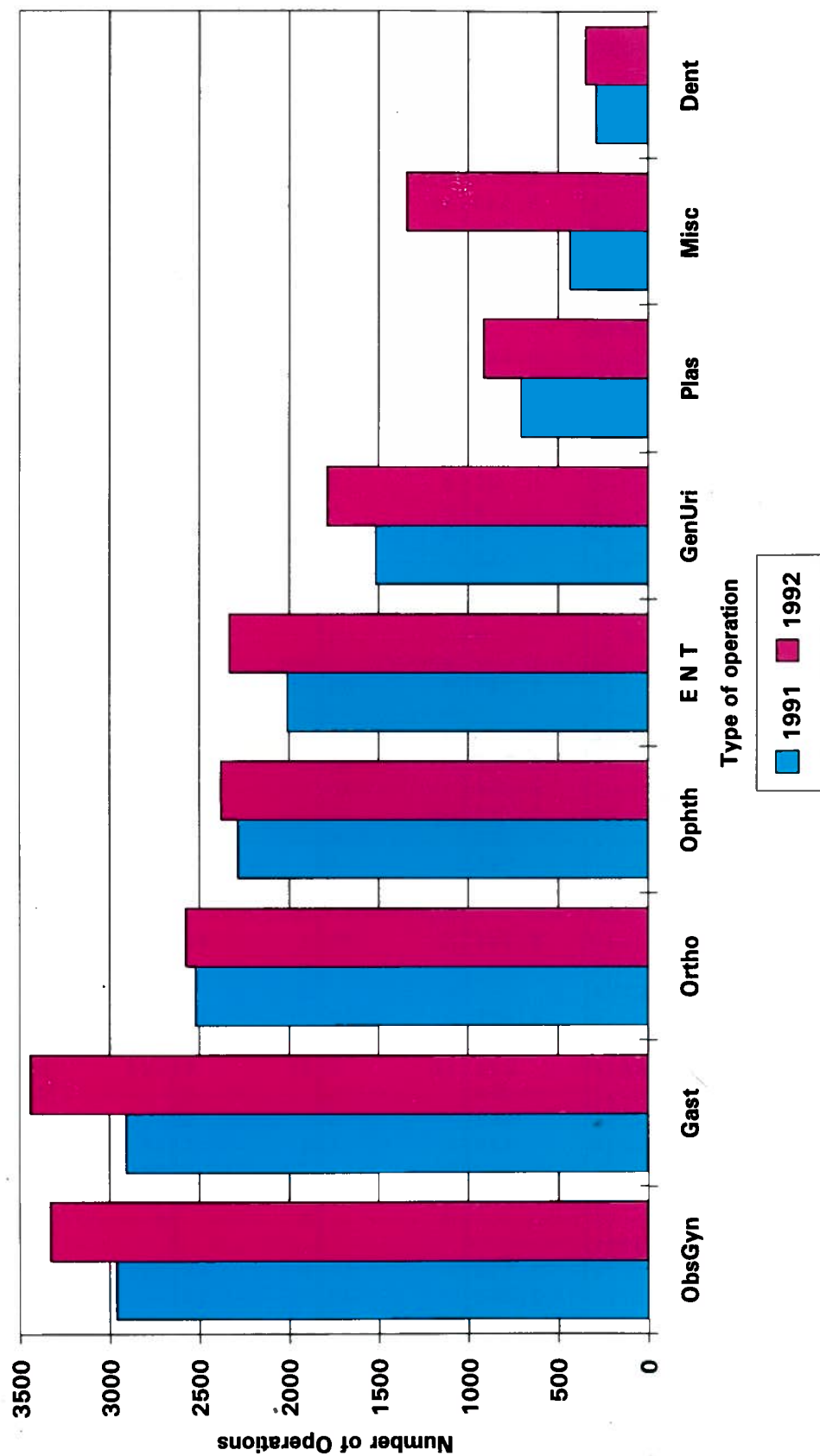


TABLE 4.1

NUMBER OF DELIVERIES - 1992

REGION		DELIVERIES IN HEALTH UNITS				TOTAL
HOSPITAL	SCVD	BREECH (VAGINAL)	ASSISTED DELIVERY	CAESARIAN		
				ELECTIVE	EMERGENCY	
MUSCAT						
ROYAL.....	4,377	118	147	125	444	5,211
KHOULA.....	5,115	112	114	83	436	5,860
QURIYAT.....	869	8	12	0	0	889

TOTAL:.....	10,361	238	273	208	880	11,960

DHOFAR						
QABOOS.....	3,191	75	87	44	191	3,588
MADINAT AL-HAQ.....	29	1	0	0	0	30
SUDH.....	28	3	0	0	0	31
RAKHYUT.....	1	0	0	0	0	1
TAWI ATTAIR.....	26	1	0	0	0	27
MIRBAT H.C.....	10	0	0	0	0	10
TAQA H.C.....	2	0	0	0	0	2
THUMRAIT H.C.....	2	0	0	0	0	2
SHAHIB ASSAIB H.C...	12	0	0	0	0	12
SHELEEM H.C.....	16	0	0	0	0	16
DHALQUT H.C.....	24	0	0	0	0	24
MAKINAT SHAHAN H.C..	6	0	0	0	0	6

TOTAL:.....	3,347	80	87	44	191	3,749

DAKHILIYA						
NIZWA.....	1,741	42	57	24	136	2,000
SUMAIL.....	1,104	15	27	1	31	1,178
BAHLA.....	1,310	25	1	0	0	1,336
ADAM.....	322	5	1	0	0	328
IZKI.....	746	8	0	0	0	754
JABAL AKHDAR.....	40	0	0	0	0	40

TOTAL:.....	5,263	95	86	25	167	5,636

NORTH SHARQIYA						
IBRA	1,435	35	19	2	105	1,596
SINAW	868	7	0	0	0	875
WADI DIMA & TAYEEN..	280	3	0	0	0	283
BIDIYA.....	299	5	0	0	0	304
SAMAD AL-SHAAN.....	403	5	0	0	0	408
WADI BANI KHALID....	129	1	1	0	0	131

TOTAL:.....	3,414	56	20	2	105	3,597

SOUTH SHARQIYA						
SUR.....	1,805	57	88	2	123	2,075
B.B.BU ALI.....	1,363	40	59	4	57	1,523
B.B.BU HASSAN.....	334	1	16	0	0	351
MASIRAH.....	170	2	6	0	5	183

TOTAL:.....	3,672	100	169	6	185	4,132

(CONT)TABLE 4.1

NUMBER OF DELIVERIES - 1992

REGION		DELIVERIES IN HEALTH UNITS					TOTAL
HOSPITAL	SCVD	BREECH (VAGINAL)	ASSISTED DELIVERY	CAESARIAN			
				ELECTIVE	EMERGENCY		
NORTH BATINAH							
SOHAR.....	4,533	143	262	10	221	5,169	
SAHAM.....	3,175	52	66	1	15	3,309	
WADI HAWASNA.....	55	2	0	0	0	57	
WADI SARAMI.....	40	1	0	0	0	41	
HEEBI H.C.....	172	4	0	0	0	176	

TOTAL:.....	7,975	202	328	11	236	8,752	

SOUTH BATINAH							
RUSTAQ.....	3,536	72	87	1	196	3,892	
WADI BANI GHAFFIR...	299	4	0	0	0	303	
WADI BANI KHAROOS...	130	1	0	0	0	131	
WADI MISTAL.....	49	1	0	0	0	50	
WADI HEMLI.....	155	2	0	0	0	157	
WADI SAHTAN H.C.....	199	3	0	0	0	202	

TOTAL:.....	4,368	83	87	1	196	4,735	

DHAHIRA							
TANAM.....	2,327	45	69	1	68	2,510	
BURAIMI.....	580	12	9	3	34	638	
YANKUL.....	606	9	6	0	0	621	
WADI JIZZI*.....	3	1	0	0	0	4	
WADI AL AIN H.C.*...	12	0	0	0	0	12	

TOTAL:.....	3,528	67	84	4	102	3,785	

MUSANDAM							
KHASAB.....	293	9	10	0	13	325	
DIBBA.....	182	3	16	4	1	206	
BUKHA.....	57	1	0	0	0	58	
MADHA H.C.....	14	0	0	0	0	14	
LEEMA H.C.....	29	1	0	0	0	30	
KUMZAR H.C.....	13	1	0	0	0	14	

TOTAL:.....	588	15	26	4	14	647	

AL-WOUSTAH							
HAIMA.....	36	2	2	0	0	40	
DUQUM.....	88	1	0	0	0	89	
AL KAHIL H.C.....	18	1	0	0	0	19	
WADI HAITHAM H.C....	0	0	0	0	0	0	

TOTAL:.....	142	4	2	0	0	148	

NATIONAL TOTAL:.....	42,658	940	1,162	305	2,076	47,141	

* Started maternity services in November, 1992.

TABLE 4-2

OUTCOME OF HOSPITAL DELIVERIES - 1992

REGION HOSPITAL	LIVE BIRTHS (WEIGHT IN GRAMS)					STILL BIRTHS	GRAND TOTAL	SB's (per100 births)
	500 - 999	1000 - 1499	1500 - 2499	2500 OR MORE	TOTAL			
MUSCAT								
ROYAL.....	28	77	476	4,610	5,191	78	5,269	1.5%
KHOULA.....	6	10	341	5,482	5,839	65	5,904	1.1%
QURIYAT.....	0	0	64	822	886	6	892	0.7%
TOTAL:.....	34	87	881	10,914	11,916	149	12,065	1.2%
DHOFAR								
QABOOS.....	12	19	129	3,452	3,612	70	3,682	1.9%
MADINAT AL-HAQ.....	0	0	0	31	31	0	31	0.0%
SUDH.....	0	0	2	48	50	1	51	2.0%
RAKHYUT.....	0	0	0	5	5	0	5	0.0%
TAWI ATTAIR.....	0	0	0	64	64	1	65	1.5%
MIRBAT H.C.....	0	0	1	9	10	0	10	0.0%
TAQA H.C.....	0	0	0	2	2	0	2	0.0%
THUMRAIT H.C.....	0	0	0	2	2	0	2	0.0%
SHAHIB ASSAIB H.C...	0	0	0	11	11	1	12	8.3%
SHELEEM H.C.....	0	0	2	14	16	0	16	0.0%
DHALQUT H.C.....	0	0	2	31	33	1	34	2.9%
MAKINAT SHAHAN H.C..	0	0	0	6	6	0	6	0.0%
TOTAL:.....	12	19	136	3,675	3,842	74	3,916	1.9%
DAKHILIYA								
NIZWA.....	3	16	217	1,741	1,977	47	2,024	2.3%
SUMAIL.....	1	5	130	1,037	1,173	11	1,184	0.9%
BAHLA.....	1	2	157	1,176	1,336	4	1,340	0.3%
ADAM.....	0	0	25	326	351	2	353	0.6%
IZKI.....	0	2	59	692	753	3	756	0.4%
JABAL AKHDAR.....	0	0	8	32	40	0	40	0.0%
TOTAL:.....	5	25	596	5,004	5,630	67	5,697	1.2%
NORTH SHARQIYA								
IBRA	1	12	148	1,420	1,581	28	1,609	1.7%
SINAW	1	3	73	794	871	6	877	0.7%
WADI DIMA & TAYEEN..	0	1	31	249	281	3	284	1.1%
BIDIYA.....	0	0	16	290	306	0	306	0.0%
SAMAD AL-SHAAN.....	0	0	36	374	410	3	413	0.7%
WADI BANI KHALID....	0	0	1	129	130	1	131	0.8%
TOTAL:.....	2	16	305	3,256	3,579	41	3,620	1.1%
SOUTH SHARQIYA								
SUR.....	5	15	176	1,865	2,061	29	2,090	1.4%
B.B.BU ALI.....	2	13	75	1,436	1,526	15	1,541	1.0%
B.B.BU HASSAN.....	0	3	23	323	349	3	352	0.9%
MASIRAH.....	1	1	8	173	183	1	184	0.5%
TOTAL:.....	8	32	282	3,797	4,119	48	4,167	1.2%

OUTCOME OF HOSPITAL DELIVERIES - 1992

REGION HOSPITAL	LIVE BIRTHS					STILL BIRTHS	GRAND TOTAL	SB's (per100 births)
	(WEIGHT IN GRAMS)				TOTAL			
	500 - 999	1000 - 1499	1500 - 2499	2500 OR MORE				
NORTH BATINAH								
SOHAR.....	11	23	284	4,823	5,141	98	5,239	1.9%
SAHAM.....	5	6	162	3,124	3,297	19	3,316	0.6%
WADI HAWASNA.....	0	0	8	48	56	1	57	1.8%
WADI SARAMI.....	0	0	1	40	41	0	41	0.0%
HEEBI H.C.....	0	0	12	167	179	0	179	0.0%
TOTAL:.....	16	29	467	8,202	8,714	118	8,832	1.3%
SOUTH BATINAH								
RUSTAQ.....	7	21	405	3,459	3,892	43	3,935	1.1%
WADI BANI GHAFFIR...	0	0	26	275	301	2	303	0.7%
WADI BANI KHAROOS...	0	0	10	120	130	1	131	0.8%
WADI MISTAL.....	0	0	7	44	51	0	51	0.0%
WADI HEMLI.....	1	0	12	143	156	1	157	0.6%
WADI SAHTAN H.C.....	0	2	29	171	202	2	204	1.0%
TOTAL:.....	8	23	489	4,212	4,732	49	4,781	1.0%
DHAHIRA								
TANAM.....	7	13	171	2,308	2,499	35	2,534	1.4%
BURAIMI.....	2	1	35	596	634	10	644	1.6%
YANKUL.....	2	1	41	574	618	7	625	1.1%
WADI JIZZI*.....	0	0	0	3	3	1	4	25.0%
WADI AL AIN H.C.*...	0	0	0	12	12	0	12	0.0%
TOTAL:.....	11	15	247	3,493	3,766	53	3,819	1.4%
MUSANDAM								
KHASAB.....	0	1	25	294	320	6	326	1.8%
DIBBA.....	1	0	13	193	207	3	210	1.4%
BUKHA.....	0	0	7	54	61	0	61	0.0%
MADHA H.C.....	0	0	1	13	14	0	14	0.0%
LEEMA H.C.....	0	0	4	26	30	1	31	3.2%
KUMZAR H.C.....	0	0	1	33	34	0	34	0.0%
TOTAL:.....	1	1	51	613	666	10	676	1.5%
AL-WOUSTAH								
HAIMA.....	0	0	2	43	45	0	45	0.0%
DUQUM.....	0	1	2	93	96	1	97	1.0%
AL KAHIL H.C.....	0	0	3	63	66	0	66	0.0%
WADI HAITHAM H.C....	0	0	2	2	4	0	4	0.0%
TOTAL:.....	0	1	9	201	211	1	212	0.5%
NATIONAL TOTAL:.....	97	248	3,463	43,367	47,175	610	47,785	1.3%

TABLE 4.3

MAJOR OPERATIONS PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1992

HOSPITALS	REGIONS	TYPE OF MAJOR OPERATIONS								TOTAL MAJOR OPERATIONS	
		Gastro-Intestinal	Genito-urinary	Obs.& Gynaec.	Ophthalmology	Orthopaedics	Plastic Surgery	ENT	Dental		Misc.
MUSCAT	ROYAL.....	733	627	0	0	225	0	0	0	916	2,501
	MALE	489	78	1,060	0	68	0	0	0	412	2,107
	TOTAL	1,222	705	1,060	0	293	0	0	0	*1328	4,608
	MALE	374	0	0	99	1,109	692	0	0	77	2,351
	FEMALE	100	0	610	34	292	213	0	0	28	1,277
	TOTAL	474	0	610	133	1,401	905	0	0	105	3,628
	MALE	0	0	0	751	0	0	933	217	0	1,901
	FEMALE	0	0	0	576	0	0	615	129	0	1,320
	TOTAL	0	0	0	1,327	0	0	1,548	346	0	3,221
	TOTAL:	1,696	705	1,670	1,460	1,694	905	1,548	346	1,433	11,457
DHOFAR	QABOOS.....	225	44	0	99	110	4	172	0	61	715
	MALE	109	5	286	62	21	1	98	0	44	626
	TOTAL	334	49	286	161	131	5	270	0	105	1,341
	TOTAL:	334	49	286	161	131	5	270	0	105	1,341
DAKHILYA	NIZWA.....	180	49	0	99	113	1	80	0	81	603
	MALE	52	2	189	86	48	0	81	0	46	504
	TOTAL	232	51	189	185	161	1	161	0	127	1,107
	MALE	48	0	0	13	1	0	0	0	11	73
	FEMALE	18	0	36	22	0	0	0	0	6	82
	TOTAL	66	0	36	35	1	0	0	0	17	155
NORTH SHARQIYA	IBRA	298	51	225	220	162	1	161	0	144	1,262
	MALE	93	2	0	23	0	0	0	0	18	136
	FEMALE	44	0	215	22	0	0	0	0	10	291
	TOTAL	137	2	215	45	0	0	0	0	28	427
	MALE	0	0	0	0	0	0	0	0	13	13
	FEMALE	0	0	0	0	0	0	0	0	3	3
	TOTAL	0	0	0	0	0	0	0	0	16	16
	MALE	0	0	0	0	0	0	0	0	42	42
	FEMALE	0	0	0	0	0	0	0	0	18	18
	TOTAL	0	0	0	0	0	0	0	0	60	60
TOTAL:	137	2	215	45	0	0	0	0	104	503	

* Includes 930 Paediatrics and 384 Cardio-thoracic.

(CONT) TABLE 4.3 MAJOR OPERATIONS PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1992

HOSPITALS	REGIONS	TYPE OF MAJOR OPERATIONS									TOTAL MAJOR OPERATIONS	
		Gastro-Intestinal	Genito-urinary	Obs.& Gynaec.	Ophthalmology	Orthopaedics	Plastic Surgery	ENT	Dental	Misc.		
SOUTH SHARQIYA	MALE	94	20	0	73	26	0	47	0	21	281	
	FEMALE	37	1	167	55	12	0	32	0	15	319	
	TOTAL	131	21	167	128	38	0	79	0	36	600	
	MALE	54	6	0	11	0	0	0	0	0	71	
	FEMALE	13	1	64	16	0	0	0	0	0	94	
	TOTAL	67	7	64	27	0	0	0	0	0	165	
	MALE	7	0	0	0	0	0	0	0	10	17	
	FEMALE	3	0	5	0	0	0	0	0	2	10	
	TOTAL	10	0	5	0	0	0	0	0	12	27	
	TOTAL:	208	28	236	155	38	0	79	0	48	792	
NORTH BATINAH	MALE	309	170	0	39	387	0	55	0	22	992	
	FEMALE	142	3	321	23	140	0	43	0	30	702	
	TOTAL	451	173	321	62	527	0	108	0	52	1,694	
	MALE	19	7	0	0	0	0	0	0	4	30	
	FEMALE	8	0	16	0	0	0	0	0	2	26	
	TOTAL	27	7	16	0	0	0	0	0	6	56	
	TOTAL:	478	180	337	62	527	0	108	0	58	1,750	
	SOUTH BATINAH	MALE	84	7	0	55	2	0	0	0	4	152
		FEMALE	25	2	216	27	0	0	0	0	2	272
		TOTAL	109	9	216	82	2	0	0	0	6	424
TOTAL:	109	9	216	82	2	0	0	0	6	424		
DHAHIRA	MALE	57	16	0	62	0	1	51	0	56	243	
	FEMALE	22	0	88	49	0	0	43	0	24	226	
	TOTAL	79	16	88	111	0	1	94	0	80	469	
	MALE	60	26	0	34	16	0	0	0	38	174	
	FEMALE	17	2	37	36	2	1	0	0	20	115	
	TOTAL	77	28	37	70	18	1	0	0	58	289	
	TOTAL:	156	44	125	181	18	2	94	0	138	758	
	MUSANDAM	MALE	17	16	0	3	1	0	26	0	2	65
		FEMALE	1	2	11	8	1	0	25	0	1	49
		TOTAL	18	18	11	11	2	0	51	0	3	114
MALE		4	0	0	0	0	0	0	0	2	6	
FEMALE		1	0	6	0	0	0	0	0	3	10	
TOTAL		5	0	6	0	0	0	0	0	5	16	
TOTAL:		23	18	17	11	2	0	51	0	8	130	
NATIONAL:		MALE	2,358	990	0	1,361	1,990	688	1,374	217	1,378	10,366
		FEMALE	1,081	96	3,327	1,016	584	215	937	129	666	8,051
		TOTAL	3,439	1,086	3,327	2,377	2,574	913	2,311	346	2,044	18,417

TABLE 4.4

MINOR OPERATIONS PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1992

REGIONS HOSPITALS	MINOR OPERATIONS PERFORMED
MUSCAT	
ROYAL.....	2,070
KHOULA.....	4,471
AL-NAHDHA.....	2,468
AR-RAHMA.....	0
IBN SINA.....	0
QURIYAT.....	947
MUSCAT.....	3
TOTAL:	9,959
DHOFAR	
QABOOS.....	3,921
MADINAT AL HAQ.....	119
SUDH.....	169
RAKHYUT.....	25
TAWI ATTAIR.....	70
TOTAL:	4,304
DAKHILYA	
NIZWA.....	13,133
SUMAIL.....	3,286
BAHLA.....	2,531
ADAM.....	470
IZKI.....	967
JABAL AKHDAR.....	84
TOTAL:	20,471
NORTH SHARQIYA	
IBRA	7,437
SINAW.....	50
WADI TAYEEN.....	106
BIDIYA.....	247
SAMAD AL-SHAAN ...	415
WADI BANI KHALID...	97
TOTAL:	8,352
SOUTH SHARQIYA	
SUR.....	3,592
B.B.BU ALI.....	1,693
B.B.BU HASSAN.....	323
MASIRAH.....	386
TOTAL:	5,994

REGIONS HOSPITALS	MINOR OPERATIONS PERFORMED
NORTH BATINAH	
SOHAR.....	4,988
SAHAM.....	1,112
WADI AL-HAWASNA.....	4
WADI SARAMI.....	46
TOTAL:	6,150
SOUTH BATINAH	
RUSTAQ.....	990
WADI BANI GHAFIR	152
WADI BANI KHAROO	0
WADI MISTAL.....	16
WADI HEMLI.....	0
TOTAL:	1,158
DHAHIRA	
TANAM.....	2,878
BURAIMI.....	1,098
YANKUL.....	470
WADI JIZZI.....	0
TOTAL:	4,446
MUSANDAM	
KHASAB.....	930
DIBBA.....	641
BUKHA.....	73
TOTAL:	1,644
AL WOUSTA	
DUQUM.....	184
HAIMA.....	61
TOTAL:	245
NATIONAL TOTAL:	62,723

TABLE 4.5

RADIOGRAPHY PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1992

REGIONS HOSPITALS	TYPE OF X-RAYS				TOTAL
	PLAIN	IVP	BARIUM- MEAL	OTHERS	
MUSCAT					
ROYAL.....	51,131	1,636	1,645	12,497	66,909
KHOULA.....	95,579	206	431	1,350	97,566
AL-NAHDHA.....	20,195	93	220	1,763	22,271
IBN-SINA.....	0	0	0	0	0
AR-RAHMA.....	10,214	0	0	0	10,214
QURIYAT.....	5,374	0	0	0	5,374
MUSCAT.....	2,266	0	0	0	2,266
TOTAL:.....	184,759	1,935	2,296	15,610	204,600
DHOFAR					
QABOOS.....	49,315	303	839	217	50,674
MADINAT AL-HAQ.....	398	0	0	0	398
SUDH.....	1,160	0	0	0	1,160
RAKHYUT.....	193	0	0	0	193
TAWI ATTAIR.....	0	0	0	0	0
TOTAL:.....	51,066	303	839	217	52,425
DAKHILYA					
NIZWA.....	21,636	273	155	1,477	23,541
SUMAIL.....	8,351	59	1	12	8,423
BAHLA.....	2,345	0	0	3,339	5,684
ADAM.....	3,426	0	0	0	3,426
IZKI.....	0	0	0	0	0
JABAL AKHDAR.....	0	0	0	0	0
TOTAL:.....	35,758	332	156	4,828	41,074
NORTH SHARQIYA					
IBRA	9,226	123	64	65	9,478
SINAW	5,331	0	0	0	5,331
WADI TAYEEN.....	1,018	5	23	109	1,155
BIDIYA.....	1,716	0	0	382	2,098
SAMAD AL-SHAAN.....	1,064	0	0	274	1,338
WADI BANI KHALID.....	0	0	0	0	0
TOTAL:.....	18,355	128	87	830	19,400
SOUTH SHARQIYA					
SUR.....	14,637	167	183	109	15,096
B.B.BU ALI.....	15,772	189	47	0	16,008
B.B.BU HASSAN.....	5,041	0	0	0	5,041
MASIRAH.....	3,510	18	53	3	3,584
TOTAL:.....	38,960	374	283	112	39,729

(CONT) TABLE 4.5

RADIOGRAPHY PERFORMED IN MINISTRY OF HEALTH HOSPITALS - 1992

HOSPITALS	TYPE OF X-RAYS				TOTAL
	PLAIN	IVP	BARIUM-MEAL	OTHERS	
NORTH BATINAH					
SOHAR.....	22,488	58	82	833	23,461
SAHAM.....	14,341	1	0	5	14,347
WADI HAWASNA.....	0	0	0	0	0
WADI SARAMI.....	0	0	0	0	0
TOTAL:.....	36,829	59	82	838	37,808
SOUTH BATINAH					
RUSTAQ.....	19,854	10	14	19	19,897
WADI BANI GHAFIR.....	0	0	0	0	0
WADI BANI KHAROOS.....	386	0	0	0	386
WADI MISTAL.....	0	0	0	0	0
WADI HEMLI.....	673	0	0	0	673
TOTAL:.....	20,913	10	14	19	20,956
DHAHIRA					
TANAM.....	18,128	146	38	72	18,384
BURAIMI.....	10,317	121	190	71	10,699
YANKUL.....	0	0	0	0	0
WADI JIZZI.....	0	0	0	0	0
TOTAL:.....	28,445	267	228	143	29,083
MUSANDAM					
KHASAB.....	5,198	20	47	37	5,302
DIBBA.....	695	0	13	990	1,698
BUKHA.....	537	0	0	144	681
TOTAL:.....	6,430	20	60	1,171	7,681
AL WOUSTAH					
HAIMA.....	0	0	0	0	0
DUQUM.....	0	0	0	0	0
TOTAL:.....	0	0	0	0	0
NATIONAL TOTAL:.....	421,515	3,428	4,045	23,768	452,756

TABLE 4.6

LABORATORY INVESTIGATIONS CARRIED OUT IN HEALTH INSTITUTIONS - 1992

REGIONS	TYPE & NUMBER OF LABORATORY TESTS DONE										TOTAL	
	HAEMATO- LOGY	BLOOD GROUPING	BIOCHEM- ISTRY	BACTERIOLOGY		HISTOLOGY	CYTOLOGY	REFERRAL	SPECIMENS			
				CULTURAL	OTHER							
HOSPITALS/HEALTH CENTR	MUSCAT											
	ROYAL.....	475,570	92,393	759,152	89,056	31,637	66,489	33,196	5,077	0	1,552,570	
	KHOULA.....	168,091	33,122	160,825	0	64,227	0	0	12,915	25,641	464,821	
	AL-NAHDHA.....	105,806	332	53,815	7,296	29,383	0	0	6,988	57,701	261,321	
	IBN-SINA.....	6,972	123	2,656	0	2,759	0	0	1,327	3,103	16,940	
	ARRAHMA.....	44,328	3,296	37,345	0	23,658	0	0	6,527	23,224	138,378	
	QURIYAT.....	18,837	1,584	3,637	0	15,813	0	0	695	14,558	55,124	
	MUSCAT.....	9,840	1,031	2,314	0	9,361	0	0	410	8,188	31,144	
	SEEB H.C.....	15,516	3,506	6,611	0	20,328	0	0	54	11,155	57,170	
	AMIRAT H.C.....	5,627	770	1,199	0	6,952	0	0	47	4,911	19,506	
	NEW AL KHOD H.C.....	4,657	759	1,379	0	6,770	0	0	0	7,147	20,712	
	TOTAL.....	855,244	136,916	1,028,933	96,352	210,888	66,489	33,196	34,040	155,628	2,617,686	
DHOFAR												
	QABOOS.....	175,751	13,975	284,155	10,995	79,328	4,445	762	2,643	93,099	665,153	
	MADINAT AL-HAQ.....	4,782	292	494	0	4,327	0	0	5	4,292	14,192	
	SUDH.....	4,086	142	757	0	2,627	0	0	32	2,158	9,802	
	RAKHYUT.....	2,395	115	249	0	2,142	0	0	30	1,375	6,306	
	TAWI ATTAIR.....	2,567	198	265	0	1,902	0	0	0	1,615	6,547	
	MIRBAT H.C.....	2,578	103	4	0	1,151	0	0	0	15	3,851	
	DHALQUT H.C*.....	2,388	75	51	0	1,689	0	0	800	2,954	7,957	
	TOTAL.....	194,547	14,900	285,975	10,995	93,166	4,445	762	3,510	105,508	713,808	
	DAKHILYA											
		NIZWA.....	156,133	9,921	27,069	0	39,188	0	0	5,170	52,007	289,488
		SUMAIL.....	37,774	3,668	8,670	0	24,657	0	0	2,879	24,510	102,158
BAHLA.....		34,237	3,760	5,573	0	17,157	0	0	2,345	20,236	83,308	
ADAM.....		13,082	1,039	3,001	0	8,305	0	0	894	9,381	35,702	
IZKI.....		27,165	1,254	3,412	0	17,991	0	0	1,211	14,218	65,251	
JABAL AKHDAR.....		470	123	0	0	2,130	0	0	69	547	3,339	
TOTAL.....	268,861	19,765	47,725	0	109,428	0	0	12,568	120,899	579,246		

(CONT) TABLE 4.6

LABORATORY INVESTIGATIONS CARRIED OUT IN HEALTH INSTITUTIONS - 1992

REGIONS	TYPE & NUMBER OF LABORATORY TESTS DONE										
	HAEMATO- LOGY	BLOOD GROUPING	BIOCHEM- ISTRY	BACTERIOLOGY		HISTOLOGY	CYTOLOGY	REFERRAL	SPECIMENS	T O T A L	
				CULTURAL	OTHER						
HOSPITALS/HEALTH CENTR	NORTH SHARQIYA										
	IBRA	49,363	6,930	13,915	0	26,001	0	0	1,231	24,936	122,376
	SINAW	35,627	2,348	6,539	0	19,657	0	0	519	21,978	86,668
	W. DIMA & TAYEEN.....	11,175	644	731	0	6,877	0	0	869	4,552	24,848
	BIDIYA.....	11,128	1,067	2,149	0	8,174	0	0	27	7,522	30,067
	SAMAD AL SHAAN.....	9,722	1,143	1,072	0	8,115	0	0	0	6,215	26,267
	WADI BANI KHALID.....	2,111	262	289	0	1,678	0	0	0	1,542	5,882
	TOTAL:.....	119,126	12,394	24,695	0	70,502	0	0	2,646	66,745	296,108
SOUTH SHARQIYA	SUR.....	56,340	6,112	17,429	2,795	28,385	0	0	5,245	34,719	151,025
	B.B.BU ALI.....	47,456	5,188	12,021	0	42,672	0	0	604	30,444	138,385
	B.B.BU HASSAN.....	22,829	1,923	3,594	0	17,640	0	0	195	13,435	59,616
	MASIRAH.....	8,846	358	1,475	0	5,482	0	0	265	4,007	20,433
	TOTAL:.....	135,471	13,581	34,519	2,795	94,179	0	0	6,309	82,605	369,459
NORTH BATINAH	SOHAR.....	138,439	14,323	47,398	4,450	58,713	406	15	2,907	60,816	327,467
	SAHAM.....	59,935	6,393	8,915	522	33,889	0	0	717	34,435	144,806
	WADI HAWASNA*.....	1,659	57	130	0	445	0	0	9	1,353	3,653
	WADI SARAMI.....	4,873	80	299	0	1,682	0	0	2	2,144	9,080
	WADI BANI OMAR H.C.*.....	68	2	1	0	9	0	0	0	62	142
	TOTAL:.....	204,974	20,855	56,743	4,972	94,738	406	15	3,635	98,810	485,148
SOUTH BATINAH	RUSTAQ.....	158,306	9,979	36,883	0	31,556	0	0	4,493	57,490	298,707
	WADI BANI GHAFIR.....	9,634	195	414	0	1,688	0	0	0	5,651	17,582
	WADI BANI KHAROOS.....	3,304	244	647	0	2,713	0	0	4	2,205	9,117
	WADI MISTAL*.....	0	0	0	0	0	0	0	0	0	0
	WADI HEMLI.....	6,900	138	391	0	2,412	0	0	3	2,642	12,486
	TOTAL:.....	178,144	10,556	38,335	0	38,369	0	0	4,500	67,988	337,892

(CONT) TABLE 4.6

LABORATORY INVESTIGATIONS CARRIED OUT IN HEALTH INSTITUTIONS - 1992

REGIONS	TYPE & NUMBER OF LABORATORY TESTS DONE									
	HAEMATO- LOGY	BLOOD GROUPING	BIOCHEM- ISTRY	BACTERIOLOGY		HISTOLOGY	CYTOLOGY	REFERRAL	SPECIMENS	T O T A L
				CULTURAL	OTHER					
HOSPITALS/HEALTH CENTRE	DHAHIRA									
	TANAM.....	110,618	10,721	22,274	10,167	34,568	0	2,426	43,774	234,548
	BURAIMI.....	42,188	6,349	17,364	5,104	47,897	0	892	30,150	149,944
	YANKUL.....	12,505	727	1,172	0	7,781	0	218	8,711	31,114
	WADI JIZI.....	3,606	83	228	0	1,443	0	13	1,797	7,170
	WADI AL AIN & HAJER*	1,872	83	83	0	414	0	32	1,045	3,529
	TOTAL:.....	170,789	17,963	41,121	15,271	92,103	0	3,581	85,477	426,305
MUSANDAM	KHASAB.....	23,435	2,582	7,080	1,512	16,144	0	386	24,993	76,132
	DIBBA.....	5,935	884	1,452	54	4,318	0	0	6,394	19,037
	BUKHA.....	5,368	176	1,096	0	3,909	0	13	3,637	14,199
	MADHA H.C*	94	17	33	0	67	0	0	123	334
	TOTAL:.....	34,832	3,659	9,661	1,566	24,438	0	399	35,147	109,702
AL WOUSTAH	HAIMA.....	6,910	352	1,104	0	3,501	0	215	2,911	14,993
	DUQUIM.....	3,951	107	353	0	2,278	0	58	1,966	8,713
	TOTAL:.....	10,861	459	1,457	0	5,779	0	273	4,877	23,706
NATIONAL TOTAL:.....	2,172,849	251,048	1,569,164	131,951	833,590	71,340	33,973	71,461	823,684	5,959,060

- 1) Laboratory technician was on leave in Rakhyut in May and in Dhalqut in February and hence no laboratory investigations had been carried out.
- 2) There was no laboratory technician posted in Wadi Hawasna from January to April and in Wadi Mistal for the whole year of 1992.
- 3) Madha H.C. and Wadi Bani Omar H.C. started laboratory services in December, 1992; and Wadi Al Ain H.C. in September, 1992.

TABLE 4.7

DENTAL & OTHER ACTIVITIES IN MINISTRY OF HEALTH HOSPITALS - 1992

REGIONS	TYPE OF DENTAL TREATMENTS			TOTAL DENTAL TREATMENTS	OTHER ACTIVITIES	
	DENTAL EXTRACTIONS	DENTAL FILLINGS	OTHER DENTAL TREATMENTS		MEDICAL CHECKUP	EYE TESTINGS
HOSPITALS						
MUSCAT						
ROYAL.....	824	1,106	2,191	4,121	0	0
KHOULA.....	0	0	0	0	0	0
AL-NAHDHA.....	14,108	6,614	16,675	37,397	3,325	14,909
IBN-SINA.....	0	0	0	0	0	0
AR-RAHMA.....	0	0	0	0	4,697	0
QURIYAT.....	3,176	460	4,598	8,234	235	235
MUSCAT.....	2,423	479	2,799	5,701	0	0
TOTAL:.....	20,531	8,659	26,263	55,453	8,257	15,144
DHOFAR						
QABOOS.....	13,132	3,177	12,638	28,947	1,421	12,579
MADINAT AL-HAQ.....	0	0	0	0	0	0
SUDH.....	0	0	0	0	0	0
RAKHYUT.....	0	0	0	0	0	0
TAWI ATTAIR.....	0	0	0	0	0	0
TOTAL:.....	13,132	3,177	12,638	28,947	1,421	12,579
DAKHILYA						
NIZWA.....	8,186	2,098	5,001	15,285	832	8,370
SUMAIL.....	4,532	1,056	6,285	11,873	837	1,064
BAHLA.....	4,223	326	2,196	6,745	576	0
ADAM.....	1,688	639	3,852	6,179	329	0
IZKI.....	0	0	0	0	0	0
JABAL AKHDAR.....	0	0	0	0	0	0
TOTAL:.....	18,629	4,119	17,334	40,082	2,574	9,434
NORTH SHARQIYA						
IBRA.....	5,575	2,733	4,966	13,274	1,207	2,398
SINAW.....	2,695	1,707	5,072	9,474	825	424
WADI TAYEEN.....	34	0	270	304	182	340
BIDIYA.....	0	0	0	0	389	190
SAMAD AL-SHAAN.....	0	0	0	0	646	83
WADI BANI KHALID.....	0	0	0	0	0	12
TOTAL:.....	8,304	4,440	10,308	23,052	3,249	3,447
SOUTH SHARQIYA						
SUR.....	3,206	1,120	8,583	12,909	4,634	3,186
B.B BU ALI.....	1,393	0	289	1,682	187	10
B.B.BU HASSAN.....	0	0	1,050	1,050	574	574
MASIRAH.....	0	0	0	0	219	20
TOTAL:.....	4,599	1,120	9,922	15,641	5,614	3,790

(CONT)TABLE 4.7

DENTAL & OTHER ACTIVITIES IN MINISTRY OF HEALTH HOSPITALS - 1992

REGIONS	T YPE OF DENTAL TREATMEN			TOTAL DENTAL TREAT- MENTS	OTHER ACTIVITIES	
	DENTAL EXTRAC- TIONS	DENTAL FILLINGS	OTHER DENTAL TREAT- MENTS		MEDICAL CHECKUPS	EYE TESTINGS
HOSPITALS						
NORTH BATINAH						
SOHAR.....	10,937	2,194	10,057	23,188	4,621	15,632
SAHAM.....	7,994	1,827	5,706	15,527	477	476
WADI HAWASNA.....	0	0	0	0	0	0
WADI SARAMI.....	659	133	592	1,384	0	0
TOTAL:.....	19,590	4,154	16,355	40,099	5,098	16,108
SOUTH BATINAH						
RUSTAQ.....	7,002	1,295	4,864	13,161	1,140	4,106
WADI BANI GHAFIR.....	0	0	1,176	1,176	119	0
WADI BANI KHAROOS.....	0	0	268	268	0	0
WADI MISTAL.....	0	0	0	0	0	0
WADI HEMLI.....	0	0	1,070	1,070	0	0
TOTAL:.....	7,002	1,295	7,378	15,675	1,259	4,106
DHAHIRA						
TANAM.....	8,001	1,785	9,033	18,819	5,742	1,077
BURAIMI.....	3,189	971	3,264	7,424	11,341	325
YANKUL.....	0	0	0	0	0	0
WADI JIZZI.....	0	0	0	0	0	0
TOTAL:.....	11,190	2,756	12,297	26,243	17,083	1,402
MUSANDAM						
KHASAB.....	634	214	373	1,221	567	780
DIBBA.....	98	0	1,444	1,542	470	600
BUKHA.....	29	0	203	232	269	64
TOTAL:.....	761	214	2,020	2,995	1,306	1,444
AL WUSTAH						
HAIMA.....	0	0	0	0	0	0
DUQUM.....	0	0	0	0	0	0
TOTAL:.....	0	0	0	0	0	0
NATIONAL TOTAL:.....	103,738	29,934	114,515	248,187	45,861	67,454

5. PREVENTIVE SERVICES

The Directorate-General of Health Affairs now covers all aspects of health care i.e. curative, preventive and promotive.

In most regions, the public health units have amalgamated with the hospitals or health centres where they are located to provide a fully comprehensive health service. Thus, at the end of 1992, there were only 44 independent Public Health Units operating throughout the country. Their distribution is shown in Table 5.1.

The various components of preventive services are as follows.

EXPANDED PROGRAMME OF IMMUNIZATION (EPI)

The objective of the EPI Programme was extended in 1992 to include immunization against viral hepatitis type B, as well as tuberculosis (BCG), diphtheria, pertussis, tetanus and poliomyelitis (DPT), and measles.

This was carried out under the management of the Department of Family and Community Health Programs. Its main features are:-

- (a) To offer an immunization service in all the Ministry's hospitals and health centers.
- (b) To monitor the incidence of the seven diseases in children and to instigate 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 1992 to children is shown in Table 5.3. A comparison over the last 12 years for the numbers of doses given and the coverage rates by age one year is shown in Table 5.4 and Figure 6.

As shown by the tables and figure, the coverage rate for the six basic EPI immunizations increased significantly from 1981 to 1986. In 1985 the BCG and DPT-1 (1st dose of DPT and OPV) reached over 90% coverage by age 1 year, and have remained there since. Both the DPT-3 (3rd dose of DPT and OPV) and the measles, both given towards the end of the child's first year, both passed the critical 80% mark in 1987 and have further improved to 99% and 96% respectively in 1992. A small number of immunizations given in the age range 1-5 years further augment the 1-year old coverage. The coverage of hepatitis B vaccine has, in just over one year, now reached 99%.

There has been a marked decline in the incidence of the EPI target diseases. During 1992, there was only 1 confirmed case of Diphtheria, and no cases of either Neonatal Tetanus or Acute Poliomyelitis. Prompt investigation and necessary containment action were initiated for any suspect cases reported. The outbreaks of measles in the Dhofar, Dhakilya and North Sharqiya regions were mainly among the over 6 year olds; these older children have never been vaccinated as the measles programme only reached satisfactory coverage in 1987.

EYE HEALTH CARE PROGRAMME (EHC)

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 30% of the population suffer from some form of trachoma and 3% are blind in one or both eyes. Muscat and the southern Dhofar 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 and treat them. EHC has, therefore, two approaches - a School Screening Programme and a Community Screening Programme. Under both programs, cases detected are treated with appropriate drugs and serious cases referred to a local ophthalmologist.

(i) School Screening Programme

In the school year 1991-2, the newly appointed school health doctors carried out this programme. Their activity levels and findings compared with those of the previous years are shown in Table 5.6. There appears to have been a consistent improvement in the status of the children's eye health since 1987. The overall rate then fell markedly in 1992, due to the screening taking place in all regions compared with just the high risk regions previously.

(ii) Community Screening Programme

The Community Screening Programme was carried out by 7 EHC teams based in Nizwa, Sumail, Al-Hamra, Rustaq, Sur, Masnah and Sohar. Their activity levels and findings for 1992 and the five previous years are also shown in Table 5.6. As shown in the table, the results of 1992 are similar to those of the last five years for the Community Screening.

TABLE 5.1

REGIONAL DISTRIBUTION OF PREVENTIVE MEDICINE FACILITIES
- AS OF 31.12.1992

REGION	PUBLIC HEALTH UNITS	QUARANTINE UNITS			MCH CENTRES	MALARIA CONTROL CENTRES
		AIRPORTS	PORTS	BORDERS		
MUSCAT.....	4	1	2	-	1	-
DHOFAR.....	5	1	1	-	-	-
DAKHILYA.....	9	-	-	-	-	3
N SHARQIYA.....	1	-	-	-	1	2
S SHARQIYA.....	4	-	-	-	-	-
N BATINAH.....	1	-	-	1	-	1
S BATINAH.....	7	-	-	-	-	4
DHAHIRA.....	11	-	-	1	-	1
MUSANDAM.....	1	-	-	-	-	1
AL WOUSTAH.....	1	-	-	-	-	-
TOTAL: (1992)	44	2	3	2	2	12
TOTAL: (1991)	68	2	3	2	2	12



TABLE 5.2

A: - ANTENATAL ATTENDANCES IN 1992

HOSPITALS / HEALTH CENTRES BY REGION	Total Attendance						MEAN NUMBER OF VISITS PER PREGNANCY		
	NEW CASES			FOLLOW - UP			Total	Prima Gravida	Multi- Gravida
	Prima	Multi	Total	Prima	Multi	Total			
MUSCAT.....	2,151	9,133	11,284	7,267	43,939	51,206	6	4	6
DHOFAR.....	586	3,706	4,292	3,267	19,950	23,217	6	7	6
DAKHILYA.....	832	6,469	7,301	3,956	34,206	38,162	6	6	6
NORTH SHARQIYA..	476	3,332	3,808	2,009	16,237	18,246	6	5	6
SOUTH SHARQIYA..	544	3,662	4,206	2,976	19,209	22,185	6	6	6
NORTH BATINAH.....	1,167	10,195	11,362	4,292	40,009	44,301	5	5	5
SOUTH BATINAH.....	929	8,767	9,696	2,809	27,611	30,420	4	4	4
DHAHIRA.....	473	3,733	4,206	1,749	22,864	24,613	7	5	7
MUSANDAM.....	103	616	719	442	2,653	3,095	5	5	5
AL WOUSTAH.....	32	427	459	135	1,356	1,491	4	5	4
NATIONAL TOTAL....	7,293	50,040	57,333	28,902	228,034	256,936	5	5	6

B: - POSTNATAL ATTENDANCES IN 1992

HOSPITALS / HEALTH CENTRES BY REGION	Total Attendance						% OF MOTHERS MAKING POSTNATAL VISIT		
	NEW CASES			FOLLOW - UP			Total	Prima Gravida	Multi- Gravida
	Prima	Multi	Total	Prima	Multi	Total			
MUSCAT.....	1,270	1,739	3,009	214	1,566	1,780	27%	59%	19%
DHOFAR.....	229	1,262	1,491	82	309	391	35%	39%	34%
DAKHILYA.....	629	4,525	5,154	539	3,727	4,266	71%	76%	70%
NORTH SHARQIYA..	158	1,567	1,725	509	2,951	3,460	45%	33%	47%
SOUTH SHARQIYA..	286	1,739	2,025	91	817	908	48%	53%	47%
NORTH BATINAH.....	582	5,496	6,078	608	4,158	4,766	53%	50%	54%
SOUTH BATINAH.....	309	4,123	4,432	126	747	873	46%	33%	47%
DHAHIRA.....	337	3,043	3,380	82	678	760	80%	71%	82%
MUSANDAM.....	71	511	582	3	53	56	81%	69%	83%
AL WOUSTAH.....	24	157	181	42	247	289	39%	75%	37%
NATIONAL TOTAL....	3,895	24,162	28,057	2,296	15,253	17,549	49%	53%	48%

TABLE 5.3**IMMUNIZATIONS GIVEN TO PRE-SCHOOL CHILDREN - 1992**

IMMUNIZATION	TOTAL	A G E UNDER 1 Year	1 YR & OVER
B C G.....	54,764	54,501*	263
OPV (Birth).....	54,258	54,258	-
HBV - 1st dose.....	54,124	54,124	-
OPV - 40.....	54,265	54,265	-
HBV - 2nd dose.....	54,583	54,583	-
DPT & OPV (DPTP)			
Dose - 1.....	54,505	54,316	189
Dose - 2.....	54,843	54,431	412
Dose - 3.....	55,091	54,445	646
HBV - 3rd dose.....	55,115	54,676	439
MEASLES.....	54,468	53,130	1,338
DPT/OPV Booster.....	50,454	-	50,454

*Including 1500 Doses of BCG given outside Oman.

TABLE 5.4

IMMUNIZATION COVERAGE BY AGE 1 YEAR - 1981-1992**TYPE OF IMMUNIZATION**

Year	Estimated live- births (^{'000s})	BCG		DPT-1		DPT-3		MEASLES	
		No. (^{'000s})	% *	No. (^{'000s})	% *	No. (^{'000s})	% *	No. (^{'000s})	% *
1981	44.9	24.3	54%	10.5	24%	8.0	19%	4.0	10%
1982	46.8	35.9	77%	23.1	51%	10.8	24%	10.6	24%
1983	48.8	37.7	77%	29.0	61%	14.5	31%	15.8	34%
1984	50.0	39.6	79%	38.7	79%	21.4	45%	25.1	53%
1985	50.5	47.2	93%	45.3	92%	28.8	60%	31.3	65%
1986	51.1	51.7	101%	50.4	101%	40.4	82%	38.6	79%
1987	51.7	50.4	97%	50.1	99%	44.2	89%	43.0	86%
1988	52.4	50.4	96%	49.2	96%	45.4	90%	44.1	87%
1989	53.5	50.9	95%	51.8	98%	51.0	98%	48.9	94%
1990	54.4	52.0	96%	51.8	97%	51.5	98%	51.8	98%
1991	55.5	52.4	94%	52.1	95%	51.1	95%	51.9	96%
1992	56.6	54.5	96%	54.3	97%	54.4	99%	53.1	96%

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

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

* % Coverage of the target populations, which are:-

BCG - (All livebirths)

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

DPT-3 - (Livebirths) minus (All infant deaths)

Measles - (Livebirths) minus (All infant deaths)

Note - It is estimated that about 1,500 babies are delivered in nearby countries and receive their BCG there.

These are included in this table, and have increased the BCG coverage provided by Omani health services by 2.6 %.

Fig 7 IMMUNIZATION COVERAGE BY ONE YEAR
1982 - 1992

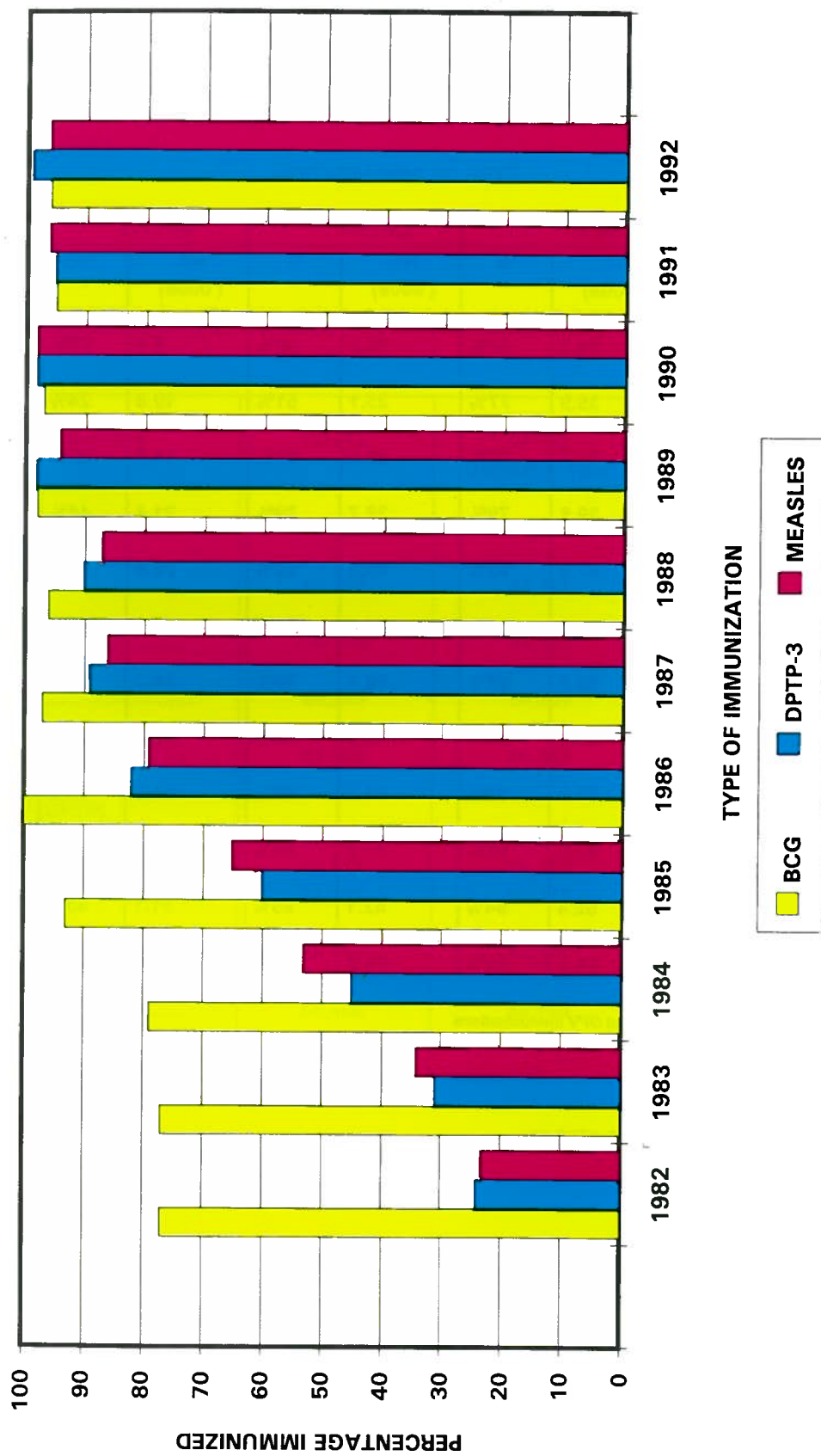


TABLE 5.5**IMMUNIZATION COVERAGE BY REGION AT AGE 1 YEAR - 1992****TYPE OF IMMUNIZATION GIVEN BY AGE ONE YEAR**

REGION	Estimated live-births	BCG No.	%	DPTP-3 No.	%	HBV-3 No.	%	MEASLES No.	%
MUSCAT	10,710	15,009	140%	10,876	104%	10,965	105%	10,805	104%
DHOFAR	5,860	4,594	78%	4,358	77%	4,448	78%	4,394	77%
DAKHILYA	7,720	6,751	87%	7,623	102%	7,619	102%	7,241	96%
N.SHARQIY	4,260	3,564	84%	4,051	98%	3,957	96%	3,916	95%
S.SHARQIYA	4,430	4,146	94%	4,391	102%	4,435	103%	4,448	103%
N.BATINAH	11,720	9,097	78%	10,582	93%	10,719	94%	10,122	89%
S.BATINAH	5,530	5,132	93%	6,561	122%	6,553	122%	6,546	122%
DHAHIRA	5,080	3,791	75%	4,926	100%	4,921	100%	4,633	94%
MUSANDAM	890	695	78%	725	84%	734	85%	716	83%
AL WUSTAH	410	222	54%	352	88%	325	82%	309	78%
NATIONAL	56,610	54,501*	96%	54,445	99%	54,676	99%	53,130	97%

* Including an estimated 1500 doses of B.C.G given outside Oman.

NOTE

Rates over 100% can occur when infants of other regions are immunised in that region e.g.BCG in Muscat is high due to BCG's given in the Royal and Khoula hospitals to babies from other regions.

TABLE 5.6

EYE HEALTH CARE PROGRAMME

Community Screening

TRACHOMA SCREENING	1992	1991	1990	1989	1988	1987
Places visited.....	421	52	113	95	122	123
Persons examined.....	12,574	12,349	32,833	24,609	34,596	32,591
Prevalence discovered						
Normal.....	59%	56%	47%	53%	56%	51%
Conjunctivitis.....	5%	6%	9%	*	*	*
Cases of trachoma.....	30%	33%	29%	33%	38%	35%
Trichiasis.....	2%	n.a	n.a	n.a	n.a	n.a
Corneal opacity.....	2%	4%	7%	7%	9%	6%
Cataract.....	0.5%	1%	1%	1%	1%	1%
Glaucoma.....	0.3%	-	0.6%	0.1%	0.8%	1%
Blind (one or both eyes).....	3%	5%	6%	6%	6%	6%

* Included in normal prevalence.

School Screening

TRACHOMA SCREENING	1992**	1990-91	1989-90	1988-89	1987-88	1986-87
School visited.....	696	390	360	264	413	330
Students examined.....	63,716	43,374	44,241	27,012	106,175	55,575
Prevalence discovered						
Normal.....	92%	79%	83%	78%	72%	62%
Conjunctivitis.....	4%	8%	*	*	*	*
Cases of trachoma.....	4%	13%	17%	21%	27%	37%
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).....	0.1%	-	0.2%	0.3%	0.2%	0.2%
Squint.....	0.6%	n.a	n.a	n.a	n.a	n.a
REFRACTION TESTING						
Schools visited.....	696	99	40	94	154	153
Students examined.....	63,716	58,329	19,300	51,000	60,500	58,600
Refraction tests.....	1,583	2,088	2,213	3,168	4,808	5,154
Defective vision detected.....	429	1,167	1,460	1,701	2,609	2,251
%	0.7%	2.0%	7.5%	3.3%	4.3%	3.8%

* Included in normal prevalence

** Jan-Dec 1992, using a new reporting system.

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 mainly in the Ministry's hospitals.
- 2 Contact tracing and defaulter retrieval.
- 3 Staff training, monitoring and supervision of the Control Programme, which is the responsibility of the Department of Family and Community Health Programmes.

A statistical summary for the year 1992 and its comparison with previous years is shown in Table 5.6.

The number of new cases remained constant (around 480) from 1988 to 1990 but declined to only 442 in 1991, and further reduced to 367 in 1992. From 1985 to 1987, the number of extra-pulmonary cases increased, and remained at about 100 per year until 1992, when it fell to only 85.

The number of defaulters has declined since 1986 reaching only 52 in 1991 and 47 in 1992. Every effort is made to retrieve defaulters by both active and passive means, especially those who were detected to be sputum positive initially.

ARI, C.D.D.and PEM PROGRAMMES

The control of diarrhoeal disease statistics are shown in Table 5.8. A total of 179 thousand children were diagnosed giving a rate of 651 cases per 1,000 children, of whom 11% had mild or moderated dehydration and only 1% severe dehydration. The rate of treatment with antibiotics varied considerably from under 1% in both South Batinah and Al Woustah to over 10% in Dhofar.

Acute respiratory Infections (ARI) accounted for 739 thousand cases in 1992 giving a rate of 2.7 episodes per child during the year (Table 5.9). The rate was lowest in the Muscat region (1.9) and highest in Al Woustah (6.8). Treatment with antibiotics averaged 21% of cases and was relatively consistent in all regions.

There were 26 thousand attendances with Protein-Energy Malnutrition (PEM) in 1992 giving a national rate of only 80 per 1,000 children (Table 5.10). There were wide regional variations in the rate from only 29 in Dhofar to 145 in Dakhilya; 10% of all cases were admitted to hospital.

The mortality reported for all three programmes still remains at very low levels but this is not necessarily the true mortality in the community, as not every death is reported.

TABLE 5.7

TUBERCULOSIS RELATED STATISTICS - 1986-1992

	1992	1991	1990	1989	1988	1987	1986
New pulmonary cases detected.....	263	299	379	370	379	502	609
Primary Complex	19	37	n.a	n.a	n.a	n.a	n.a
Sputum positive.....	(149)	(150)	(160)	(147)	(177)	(153)	(222)
Sputum negative.....	(114)	(149)	(219)	(223)	(202)	(349)	(387)
Extra pulmonary cases.....	85	106	103	108	98	114	91
Total New Cases.....	367	442	482	478	477	616	700
Old cases restarting treatment.....	37	64	64	60	79	108	171
Cured cases reinfected.....	(14)	(28)	(22)	(31)	(35)	n.a.	n.a.
Lost cases resuming trt.....	(23)	(36)	(42)	(29)	(44)	n.a.	n.a.
Cases cured.....	341	287	365	373	469	447	446
Cases died.....	20	22	14	42	34	44	46
Cases lost (defaulters).....	47	52	90	108	170	275	424
Cases left country.....	46	33	46	31	39	35	43
Cases on treatment on 31st Dec.....	363	436	406	437	463	619	696

(thousands)

	1992	1991	1990	1989	1988	1987	1986
Diagnostic tests							
Sputum examinations.....	18.2	30.8	13.7	15.1	15.4	13.7	13.8
Mantoux tests.....	7.9	6	5.1	n.a	5.8	5.4	4.3

CONTROL OF DIARRHOEAL DISEASES (CDD) BY REGION - 1992

TABLE 5.8

R E G I O N

STATISTICS FOR 1992	NATIONAL TOTAL	MUSCAT	DHOFAR	DAKHILYA	N.SHARQIYA	S.SHARQIYA	N.BATINAH	S.BATINAH	DHAHIRA	MUSANDAM	AL WOUSTAH
Total Diarrhoea cases.....	179,598	30,864	11,741	23,914	16,898	18,496	36,723	22,725	13,602	3,095	1,540
Rate per1000 population<5yrs.....	651	599	409	638	766	745	646	850	548	701	798
Dehydration of cases											
No dehydration.....	88%	90%	78%	87%	92%	91%	84%	92%	94%	90%	99%
Mild/moderate.....	11%	10%	22%	12%	7%	9%	15%	7%	5%	9%	1%
Severe.....	1%	0%	0	1%	1%	0	1%	1%	1%	1%	0%
Cases admitted to hospital..... No.	4,875	305	627	824	758	841	842	269	267	123	19
%	2.7%	1%	5.3%	3.4%	4.5%	4.6%	2.3%	1.2%	2%	4%	1.2%
Cases treated with antibiotics..... No.	7,926	1,606	1,504	661	683	261	2,605	12	315	270	9
%	4.4%	5.2%	12.8%	2.8%	4.0%	1.4%	7.1%	0.1%	2.3%	8.7%	0.6%
Deaths reported..... No.	3	0	0	0	0	0	3	0	0	0	0

TABLE 5.9 ACUTE RESPIRATORY INFECTIONS (ARI) BY REGION - 1992
R E G I O N

STATISTICS FOR 1992	NATIONAL TOTAL	MUSCAT	DHOFA	DAKHILA	N SHARQIYA	S SHARQIYA	N BATINAH	S BATINAH	DHAHIRA	MUSANDAM	AL WOUSTAH
Total ARI cases.....	739,307	100,029	79,848	91,357	70,228	100,843	122,188	77,425	69,822	14,556	13,211
Rate per 1000 population<5yrs.....	2,681	1,909	2,784	2,436	3,183	4,932	2,151	2,894	2,813	3,299	6,845
Severity of cases (%)											
Mild.....	78%	82%	73%	78%	84%	73%	75%	82%	77%	81%	89%
Moderate.....	21%	18%	27%	21%	16%	26%	24%	17%	23%	19%	11%
Severe.....	1%	0%	0%	1%	0%	1%	1%	1%	0%	0%	0%
Cases admitted to hospital..... No.	10,529	513	1,317	2,064	1,160	2,211	1,462	652	829	143	178
%	1.4%	0.5%	1.7%	2.3%	1.7%	2.2%	1.2%	0.8%	1.2%	1%	1.4%
Cases treated with antibiotics..... No.	154,275	18,304	21,544	19,443	10,906	19,348	30,045	13,422	15,870	3,896	1,497
%	20.9%	18.3%	27%	21.3%	15.5%	19.2%	24.6%	17.3%	22.7%	26.8%	11.3%
Deaths reported..... No.	22	1	6	3	0	3	3	5	1	0	0

PROTEIN ENERGY MALNUTRITION (PEM)) BY REGION - 1992

TABLE 5.10

STATISTICS FOR 1992	NATIONAL TOTAL	R E G I O N									
		MUSCAT	DHOFAR	DAKHILYA	N SHARQIYA	S SHARQIYA	N BATINAH	S BATINAH	DHAHIRA	MUSANDAM	AL WOUSTAH
Total PEM attendances.....	25,626	3,178	964	6,375	1,443	1,565	5,981	4,000	1,299	474	347
Rate per 1000 population<5yrs.....	--	--	--	--	--	--	--	--	--	--	--
Severity of cases (%)											
Mild.....	74%	80%	91%	67%	68%	68%	78%	70%	81%	78%	83%
Moderate.....	23%	18%	8%	30%	29%	27%	19%	27%	17%	19%	17%
Severe.....	3%	2%	1%	3%	3%	5%	3%	3%	2%	3%	0%
Cases admitted to hospital.....	No. 2,661	319	93	927	121	327	297	473	60	24	20
%	10%	10%	10%	15%	8%	21%	5%	12%	5%	5%	6%
Cases referred to District hospital.....	No. 1,189	61	44	277	34	71	386	211	94	8	3
%	5%	2%	5%	4%	2%	5%	6%	5%	7%	2%	1%
Deaths reported.....	No. 10	0	1	5	0	1	1	2	0	0	0

MALARIA CONTROL PROGRAMME

During 1992, 12 Malaria Control Units were operational. In addition to these, there were 68 malaria control teams.

In 1992 the geographical reconnaissance was started or updated in 353 villages, 64% more than the 215 visited in 1991. The breeding places and spraying operations are shown in Table 5.11.

Table 5.11 shows the summary of the house spraying operations. An eradication programme was carried out in the Sharqiya regions in 1992 which included repeated larviciding operations. Over the whole country, this vector control measure covered 4.1 million square meters of water surfaces weekly - almost double the 2.2 million in 1991. Smear activity levels for 1992 and 1991 are as shown in Table 5.11.

The malaria incidence, as measured by passive case detection, is shown in Table 5.12. The total positive cases detected in 1992 were 13.6 thousand (a significant fall from the 15 thousand of 1991 and also less than both 1990 and 1989). Of the 1992 cases, 13 thousand were *P. falciparum*, less than the 14 thousand of 1991. The decrease in the overall incidence of the disease was due to the extra control activity initiated in 1992 in the Sharqiya region where the number of positive cases fell from 2,460 in 1991 to only 402 in 1992. Both the number of cases and the slide positivity rate were by far the highest in Dhahira, followed by Batinah (South and North) and Dakhilya. Just over 1.2 thousand cases were found in the Muscat region, although the slide positivity rate was lower at 3.6%.

Table 5.13 shows the result of the School Survey (6 - 9 year-olds) carried out by the Department of Malaria Control during 1992. This shows a slide positivity rate of 2%, almost the same as the 2.2% rate of 1991.



TABLE 5.11

MALARIA CONTROL**A) HOUSE SPRAYING OPERATIONS**

	1992	1991	1990	1989	1988
Villages covered.....	96	108	107	152	104
Total population.....	23,200	34,600	22,000	49,500	34,100
- Population protected.....	21,800	30,500	20,600	45,500	29,900
- % of population protected.....	94%	88%	95%	92%	88%
Total houses.....	5,595	7,851	5,799	12,371	8,788
- Houses totally covered.....	4,144	5,020	3,515	7,490	5,061
- Houses partially covered.....	1,451	1,976	1,790	3,935	2,617
- % of coverage.....	100%	89%	94%	92%	87%
Total number of rooms in houses.....	34,200	47,100	31,700	73,800	47,400
- Number of rooms sprayed.....	30,900	43,200	28,200	63,600	41,200
- % of coverage.....	90%	92%	89%	86%	87%
- Surface area covered (million m2).....	1.37	2.17	1.49	2.86	1.98
DDT 75% WDP consumption (kgs).....	1,344	5,337	3,618	7,093	5,238

B) SMEAR ACTIVITY

(thousands)

	1992	1991	1990	1989	1988
Total smears done.....	212	236	271	268	270
Passive case detection					
Health units.....	168.2	184.6	191	163.2	180.2
Surveys.....	37.2	38	67.4	99.3	81.8
Case contacts & follow-ups.....	4.2	6.8	6.8	5.2	8.2
Smears of those who came from East Africa and other countries.....	2.3	4.7	5.1	n.a.	n.a.
Chloroquine allergy test.....	0	1.9	0.3	n.a.	n.a.
Positive smears					
Number.....	14.8	18.3	32.7	17.9	24.8
Smear Positivity Rate.....	7.0%	7.7%	12.1%	6.7%	9.2%

TABLE 5.12**Passive Case Detection Carried out by the General****Health Facilities with Laboratories during 1992**

REGION	Blood Smears Taken	Positive Cases	Rate (%) (SPR)	Type of Malaria			% Rate of P.Falciparum
				Falciparum	Vivax	Others	
MUSCAT	35,600	1,274	3.6%	1,018	235	21	79.9%
DHOFAR	2,417	22	0.9%	13	9	0	59.1%
DAKHILYA*	21,915	1,264	5.8%	1,138	124	2	90.0%
SHARQIYA**	27,046	402	1.5%	274	124	4	68.2%
N. BATINAH	29,039	2,548	8.8%	2,452	96	0	96.2%
S. BATINAH	18,635	2,461	13.2%	2,446	15	0	99.4%
DHAHIRA	30,542	5,563	18.2%	5,343	215	5	96.0%
MUSANDAM	3,049	16	0.5%	7	9	0	43.8%
TOTAL	168,243	13,550	8.1%	12,691	827	32	93.7%

TABLE 5.13**MALARIA SCHOOL SURVEY (6-9 YEARS) BY REGION - 1992**

REGION	Blood Smears Slides	Positive Cases	Rate (%) (SPR)	Type of Malaria			% Rate of P.Falciparum
				Falciparum	Vivax	Others	
MUSCAT	2,995	50	1.7%	49	1	0	98.0%
DHOFAR	2,800	0	0.0%	0	0	0	0.0%
DAKHILYA*	6,974	44	0.6%	43	1	0	97.7%
SHARQIYA**	9,856	36	0.4%	36	0	0	100.0%
N. BATINAH	4,264	284	6.7%	283	1	0	99.6%
S. BATINAH	4,563	258	5.7%	258	0	0	100.0%
DHAHIRA	3,838	90	2.3%	90	0	0	100.0%
MUSANDAM	1,893	0	0.0%	0	0	0	0.0%
TOTAL	37,183	762	2.0%	759	3	0	99.6%

* Includes malaria cases of Al Woustah region.

** North & South Sharqiya

SCHOOL HEALTH PROGRAMME

Beginning with the 1992/93 academic year, the school health programme was significantly improved. School health doctors and nurses were appointed in each region with an organized structure for examining each new entrants to schools. A records system was designed and introduced concurrently, as well as an information system to provide information on the progress of the service and the results found.

During the 1991/92 academic year only four regions operated a school health service. A set of summary statistics are shown in Table 5.14. Of the 38,407 the children examined, the main problems detected were decayed teeth (49%), underweight (17%) and lice infestation (12%).

DISEASE SURVEILLANCE

Communicable Disease Surveillance continued in 1992 especially for the control of the EPI diseases. The Communicable Disease Surveillance System, which was introduced in March 1991 continued to function well, for both detection, treatment and prevention of subsequent cases of the individually notifiable diseases of Group A and B (see Table 3.4).

The surveillance data was compiled quarterly and published, along with articles of interest, in the "Disease Surveillance & Community Health Newsletter". This was distributed to all health units.

HEALTH EDUCATION

The Health Education Directorate was involved in several activities during 1992. These included:

1- Television

Seven TV series were produced (Health Magazine) of which two have so far been broadcast. About 20 TV spots were produced and shown, and the weekly TV programme of "Meeting a Doctor" was continued.

2- Radio

More than 30 series of "Health for All" were broadcast, along with more than 30 similar programmes of "Family Programme". The "Meeting a Doctor" programme was also broadcast monthly.

3- Press

In the Al-Watan newspaper, articles were presented in the weekly space given free. "Health Spots" or "Hints" about Health Education subjects were prepared regularly and sent to all newspapers. Public-Health subjects were written regularly.

4- Pamphlets, Stickers and Cards

Educational information was prepared and distributed through these means on many subjects, including smoking, dates, AIDS, non-infectious diseases, dental hygiene and cleanliness.

5- Booklets

For community leaders, Sport-Clubs, Women's Associations, booklets were produced containing health information about the most important subjects in Ministry of Health programmes.

ENVIRONMENTAL HEALTH SERVICES

The Directorate of Environmental Health in Muscat and public health units provide in other regions. During 1992, the Directorate's laboratory tested 1,002 food and 2,807 water samples were collected for analysis, while 55 food samples were tested by a radiological method during the year.

Bacteriological, Chemical, Microbiological and Tuberculosis Laboratories

During 1992 (1991), 999 (844) food and 4,838 (4,364) water samples were analyzed by the Bacteriological and Chemical laboratories. Also, 538 (471) water tanks were inspected & disinfected, and 29 thousand (91 thousand) samples of urine, stool, and blood taken from food-handlers were analyzed. Also, in 1992, 3 thousand samples were analyzed by the Microbiological laboratories, while 4 thousand sensitivity and cultural tests were carried out by the T.B. laboratories.

The results of water quality control tests are shown in Table 5.15. Of the 2,054 water samples tested chemically, 208 (10%) proved to be unfit. The rate was highest in water from private and public wells (14%) and lowest in mineral bottled water (0%). For the bacteriological tests, just under 22% of samples were unfit, ranging from 65% in private and public wells to 0.0% in bottled water.

Quarantine Activities

There are 7 Health Check-posts at points of entry to Sultanate, which include 3 ports, 2 airports & 2 border check-posts. During 1992 (1991), the port health units inspected 1,878 (1,957) vessels with 44 thousand (43 thousand) crew members. Airport health units checked 9,464 (8,166) planes with 100 thousand (89 thousand) crew members and 683 thousand (599 thousand) passengers. 769 (909) persons were vaccinated against cholera or yellow fever. - At points of entry into the Sultanate, 16,119 (15,730) food clearance certificates were issued.

TABLE 5.14

**ANNUAL REPORT ON SCHOOLHEALTH SERVICES
FOR THE ACADEMIC YEAR 1991 - 92 (SEPTEMBER 91 - JUNE 92)**

	Muscat	Dakhilya	Sharqiya	North Batinah	National
Total Students screened	10,586	6,915	9,746	11,160	38,407
% Referred to Specialist care	36	11	6	7	16
Rates (%) of detection of:					
Skin diseases	5	3	3	3	3
Height below the standard	10	14	8	6	9
Weight below centile	16	25	15	15	17
Lice infestation	14	5	11	15	12
Squint	1	1	1	1	1
Poor vision	5	3	7	4	3
Ear problems	1	18	2	3	5
Gum inflammation	3	11	1	10	6
Decayed teeth	41	44	43	65	49
Cardiovascular diseases	2	1	1	2	2
Skeletal deformities	0	1	3	2	2
Respiratory diseases	1	0	0	1	0

* During the academic year 91-92 school health services were provided for 4 regions only.

TABLE 5.15

WATER QUALITY AND SANITATION -1992

S O U R C E	C H E M I C A L T E S T S				B A C T E R I O L O G I C A L T E S T S			
	N U M B E R O F S A M P L E S	U N F I T			N U M B E R O F S A M P L E S	U N F I T		
		1992 N O.	1992 %	1991 %		1992 N O.	1992 %	1991 %
WATER TANKERS.....	544	24	4.4	3.6	544	39	7.2	9.1
PRIVATE AND PUBLIC WELLS.....	991	142	14.3	17.8	140	91	65.0	35.9
PRIVATE AND PUBLIC TAPS.....	216	26	12.0	6.2	49	29	59.2	30.3
PRIVATE AND PUBLIC STORAGE TANKS.....	261	16	6.1	4.3	11	2	18.2	31.7
MINERAL BOTTLED WATER.....	42	0	0.0	0.0	9	0	0.0	3.6
TOTAL 1992	2,054	208	10.1		753	161	21.4	
TOTAL 1991	1,602	162		10.1	712	140		19.7

6. MEDICAL EDUCATION & TRAINING

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

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

Local training took place at both the established Institute of Health Sciences and the 7 new training establishments (opened in 1991) - the Oman Institute of Public Health, the Institute of Assistant Pharmacists and the five Regional Nursing Institutions (in Nizwa, Sur, Sohar, Tanam and Salalah). The total enrollment at all institutes at the start of the 1992/93 academic year is shown in Table 6.1.

In 1992 (1991) the Institute of Health Sciences also arranged training courses for 167 (84) administrators & other staff locally, and hosted several workshops and seminars.

Also during 1992 (1991), 23 (25) medical & para- medical and 24 (13) other Ministry of Health staff were sent abroad for further training.

The graduates from the Institute of Health Sciences over the past years are shown in Table 6.2 and in Figure 9. The numbers of graduates of the general nursing course has been somewhat erratic, ranging from 24 and 27 in 1984 and 1985 to only 8 in 1990, but rising significantly to 58 in 1992. The number of Assistant Nurses has declined gradually over the last four years with only 8 graduating in 1991; the course was discontinued at the end of the 1991/92 academic year.

The number of medical laboratory technicians had remained between 6 and 12 since the first graduations in 1986, but significantly increased to 25 in 1992. The radiography graduates increased from 2 in 1991 to 8 in 1992. The physiotherapy graduates rose from none in 1991 to 8 in 1992.

TABLE 6.1

ENROLMENT AT MINISTRY OF HEALTH TRAINING INSTITUTIONS**1992, 1991 & 1990****NUMBER OF STUDENTS ENROLLED**

C O U R S E S	A C A D E M I C Y E A R 1 9 9 2			TOTAL	TOTAL
	MALE	FEMALE	TOTAL	1991	1990
(A) INSTITUTE OF HEALTH SCIENCES					
GENERAL NURSING					
1st Year	18	91	109	72	78
2nd Year	11	60	71	82	67
3rd Year	12	47	59	57	46
In Service	16	41	57	45	29
MEDICAL LAB TECHNICIAN					
(3 Year Course)					
1st Year	4	18	22	19	15
2nd Year	10	8	18	15	16
3rd Year	3	14	17	16	10
In Service	2	14	16	10	13
(18Month Course)					
1st Year	0	0	0	11	-
2nd Year	0	11	11	16	-
RADIOGRAPHY					
1st Year	3	13	16	12	16
2nd Year	5	7	12	16	12
3rd Year	2	14	16	12	7
In Service	7	5	12	8	0
PHYSIOTHERAPY					
1st Year	5	6	11	12	10
2nd Year	2	10	12	9	11
3rd Year	5	4	9	11	8
In Service	5	5	10	8	0
TOTAL	110	368	478	431	338
(B) OMAN INSTITUTE OF PUBLIC HEALTH					
SANITARY INSPECTOR					
1st Year	35	0	35	35	-
2nd Year	35	0	35	0	-
(C) INSTITUTE OF ASSISTANT PHARMACISTS					
ASST. PHARMACIST					
1st Year	8	30	38	35	-
2nd Year	10	24	34	0	-
(D) REGIONAL NURSING INSTITUTIONS					
GENERAL NURSING					
LOCATION					
NIZWA	1st Year	18	8	26	27
	2nd Year	7	20	27	0
SUR	1st Year	3	32	35	30
	2nd Year	0	28	28	0
SOHAR	1st Year	5	32	37	30
	2nd Year	7	21	28	0
TANAM	1st Year	7	23	30	30
	2nd Year	7	21	28	0
DHO FAR	1st Year	9	9	18	24
	2nd Year	0	15	15	0

TABLE 6.2

GRADUATES FROM THE INSTITUTE OF HEALTH SCIENCES 1984 - 1992

NUMBER OF STUDENTS QUALIFIED

Y E A R	GENERAL NURSING			ASSISTANT NURSING			MEDICAL LAB TECHNICIAN			RADIOGRAPHER			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
1991	16	13	29	2	6	8	14	14	28	2	0	2	-	-	-
1992	15	43	*58	0	0	0	2	23	25	5	3	8	7	1	8

Course discontinued

*Includes 14 Assistant Nurses who had been upgraded to General Nursing.

FIG 8 NURSING GRADUATES FROM IHS 1984 - 1992

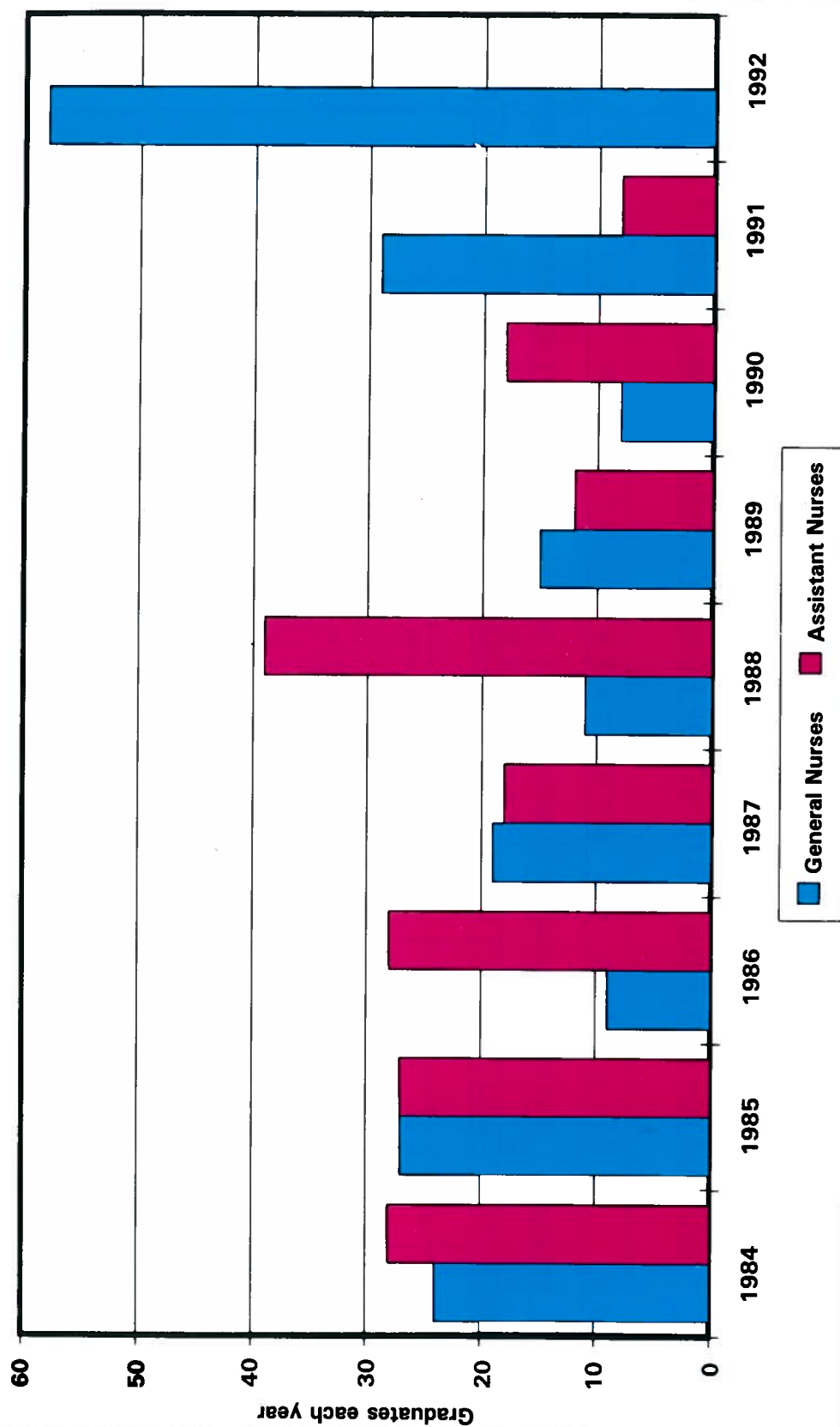
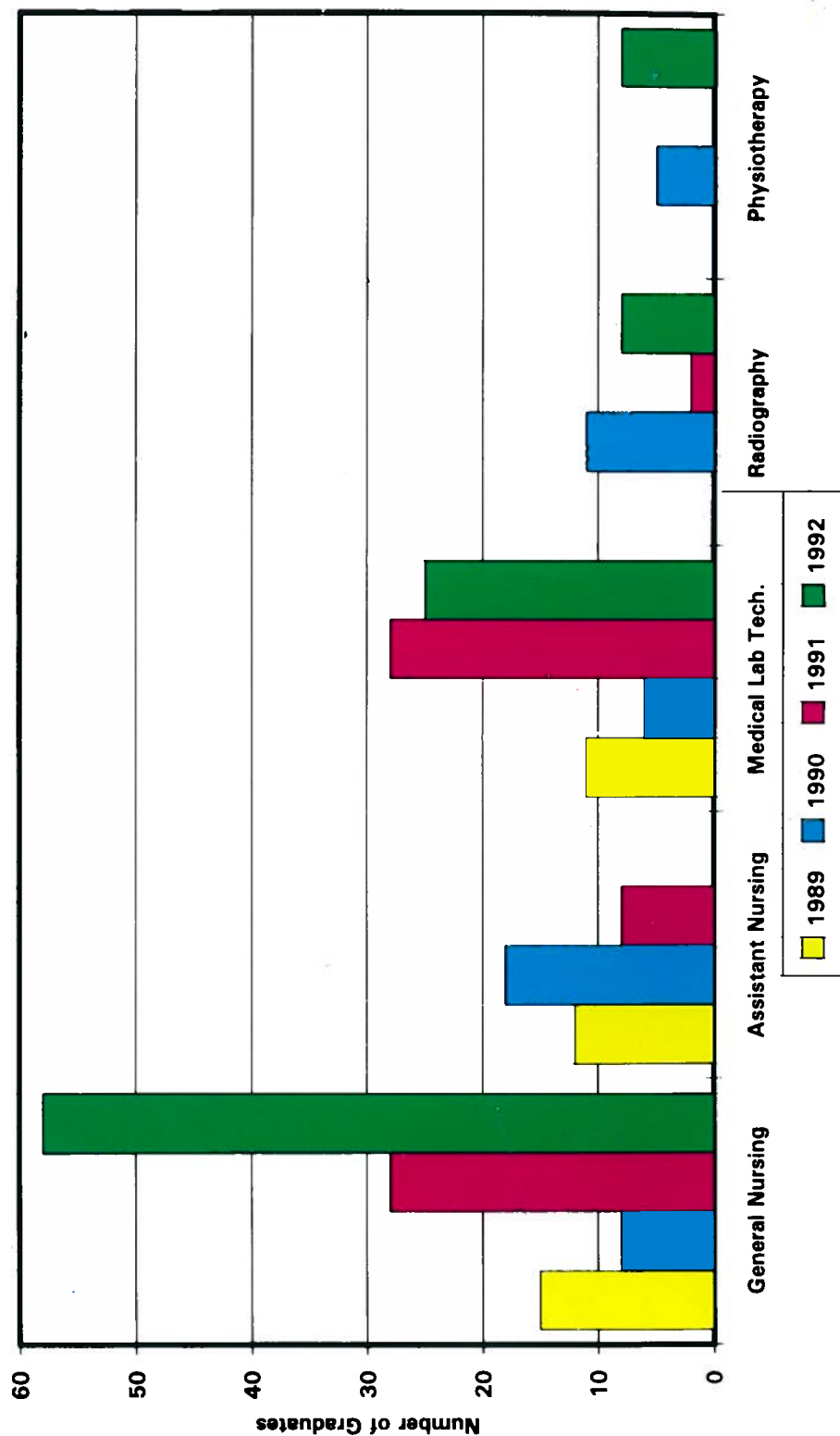


FIG 9 TOTAL GRADUATES BY TYPE 1989 - 1992



7. MEDICAL & HEALTH PERSONNEL

The total staff employed under the Ministry of Health at the end of 1992 is shown in Table 7.1. At that time, the Ministry employed 13,710 staff. This was 8.5% more than the 12,636 at the end of 1991. Omanis constituted 48% of the total staff. Of the total medical and para-medical staff, Omanis constituted 32%. This included 8% of physicians, 15% of dentists, 12% of pharmacists, 11% of nursing staff and 68% of other paramedical staff. There has been little change in these percentages since 1988, as the increase in the numbers of newly qualified Omanis have only managed to keep pace with the increasing staff demand.

The regional distribution of Ministry of Health staff is shown in Table 7.2. A large proportion (37%) of staff are located in the Muscat region due to the presence of the national referral hospitals of the Royal, Khoula, AL Nahdha and Ibn Sina.

The numbers of medical personnel employed by the Ministry over the last nine 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 due to 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 the total 2,096 doctors are employed by the Ministry of Health, although 438 (21%) work in private clinics. Just under half of all dentists work for the Ministry of Health, with another 35% being in private practice. Pharmacists are primarily distributed in the private sector (76%), while the vast majority of nurses (80%) are employed by the Ministry of Health.



**Fig 10 MEDICAL AND PARAMEDICAL STAFF
BY NATIONALITY 1985 - 1992**

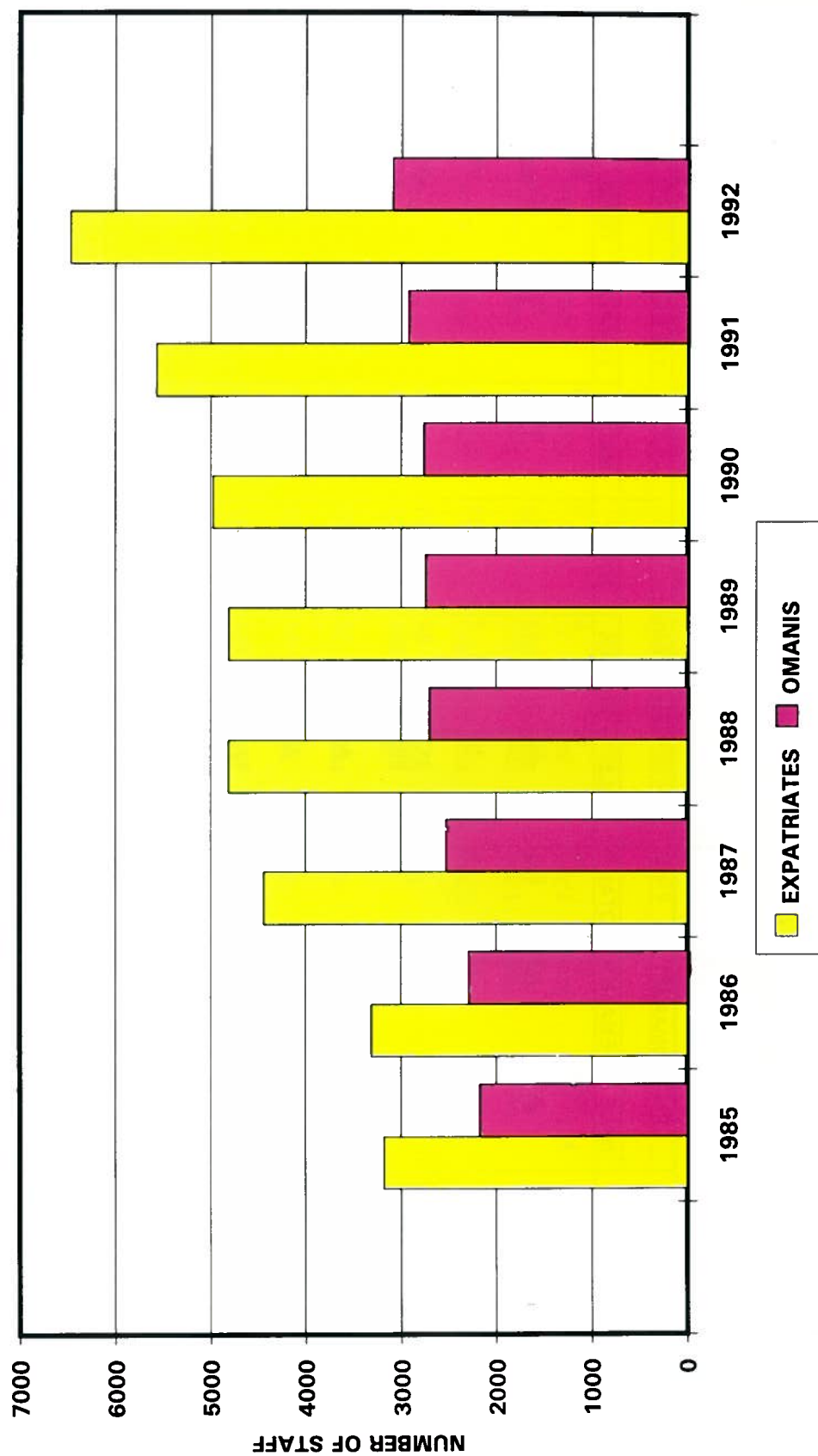


TABLE 7.1

MEDICAL/PARA-MEDICAL & OTHER STAFF EMPLOYED UNDER MINISTRY OF HEALTH

31-12-1992

CODE NO.	CATEGORIES	OMANIS				NON-OMANIS				TOTAL				PERCENTAGE OF OMANIS	
		MALE		FEMALE		TOTAL		MALE		FEMALE		TOTAL		1992	1991
1	HEALTH ADMINISTRATORS.....	86	3		89		9		95		3	98		91%	85%
2	DOCTORS.....	81	33		114		924		1,005		377	1,382		8%	9%
2.1	Medical Administrators.....	8	1		9		10		18		2	20		45%	56%
2.2	Sr/Jr.Specialists/ Specialists/Consultants.....	26	6		32		317		343		90	433		7%	8%
2.3	Medical Officers.....	47	26		73		597		644		285	929		8%	9%
3	DENTISTS.....	4	6		10		44		48		18	66		15%	19%
4	PHARMACISTS.....	3	3		6		32		35		14	49		12%	16%
5	TOTAL NURSES.....	202	269		471		174		376		4,066	4,442		11%	11%
5.1	Administrative Nurses.....	24	22		46		34		58		279	337		14%	14%
5.2	Staff Nurses.....	65	133		198		137		202		3,538	3,740		5%	5%
5.3	Assistant Nurses.....	113	112		225		3		116		148	264		85%	86%
5.4	Midwives.....	0	2		2		0		0		76	76		3%	3%
5.5	Health Visitors.....	0	0		0		0		0		25	25		0%	0%
6	MEDICAL/HEALTH ASSISTANTS.....	18	0		18		75		93		1	94		19%	19%
7	PHYSIOTHERAPISTS.....	11	3		14		16		27		25	52		27%	16%
8	SANITARIANS.....	54	0		54		109		163		1	164		33%	33%
9	RADIOGRAPHERS/X-RAY TECH/ ASST X-RAY TECHNICIANS.....	18	4		22		116		134		19	153		14%	12%

(CONT)TABLE 7.1

MEDICAL/PARA-MEDICAL & OTHER STAFF EMPLOYED UNDER MINISTRY OF HEALTH

31-12-1992

CODE NO.	CATEGORIES	OMANIS			NON-OMANIS			TOTAL			PERCENTAGE OF OMANIS	
		MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	1992	1991
10	LAB TECHNICIANS/ ASST. LAB TECHNICIANS.....	49	72	121	215	140	355	264	212	476	25%	25%
11	ASST. PHARMACISTS/DISPENSERS	19	5	24	181	35	216	200	40	240	10%	8%
12	MEDICAL ORDERLIES.....	967	819	1,786	74	25	99	1,041	844	1,885	95%	95%
13	OTHER PARA-MEDICAL STAFF.....	332	28	360	78	18	96	410	46	456	79%	84%
14	OTHER TECHNICAL STAFF.....	136	9	145	186	1	187	322	10	332	44%	45%
14.1	Scientists/Engineers.....	8	4	12	9	1	10	17	5	22	55%	53%
14.2	Technicians.....	128	5	133	177	0	177	305	5	310	43%	44%
15	OTHER SUPPORT STAFF.....	2,918	435	3,353	323	65	388	3,241	500	3,741	90%	89%
15.1	White Collar Workers.....	1,004	185	1,189	179	63	242	1,183	248	1,431	83%	83%
15.2	Skilled Labour.....	809	30	839	85	0	85	894	30	924	91%	89%
15.3	Unskilled Labour.....	1,105	220	1,325	59	2	61	1,164	222	1,386	96%	95%
16	TEACHERS/TUTORS.....	3	5	8	30	42	72	33	47	80	10%	13%
GRAND TOTAL :		4,901	1,694	6,595	2,586	4,529	7,115	7,487	6,223	13,710	48%	51%
PERCENTAGE OF TOTAL STAFF :												
	1992.....	36%	12%	48%	19%	33%	52%	55%	45%	100%		
	1991.....	38%	13%	51%	18%	31%	49%	56%	44%	100%		

TABLE 7.2

MEDICAL/PARA-MEDICAL & OTHER STAFF EMPLOYED UNDER MINISTRY OF HEALTH

BY REGION AS OF 31-12-1992

CODE	CATEGORIES	NATIONAL		MUSCAT		DHOFAR		DAKHILA		N.SHARQIYA		S.SHARQIYA	
		OMA	EXP	OMA	EXP	OMA	EXP	OMA	EXP	OMA	EXP	OMA	EXP
1	Health Administrators	89	9	19	1	10	0	4	0	2	0	6	0
2	DOCTORS	114	1,268	106	466	0	127	0	130	0	69	0	91
2.1	Med.Administrators	9	11	2	1	0	2	0	1	0	0	0	0
2.2	Sr/Jr.Specialists/	32	401	31	205	0	47	0	26	0	15	0	21
2.3	Specialists/Consultants	73	856	73	280	0	78	0	103	0	54	0	70
3	Medical Practitioners												
3	DENTISTS	10	56	7	13	0	5	0	6	0	4	0	4
4	PHARMACISTS	6	43	1	15	0	3	0	2	0	2	0	2
5	TOTAL NURSES	471	3,971	302	1,639	8	320	37	374	8	257	35	204
5.1	Administrative Nurses	46	291	36	188	2	15	1	26	0	13	3	16
5.2	Staff Nurses	198	3,542	121	1,633	0	283	15	337	4	234	15	184
5.3	Assistant Nurses	225	39	143	7	6	11	21	4	4	5	17	0
5.4	Midwives	2	74	2	23	0	7	0	5	0	4	0	2
5.5	Health Visitors	0	25	0	8	0	4	0	2	0	1	0	2
6	Medical/Health Assistants	18	76	2	12	3	10	6	7	1	7	1	11
7	Physiotherapists	14	38	10	25	0	3	3	2	0	1	0	1
8	Sanitary Inspect/Supervisors/ Quarantine Supervisors	54	110	16	29	8	11	6	6	9	7	4	5
9	Radiographers/X-Ray Tech	22	131	12	54	1	13	4	13	0	8	2	10
10	Microbiologists/Lab Tech/ Chemists/Aust	121	355	68	146	1	36	2	32	5	15	2	19
11	Assistant Pharmacists/ Dispensers	24	216	10	50	2	17	1	23	2	9	1	11
12	Medical Orderlies	1,788	99	714	1	86	52	215	2	159	0	168	6
13	Other paramedical Staff	360	96	47	33	7	8	66	4	27	4	44	4
14	TOTAL OTHER TECHNICAL STAFF	145	187	45	39	7	17	15	12	20	10	16	6
14.1	Scientists/Engineers	12	10	7	5	1	1	1	0	0	0	3	0
14.2	Technicians	133	177	38	34	6	16	14	12	20	10	13	6
15	TOTAL OTHER SUPPORT STAFF	3,353	388	854	116	143	79	346	17	238	3	305	6
15.1	White Collar Workers	1,189	242	359	85	60	21	89	12	63	3	84	3
15.2	Skilled Labour	839	85	206	17	30	26	100	5	90	0	77	2
15.3	Unskilled Labour	1,325	61	289	14	63	32	157	0	85	0	144	1
16	Teachers/Tutors	8	72	0	0	0	4	0	5	0	0	0	8
	GRAND TOTAL	6,595	7,115	2,213	2,839	276	705	705	835	471	396	564	388

* Includes Ministry, National DG's, National Malaria Control, National Laboratories and Training Institutes

(CONT)TABLE 7.2
MEDICAL/PARA-MEDICAL & OTHER STAFF EMPLOYED UNDER MINISTRY OF HEALTH
BY REGION AS OF 31-12-1992

CODE	CATEGORIES	N.BATINAH OMA	N.BATINAH EXP	S.BATINAH OMA	S.BATINAH EXP	DHAHRA OMA	DHAHRA EXP	MUSANDAM OMA	MUSANDAM EXP	WUUSTAH OMA	WUUSTAH EXP	MINISTRY* OMA	MINISTRY* EXP
1	Health Administrators	4	0	1	0	5	0	1	0	0	0	37	8
2	DOCTORS	0	123	0	88	0	96	0	28	0	8	8	42
2.1	Med.Administrators	0	1	0	1	0	1	0	0	0	0	7	4
2.2	Sp./Jr. Specialists/ Specialists/Consultants	0	34	0	19	0	25	0	5	0	0	1	4
2.3	Medical Practitioners	0	88	0	68	0	70	0	23	0	8	0	34
3	DENTISTS	0	7	0	5	0	5	0	2	0	1	3	4
4	PHARMACISTS	0	1	0	1	0	2	0	1	0	0	5	14
5	TOTAL NURSES	27	346	11	225	20	224	5	77	0	33	18	72
5.1	Administrative Nurses	0	29	0	4	0	4	0	4	0	2	4	10
5.2	Staff Nurses	12	303	5	209	8	213	5	68	0	29	13	49
5.3	Assistant Nurses	15	4	6	0	12	1	0	3	0	0	1	4
5.4	Midwives	0	6	0	9	0	5	0	2	0	2	0	9
5.5	Health Visitors	0	4	0	3	0	1	0	0	0	0	0	0
6	Medical/Health Assistants	2	5	0	4	1	6	0	5	0	3	2	6
7	Physiotherapists	0	2	0	1	0	2	0	0	0	0	1	1
8	Sanitary Inspector/Supervisors/ Quarantine Supervisors	6	8	2	9	2	13	0	2	0	0	1	20
9	Radiographers/X-Ray Tech	2	12	1	9	0	7	0	4	0	1	0	0
10	Microbiologists/Lab Tech/ Chemists/Asst	3	28	1	21	1	17	0	7	0	4	38	30
11	Assistant Pharmacists/ Dispensers	0	17	0	17	0	13	0	3	0	4	8	52
12	Medical Orderlies	145	0	126	0	79	4	33	0	10	13	51	21
13	Other paramedical Staff	29	7	39	12	14	3	1	1	1	0	85	20
14	TOTAL OTHER TECHNICAL STAFF	1	1	15	7	6	8	1	0	0	1	19	86
14.1	Scientists/Engineers	0	1	0	0	0	0	0	0	0	0	0	3
14.2	Technicians	1	0	15	7	6	8	1	0	0	1	19	83
15	TOTAL OTHER SUPPORT STAFF	320	13	259	3	189	8	89	6	23	6	587	131
15.1	White Collar Workers	96	3	76	2	44	3	24	2	4	1	300	107
15.2	Skilled Labour	78	9	82	1	58	2	21	4	7	5	90	14
15.3	Unskilled Labour	146	1	101	0	87	3	44	0	12	0	197	10
16	Teachers/Tutors	0	7	1	0	0	6	0	0	0	0	7	42
	GRAND TOTAL	539	577	456	402	317	414	130	136	34	74	870	549

* Includes Ministry, National DG's, National Malaria Control, National Laboratories and Training Institutes

Fig 11 MINISTRY OF HEALTH STAFF
(a) CATEGORIES WITH OVER 1000 STAFF

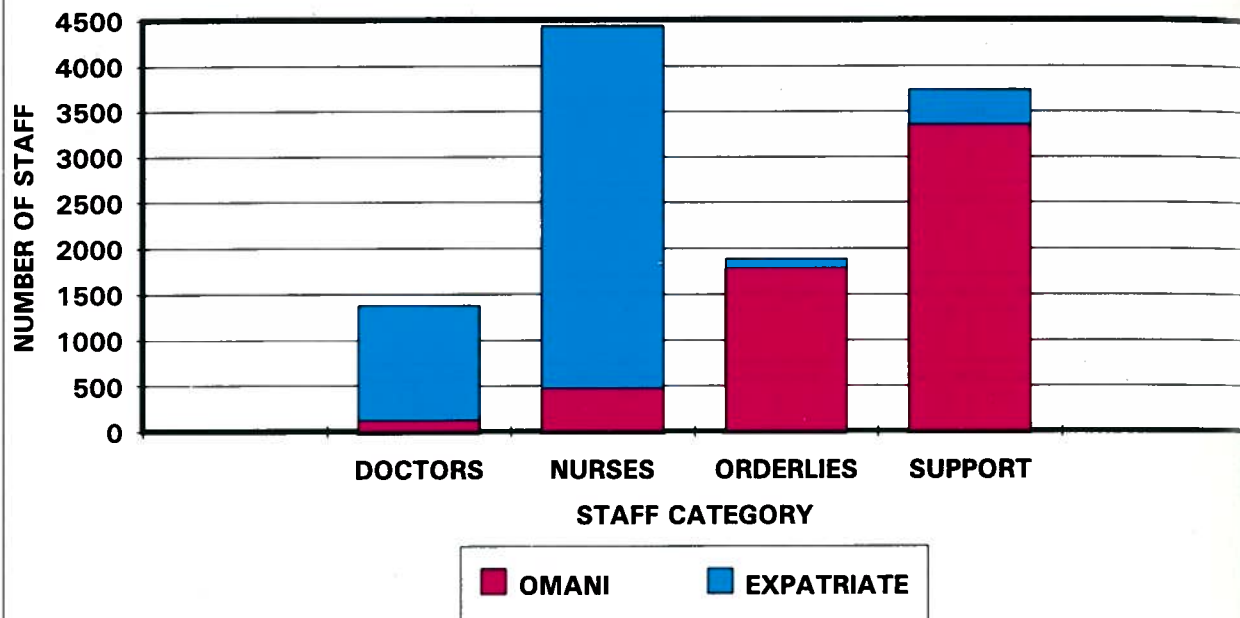


Fig 11 MINISTRY OF HEALTH STAFF
(b) CATEGORIES WITH UNDER 1000 STAFF

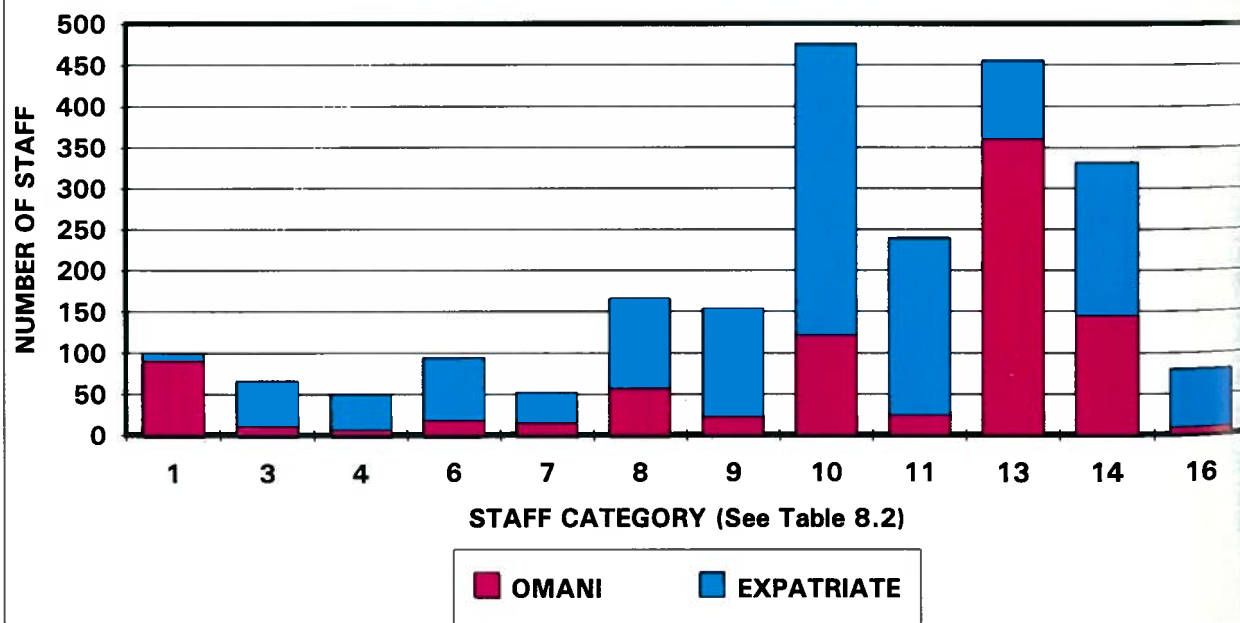


TABLE 7.3

HEALTH PERSONNEL EMPLOYED BY THE MINISTRY OF HEALTH

1983 - 1992

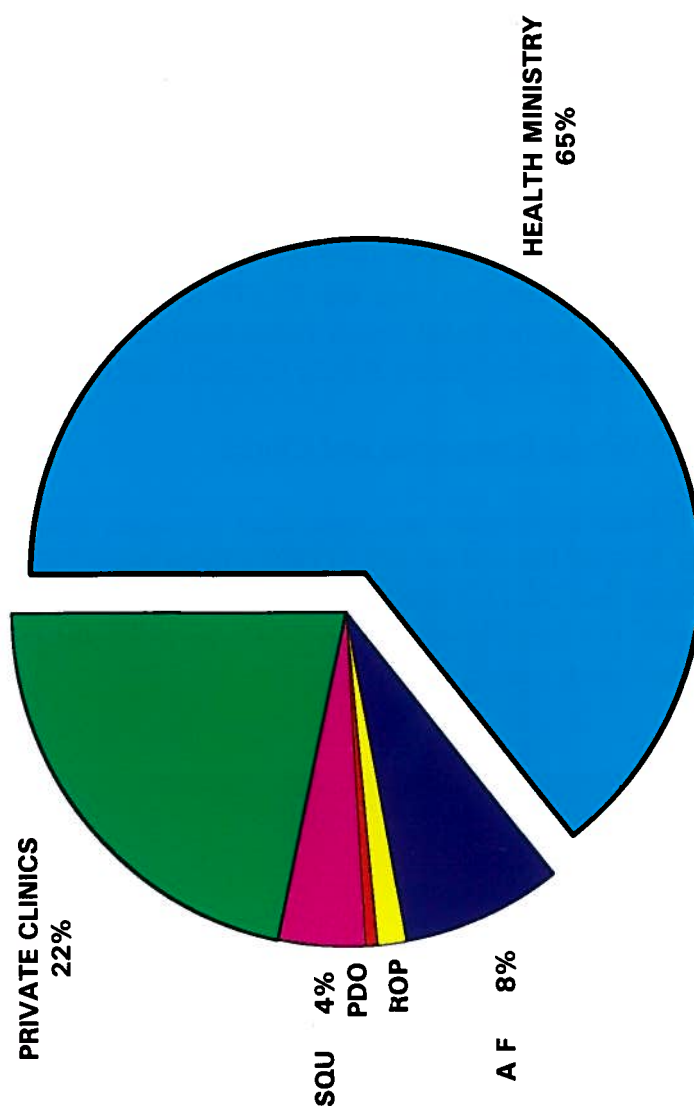
CATEGORIES	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
2.1 MEDICAL ADMINISTRATORS.....	6	7	7	8	9	9	8	10	18	20
2.2 CONSULTANTS.....	11	16	24	24	37	45	48	53	62	72
2.2 SENIOR SPECIALISTS/SPECIALISTS....	87	90	95	108	122	136	130	131	164	194
2.2 JUNIOR SPECIALISTS.....	54	57	67	86	120	129	135	141	147	167
2.3 MEDICAL OFFICERS.....	307	402	445	448	548	588	598	659	776	929
3 DENTISTS.....	22	23	23	27	31	35	38	40	54	66
4 PHARMACISTS.....	16	18	22	23	25	26	27	33	37	49
5 NURSES.....	1,386	1,753	1,947	2,057	2,973	3,260	3,274	3,512	3,855	4,442
6-13 OTHER PARA-MED. STAFF.....	2,261	2,490	2,722	2,819	3,099	3,285	3,293	3,161	3,322	3,520
TOTAL.....	4,150	4,856	5,352	5,600	6,964	7,513	7,551	7,740	8,435	9,459

TOTAL MEDICAL & PARAMEDICAL STAFF - at end of 1992 and 1991

TABLE 7.4

STAFF CATEGORIES	MINISTRY OF HEALTH		FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOP- MENT OMAN		S. QABOOS UNIVERSITY HOSPITAL		PRIVATE CLINICS		PRIVATE PHARMA- CIES		TOTAL		PERCENTAGE UNDER HEALTH MINISTRY	
	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991
DOCTORS.....	1,382	1,167	150	145	24	23	8	9	94	74	438	392	0	0	2,096	1,810	66%	64%
DENTISTS.....	66	54	20	19	2	2	0	0	4	2	50	41	0	0	142	118	46%	46%
PHARMACISTS.....	49	37	25	23	0	0	1	1	10	10	0	0	263	217	348	288	14%	13%
NURSES.....	4,442	3,855	255	239	99	96	31	32	430	336	318	298	0	0	5,575	4,856	80%	79%
OTHER PARA- MEDICAL STAFF.....	3,520	3,322	907	765	47	45	34	36	237	197	95	96	120	100	4,960	4,561	71%	73%
GRAND TOTAL	9,459	8,435	1,357	1,191	172	166	74	78	775	619	901	827	383	317	13,121	11,633	72%	73%

Fig 12 DOCTORS BY SECTOR
1992



8. HEALTH CARE PROVIDED BY OTHER ORGANIZATIONS

(a) Other Government 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 University also provides both secondary and tertiary care for the general population. The services provided by these organizations and their utilization is shown in Tables 8.1 to 8.3.

At the end of 1992, these four organizations had 5 hospitals with 658 beds, and 43 clinics with 231 beds (see Table 8.1). As shown in Table 8.2, at the end of 1992, they employed 276 doctors, 26 dentists, 36 pharmacists, 815 nursing personnel and 1225 other paramedical staff.

Their activities during 1992 are shown in Table 8.3. During 1992 they admitted 18,733 inpatients, a 9% increase over the 17,179 of 1991. The numbers of major operations decreased significantly in the Royal Oman Police Hospital from 1,637 in 1991 to 1,097 in 1992. 915 thousand outpatients were treated at their hospitals and health centres.

(b) Private Companies and Clinics

Private companies and individual sponsors also operate clinics, as shown by region in Table 8.4. At the end of 1992 (1991), there were 342 (300) general clinics, 29 (24) specialized clinics and 36 (32) dental clinics. The number of private pharmacies increased significantly from 188 in 1991 to 218 in 1992. In 1992, the private sector employed 1,284 medical and paramedical staff.

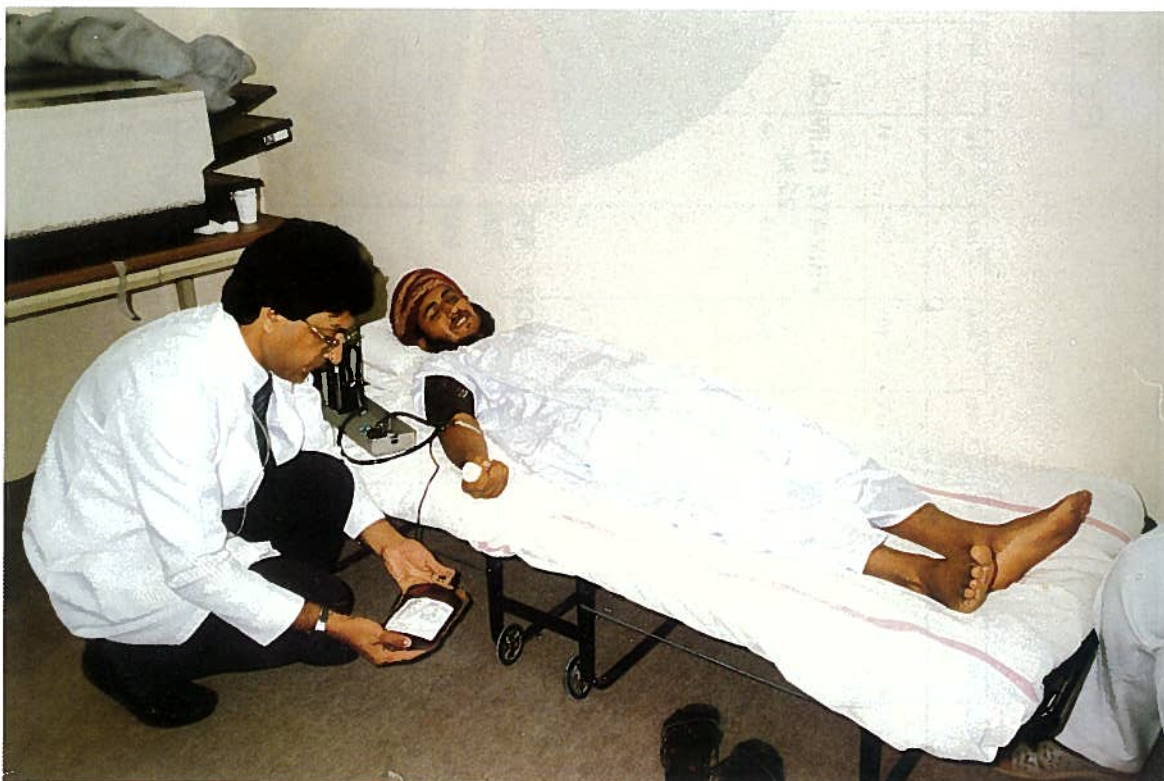


TABLE 8.1

HEALTH FACILITIES (NON-HEALTH MINISTRY ORGANIZATIONS) AS OF 31-12-1992

A. HOSPITALS

F A C I L I T I E S	ARMED FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOPMENT OMAN		SULTAN QABOOS UNIVERSITY HOSPITAL		TOTAL	
	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991
H O S P I T A L S										
Number.....	3	3	1	1	—	—	1	1	5	5
Beds.....	261	239	59	47	—	—	338	291	658	577
DISTRIBUTION OF BEDS BY SPECIALTY:										
General.....	53	53	0	0	—	—	0	0	53	53
Surgery.....	58	58	10	10	—	—	56	56	124	124
Medicine.....	42	42	15	15	—	—	102	97	159	154
Obstet. & Gynae.	24	24	12	12	—	—	64	32	100	68
Paediatrics.....	22	0	10	10	—	—	78	68	110	78
Isolation.....	22	22	0	0	—	—	0	0	22	22
Others	40	40	12	0	—	—	38	38	90	78
TOTAL BEDS	261	239	59	47	0	0	338	291	658	577

B: DISPENSARIES/PRIMARY HEALTH CARE CENTRES

F A C I L I T I E S	ARMED FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOPMENT OMAN		SULTAN QABOOS UNIVERSITY HOSPITAL		TOTAL	
	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991
DISPENSARIES/CURATIVE CENTRES										
Number	30	31	4	4	9	9	—	—	43	44
Number Of Beds..	184	198	10	10	37	37	—	—	231	245

TABLE 8.2

HEALTH - RELATED PERSONNEL EMPLOYED (NON-HEALTH MINISTRY ORGANIZATIONS)

AS OF 31.12.1992

CATEGORIES	FORCES MEDICAL SERVICES			ROYAL OMAN POLICE			PETROLEUM DEVELOPMENT OMAN			SULTAN QABOOS UNIVERSITY			T O T A L		
	OMANI	NON-OMANI	TOTAL	OMANI	NON-OMANI	TOTAL	OMANI	NON-OMANI	TOTAL	OMANI	NON-OMANI	TOTAL	OMANI	NON-OMANI	TOTAL
1 HEALTH ADMINISTRATORS.....	30	7	37	3	0	3	2	0	2	3	0	3	38	7	45
2 DOCTORS.....	16	134	150	3	21	24	2	6	8	11	83	94	32	244	276
2.1 Medical Administrators.....	1	8	10	2	0	2	1	0	1	1	0	1	5	9	14
2.2 Sr./Jr. Specialists/Specialists/Consultants.....	4	39	43	1	17	18	0	0	0	2	35	37	7	91	98
2.3 Medical Officers.....	11	86	97	0	4	4	1	6	7	8	48	56	20	144	164
3 DENTISTS.....	2	18	20	0	2	2	0	0	0	0	4	4	2	24	26
4 PHARMACISTS.....	1	24	25	0	0	0	1	0	1	0	10	10	2	34	36
5 TOTAL NURSES.....	16	239	255	22	77	99	20	11	31	4	426	430	62	753	815
5.1 Administrative Nurses.....	6	93	99	1	10	11	2	0	2	2	101	103	11	204	215
5.2 Staff Nurses.....	10	68	78	13	57	70	12	9	21	2	314	316	37	448	485
5.3 Assistant Nurses.....	0	37	37	8	0	8	0	0	0	0	0	0	8	37	45
5.4 Midwives.....	0	38	38	0	10	10	6	2	8	0	11	11	6	61	67
5.5 Health Visitors.....	0	3	3	0	0	0	0	0	0	0	0	0	0	3	3
6 MEDICAL/HEALTH ASSISTANTS.....	532	203	735	0	0	0	0	0	0	0	0	0	532	203	735
7 PHYSIOTHERAPISTS.....	3	13	16	1	1	2	0	1	1	0	8	8	4	23	27
8 SANITARIANS.....	7	19	26	0	0	0	12	0	12	0	0	0	19	19	38
9 RADIOGRAPHERS/X-RAY TECH/ASST X-RAY TECHNICIANS.....	5	18	23	3	5	8	0	1	1	1	20	21	9	44	53
10 LAB TECHNICIANS/ASST. LAB TECHNICIANS.....	13	25	38	6	10	16	2	1	3	9	69	78	30	105	135
11 ASST. PHARMACISTS/DISPENSERS.....	0	0	0	0	5	5	0	1	1	2	10	12	2	16	18
12 MEDICAL ORDERLIES.....	0	0	0	16	0	16	10	0	10	85	1	86	111	1	112
13 OTHER PARA-MEDICAL STAFF.....	19	50	69	0	0	0	6	0	6	10	22	32	35	72	107
14 OTHER TECH. STAFF.....	8	4	12	0	0	0	1	1	2	8	11	19	17	16	33
15 OTHER SUPPORT STAFF.....	540	195	735	0	0	0	8	0	8	218	32	250	786	227	983
16 TEACHERS/TUTORS.....	0	0	0	0	0	0	2	0	2	1	1	2	3	1	4
GRAND TOTAL	1192	949	2141	54	121	175	66	22	88	352	697	1049	1664	1789	3453

TABLE 8.3

UTILIZATION OF HEALTH SERVICES (NON-HEALTH MINISTRY ORGANIZATIONS) - 1992 & 1991

ACTIVITIES	FORCES MEDICAL SERVICES		ROYAL OMAN POLICE		PETROLEUM DEVELOPMENT OMAN		SULTAN QABOOS UNIVERSITY HOSPITAL		TOTAL	
	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991
INPATIENTS										
Number of staffed beds.....	261	239	59	47	-	-	338	291	658	577
Total Discharges.....	9,213	9,715	3,175	3,187	-	-	6,345	4,277	18,733	17,179
Deaths.....	213	192	10	12	-	-	139	83	362	287
Total patient days.....	59,340	57,623	14,431	15,268	-	-	48,900	32,869	122,671	105,760
Mean length of stay.....	6	6	5	5	-	-	8	8	7	6
Bed Occupancy rate.....	62%	66%	67%	89%	-	-	40%	31%	51%	50%
Major Operations done.....	432	376	57	952	-	-	608	309	1,097	1,637
Minor Operations done.....	2,826	2,428	1,307	732	18	9	1,014	591	5,165	3,760
Total deliveries.....	1,757	1,383	698	632	22	52	778	340	3,255	2,407
Livebirths.....	1,758	1,388	697	630	22	52	776	335	3,253	2,405
Stillbirths.....	16	9	1	2	0	0	15	5	32	16
OUTPATIENTS										
Hospitals (O.P.D)	285,968	255,817	56,719	56,327	-	-	65,266	36,322	407,953	348,466
Dispensaries/Primary/ H.Care Centres (O.P.D)	311,403	300,201	143,838	116,781	51,970	53,155	-	-	507,211	470,137
Patients treated in OPD...	597,371	556,018	200,557	173,108	51,970	53,155	65,266	36,322	915,164	818,603
Daily average number.....	1,632	1,523	548	474	142	146	178	100	2,500	2,243

TABLE 8.4

NUMBER OF CLINICS AND MEDICAL PERSONNEL IN THE PRIVATE SECTOR BY REGIONS - 31.12.1992

REGIONS	NUMBER OF CLINICS					NUMBER OF MEDICAL AND PARAMEDICAL PERSONNEL EMPLOYED									
	TYPE OF CLINIC		TOTAL CLINICS		PRIVATE PHARMACIES		DOCTORS		DENTISTS	PHARMACISTS	NURSES	OTHER PARA-MEDICALS	TOTAL PERSONNEL		
	GENERAL	SPECIAL	DENTAL	1992	1991	1992	1991	SPECIALISTS					GENERAL		
									1992	1991					
MUSCAT	86	20	17	123	102	94	81	20	125	29	137	67	116	494	447
DHOFAR	17	2	4	23	17	25	22	4	18	5	28	12	19	86	80
DAKHILYA	29	0	2	31	29	14	13	0	32	2	14	18	11	77	64
SHARQIYA(N)	19	0	1	20	18	8	7	0	23	1	8	5	5	42	34
SHARQIYA(S)	25	0	1	26	24	13	10	0	26	1	14	10	5	56	45
BATINAH(N)	82	2	7	91	78	30	26	2	98	7	29	52	10	198	170
BATINAH(S)	31	0	2	33	28	16	12	0	36	2	15	27	7	87	70
DHAHIRA	23	5	2	30	30	17	16	4	30	3	17	17	13	84	75
MUSANDAM	0	0	0	0	0	1	1	0	0	0	1	0	1	2	1
AL WOUSTAH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL :	312	29	36	377	326	218	188	30	388	50	263	208	187	1126	986
PRIVATE COMPANIES :	30	0	0	30	30	0	0	0	20	0	0	110	28	158	158
GRAND TOTAL	342	29	36	407	356	218	188	30	408	50	263	318	215	1284	1144

FINANCE

The initial 1992 budget allocation for the Ministry of Health was RO 178.1 million - a 32% increase from the RO 134.5 million of 1991. This included RO 100.8 million for recurrent expenditure and RO 77.3 million for development expenditure.

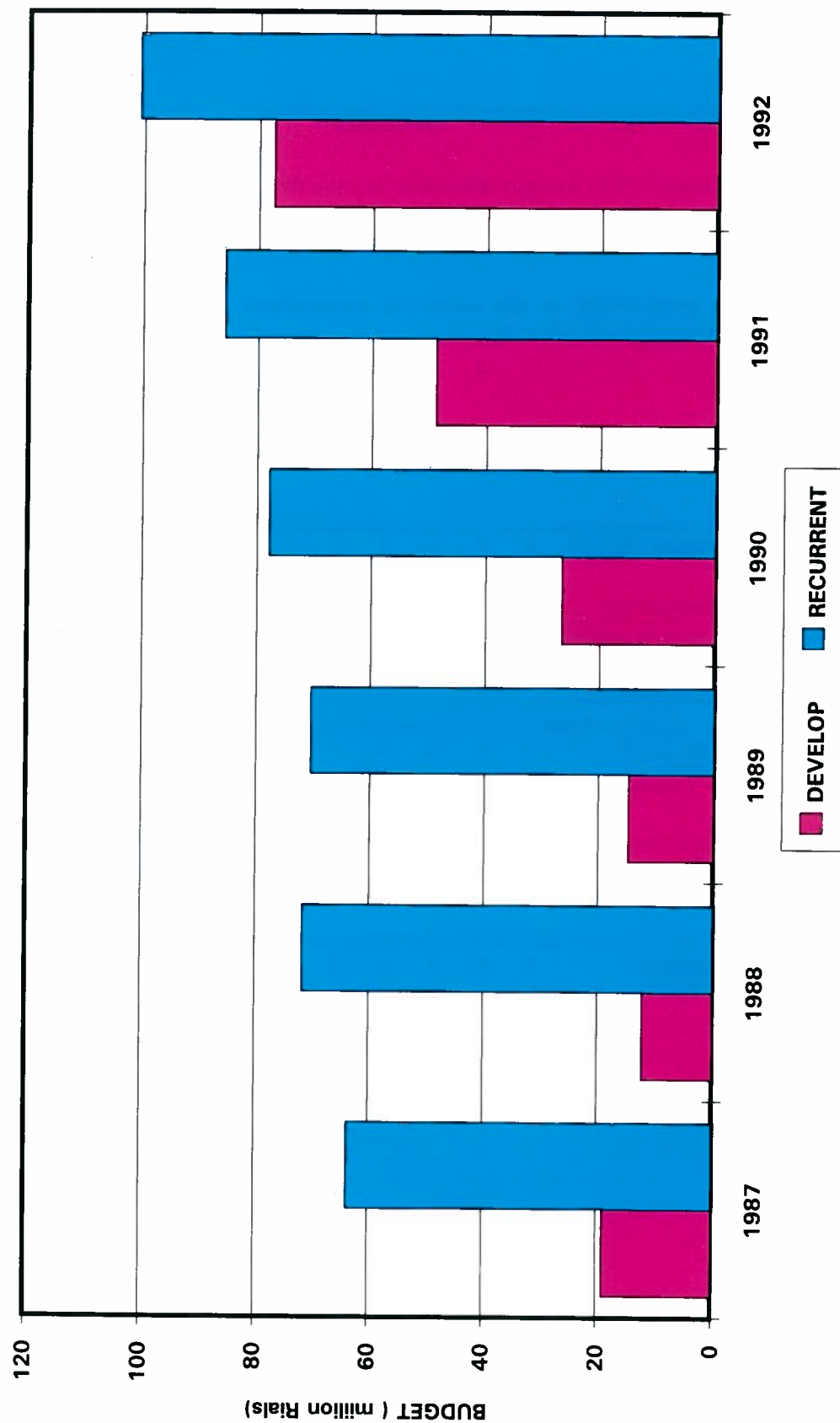
The breakdown of the recurrent expenditure for the last three years is given in Table 9.1

TABLE 9.1

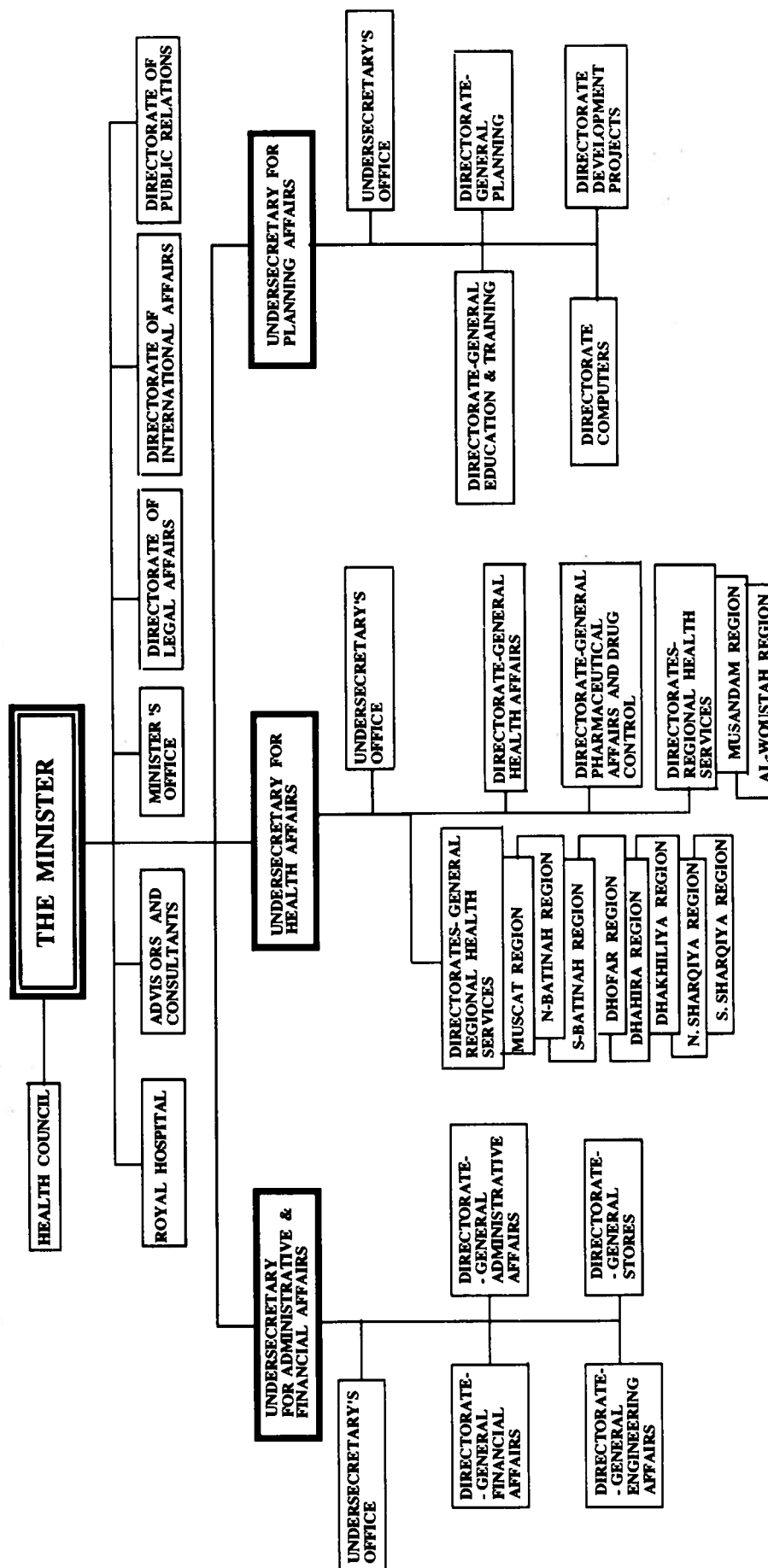
RECURRENT EXPENDITURE BY TYPE AND BUDGET LOCATION

Recurrent Expenditure	Year		
	1992	1991	1990
<i>(A) :By Type of Expenditure</i>		(million riyals)	
(i) Salaries,allowances etc.	62.4	54.8	51.2
(ii) Furniture,equipment ,vehicles etc.....	5.3	3.0	3.8
(iii) Supplies,materials,repairs,maintenance & Miscellaneous.....	33.1	28.0	22.9
Total	100.8	85.8	77.9
<i>(B):By Budget location (Centre / Region)</i>			
Centre:			
Nationally administered programmes.....	29.4	23.6	21.8
Health Services Dev. Programmes.....	0.3	0.2	0.3
Directorates-General:			
Royal Hospital.....	20.9	19.2	19.5
Regional Health Services:			
Muscat.....	14.1	13.9	11.7
Dhofar.....	5.5	5.2	4.6
Dakhilya.....	6.8	5.6	4.6
Sharqia.....	8.6	6.8	5.8
North Batinah.....	5.9	4.2	3.4
South Batinah.....	4.2	2.8	2.3
Dhahira.....	3.8	3.0	2.7
Musandam.....	1.4	1.3	1.2
Total	100.8	85.8	77.9

FIG 13 MINISTRY OF HEALTH BUDGET 1987 - 1992



Appendix 1



ORGANIZATION CHART OF THE MINISTRY OF HEALTH AS OF 22/6/1992

HEALTH INSTITUTIONS OF REGIONS AND SUB-REGIONS

31ST DECEMBER 1992

REGIONS	HOSPITALS	HEALTH CENTRES WITH BEDS		HEALTH CENTRES WITHOUT BEDS		PUBLIC HEALTH UNITS	MALARIA CONTROL CENTRES	WILAYAT
		YEAR OPEN	YEAR OPEN	YEAR OPEN	YEAR OPEN			
(1) MUSCAT	MUSCAT	<1970		AL KHOD (old)	1971	QURIYAT		Muscat
	AR RAHMA	<1970		SIYA	1971	SIYA		Qur'iyat
	AL NAHDHA	1972		HAIL AL GHAFF	1971	MAZARA		Muttrah
	KHOULA	1974		MUTTRAH (MCH)	1975	YETI		Bawshar
	IBN SINA	1973		SEEB	1978			Seeb
	QURIYAT	1983		DAGMAR	1978			Al Hajer
	ROYAL	1987		AL AMIRAT	1983			
				MAZARA	1984			
				YETI	1985			
				AL KHOD (new)	1988			
(2) DHOFA				WADI ARBEEN	1992			
	QABOOS	1977	MIRBAT	JUFFA	1977	SALALAH		Salaiah
	TAWI ATTAIR	1979	TAQAH	MUDHAI	1977	TAWI ATTAIR		Thumrait
	RAKHYUT	<1980	THUMRAIT	HAIGHAF	1978	RAKHYUT		Taqah
	SUDH	<1980	SHELEEM	JAHNEEN	1978	SUDH		Rakhyut
	MADINAT AL HAQ	1985	DHALQUT	AL HALLANIYAT	1978	MADINAT AL-HAQ		Mirbat
			HASIK	KHADRAFI	1983			Mugshan
			ASHUWAIMIYAH	QEIRON HEIRITI	1983			Sudh
			HADBEEN	SHAHIB ASSAIB	1983			Dhalqut
			GHADOW	SHARBITHAT	1984			Guzr Al Hallaniyat
			JIBJAT	UMBUSHEQ	1984			
			MAKINAT SHAHAN	PORT RAYSUT	1985			
			TEYTUM	MARSADIT	1988			
			MUQSHAN	HALOOF	1991			
				AL MASHASH	1991			
				AL HOFRA	1991			
				SWAB	1992			
				HARWEEB	1992			
				TOSINAT	1992			
				METHEN	1992			
				BETHINA	1992			

HEALTH INSTITUTIONS OF REGIONS AND SUB-REGIONS

31ST DECEMBER 1992

REGIONS	HOSPITALS	HEALTH CENTRES WITH BEDS		HEALTH CENTRES WITHOUT BEDS		PUBLIC HEALTH UNITS		MALARIA CONTROL CENTRES	WILAYAT
		YEAR OPEN		YEAR OPEN		YEAR OPEN			
(3) DAKHILIYA	NIZWA	1972			AL HAMRA	1973	NIZWA	ADAM	Nizwa
	BAHLA	1974			MANAH	1973	BAHLA		Bahla
	JABAL AKHDAR	1976			AL GHAFAT	1973	ADAM		Adam
	ADAM	1978			BARKAT AL MOUZ	1974	AL-HAMRA		Al Hamra
					AL MAMMOOR	1976	BISIYA		Manah
					BISIYA	1988			
(4) SHARQIYA NORTH	SUMAIL	1973			FANJA	1976	SUMAIL	WADI B. RAUWAHA	Sumail
	IZKI	1982			WADI MAHRAM	1981	IZKI	BIDBID	Izki
					WADI BANI RAUWAHA	1976	WADI MAHRAM		Bidbid
					QURIYATEEN	1987	QURIYATEEN		
	IBRA	1973			IBRA (MCH)	1986	IBRA	IBRA	Ibra
	SINAW	1973			AL MUDHAIBI	1978		MUDHAIBI	Al Mudhalbi
	SAMAD AL SHAAN	1980			AL DREEZ	1974			Badiyah
	WADI BANI KHALID	1980			MUDHERIB	1984			Al Qabel
	BIDIYAH	1980			AL AFLAJ	1987			Dima & Al-Tayeen
	WADI TAYEEN	1981			AL DHAKIR	1984			Wadi Bani Khalid
					AL AYOON	1988			
(5) SHARQIYA SOUTH	SUR	1973			TIWI	1981	SJR		Sur
	MASIRAH	1977			RAS AL HAD	1982	B.B. BU ALI		Masirah
	B.B. BU ALI	1973			AIGA	1974	B.B. BU HASSAN		Al Kamil & Al-Wafi
	B.B. BU HASSAN	1973			WADI BANI JABER	1989	AL KAMIL		Jaalan Bani Bu-Ali
					QUMAILA	1982			Jaalan Bani Bu-Hassan
					AL ASHKARA	1978			
					AL SUWAIH	1980			
					AL RUWAIH	1976			
					AL WAFI	1974			
					AL GHAINA	1986			
					AL KAMIL	1978			
					FALAJ AL MASHAIKH	1988			

HEALTH INSTITUTIONS OF REGIONS AND SUB-REGIONS

31ST DECEMBER 1992

REGION	HOSPITALS	HEALTH CENTRES WITH BEDS		HEALTH CENTRES WITHOUT BEDS		PUBLIC HEALTH UNITS		MALARIA CONTROL CENTRES	WILAYAT
		YEAR OPEN		YEAR OPEN			YEAR OPEN		
(6) NORTH BATINAH	SOHAR	1973	HEEBI	1975	SUWAIQ	SOHAR	1973	SHINAS	SOHAR
	SAHAM	1983	WADI BANI OMAR	1982	KHABURA		1979		Shinas
(7) SOUTH BATINAH	WADI SARAMI	1981	WADI JAHAWIR	1982	LIWA		1984		Liwa
	WADI HAWASNA	1986			SHINAS		1979		Saham
(8) DHAHRA					ABU BAQRA		1974		Al Khabura
	RUSTAQ	1972	WADI SAHTAN	1982	WADI SHAFAN		1984		Al Suwailq
(9) MUSANDAM	WADI MISTAL	1986			MASHAIQ		1986		
	WADI HEMLI	1986			KHATMAT MALAHA		1988		
(10) AL-WOUSTAH	WADI BANI GHAFIR	1980			BIRKA				
	WADI BANI KHAROO	1987			MASNAH				
TOTAL					AWABI				
					NAKHAL				
(11) AL-WOUSTAH					AFI				
					HOQEIN				
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