



**Sultanate of Oman**

**Ministry of Health**



## MGRS—The Cross Sectional Study Begins...

*(Part III in a series of articles on the MGRS study in Oman)*

The Cross Sectional Study (CSS) component of the Multicentre Growth Reference Study (MGRS) started in Oman in September 2001. This part of the MGRS aims to obtain the attained size of children aged 18 months to 71 months whose growth is not constrained by social and environmental factors. These children belong to the same sub-population from which the original sample for the longitudinal study was derived. The study is being carried out in the second year of the longitudinal study so that the same field teams conduct the interviews and measurements in both studies.

The study team will be recruiting 1400 children over the course of one year who meet the eligibility criteria. These criteria include born in Royal or Khoula hospital, singleton, Arabic speaking, full-term birth, absence of major diseases affecting growth, mother does not smoke, breastfed her child for at least three months and there are no environmental or economic constraints on growth.

To obtain this sample, the study team has already screened the Child Health

Registers in all the health centres in the study area and made a line listing of those who are eligible (singleton children born in Royal or Khoula hospital of Arab origin). The actual sample will be drawn from this master list of nearly 30,000 children.

### CSS Study Procedures

The screening team will call everyone listed in the sample and schedule a home visit. At the home visit, the screening team will conduct the screening interview to ascertain if the child is eligible. If the mother satisfies all the eligibility criteria and is willing to participate in the study, an appointment will be fixed for a visit by the follow-up team. The follow-up team then visits the family to interview the family and obtain the measurements of the child. These measurements are the same as those taken during the longitudinal study and include supine length and prone height, weight, head and arm circumference, triceps and sub-scapular skin-folds. The follow-up team only conducts one home visit.

### Pilot Studies Conducted

To ensure the appropriateness of our sampling methodology, several pilot studies were conducted. The first was

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to trace children who were born during the recruitment phase of the longitudinal study to their respective health centres using information available from our own records and the hospital records.

MR2 numbers for 279 children were traced (93%) and an additional three subjects, though utilizing the health services, did not have an MR2 number (they were instructed to obtain one when they visited their health centre to immunize their child). Of the 279 children traced, six had moved out of the study area. Relatives confirmed that six of the remaining children lived outside the study area and the rest (15) could not be contacted by telephone and were not registered in an MR2 within the study area. Tracing 93% of the families screened in the longitudinal study demonstrates the comprehensiveness of the MR2 Register.

The second pilot study involved the tracing of a sample of families who were listed in the MR2 registers of Muscat Region in 1995 and 1998. A random sample of 100 was drawn from each respective year. The initial attempt at contact was on the phone number found in the MR2 register. Those not reachable on phone were traced to the registered physical addresses, or failing that, attempts were made to trace them from the local telephone directory and through community leaders. 72 in each sample were contacted. Those listed as contacted by phone include calls that were answered by a different family from the one listed in the MR2 register. The proportions not contacted include families whose phones were not answered (probably due to summer absences) or had been

disconnected and where the number was a fax or office phone and the subjects could not then be traced from the telephone directory or by the residential address found in the MR2.

### Establishment of a Tracing System

Since it was noted through the pilot studies that the contact rate may be low, a system was established with Muscat region to trace families. Focal points at the health centres who have good rapport with the Community Support Groups (CSGs) were identified to assist tracing families. Additionally, an MGRS staff has been trained solely for the purpose of tracing the families by utilising the databases maintained in the health centres. This system is playing an important role in increasing the response rate to the acceptable levels.

### Update on the Longitudinal Study

Recruitment for the Longitudinal Study ended on 4 April 2001 when the 307th child was recruited for the study. The screening team, who had been working non-stop for more than a year, were excited to complete their task. They screened more than 4000 children born in both Royal and Khoula Hospitals, twice a day, five times a week since December 1999. All the children have completed four months, and about half of them were exclusively breastfed for four to six months. It's been found that a majority of these children go on to continue breastfeeding into their second year. A lactation team actively follows up with the families during the child's first year to

(Continued on page 6)

*“ Recruitment for the Longitudinal Study component of the MGRS study ended on 4 April 2001 when the 307th child was recruited for the study”.*

#### SUMMARY OF CSS

- **Time Frame:** Sep 2001 to Aug 2002
- **Sample Size:** 1400 Children, aged 18 to 71 months
- **Study Logistics:**
  - Recruitment Phase:** Phone calls & home visits to ascertain eligibility & willingness to participate
  - Data Collection:** Through interview of mother & measurements of children during home visit

## The Safe Motherhood Initiative in Oman: *Part 2*

### RESEARCH ACTIVITIES

Various research activities have been undertaken with the aim of assessing the progress and improving the quality of maternal health services. Different methodologies were adopted to conduct research viz. data reviews, hospital based knowledge, attitude & practice (KAP) surveys, exit interviews, and case control studies.

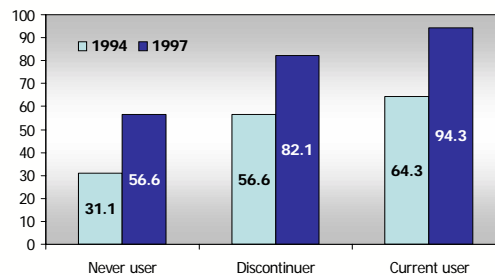
#### Research related to Information Education & Communication (IEC)

**Nizwa Health Promotion Centre (1992):** A health promotion centre was setup in Nizwa, Dakhliyah region. Five paramedical staff and 5 members of Omani women's association (OWA) were trained in conducting health education sessions for the clients attending Nizwa hospital. The effectiveness of the health education of the community was assessed. The pre and post sessions were evaluated with the help of a structured questionnaire. The health education on MCH issues by the paramedical staff and women from OWA was found to be effective.

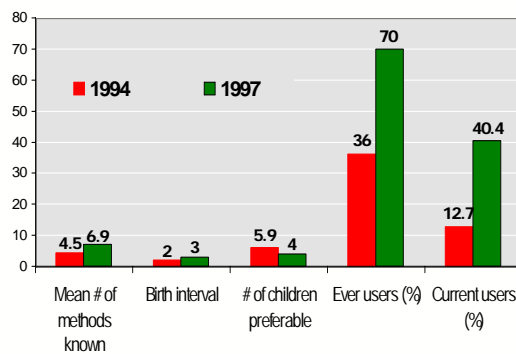
**Baseline Birth Spacing KAP Survey (1994):** 702 females and 477 males were interviewed in MoH health clinics to assess the knowledge, attitude and practices of the community on birth spacing with the aim of having baseline information. Such information provides an insight for the development of appropriate programme activities and the type of IEC materials.

**Birth Spacing Follow-up KAP Survey (1997):** A follow-up survey was done in December 1997 to assess the quality of health education and counseling provided by the service providers. The effectiveness of the IEC materials and social mobilization in changing the KAP of the community, following the provision of BS

**Fig. 1**  
Women (%), who believed that BS is beneficial

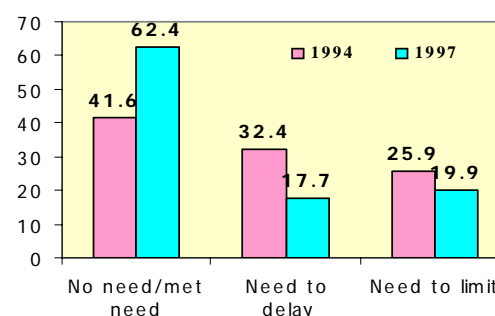


**Fig. 2**  
Change in Awareness of BS



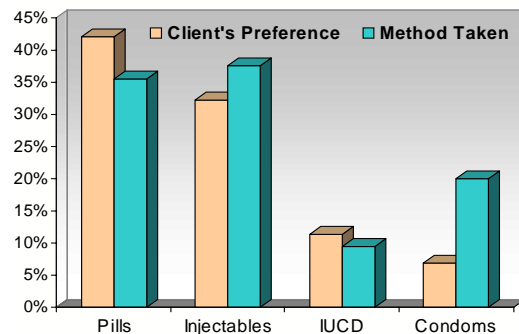
services for over 3 years was also assessed. 1,517 females and 497 males were interviewed in the MoH health clinics other than the obstetric and BS clinics. A discernible increase was seen in awareness on modern contraceptive methods and communication between wives and husbands. Contraceptive prevalence had increased from 12.75 to 40.3% and unmet need of birth spacing in females had declined from 58.3% to 37.6% (refer Graphs 1-4).

**Fig. 3**  
Unmet Need for BS in Omani Women



*“The health education on MCH issues by the paramedical staff & women from Omani Women Association was found to be effective.”*

**Fig. 4**  
**Client's Preference vs. Method Adopted**



*“Results of a survey conducted in Oman were compared with the WHO recommendations of 1 nurse for 200 deliveries. The data showed an over all shortage of 60% of nurses skilled in midwifery in the country.*

However, it was also concluded that the quality of counselling by the providers needed improvement especially on the side effects, complications and effectiveness of various methods. Social mobilization activities were effective and needed to be continued. A need was felt for developing new IEC material targeted for specific groups. Hence new brochures for young mothers and lactating women were designed and printed. Currently the all method information leaflet and 4 post method information leaflets are under revision.

## Research Related to Quality of Services

**Survey on the availability of space & for Health Education in MoH Clinics:** The availability of space and health education equipment such as TV and VCR was assessed in 1995 in each MoH clinic and recommendation for provision was made where ever such deficiencies were found. The deficiencies were rectified.

**Survey on Assessing the Counseling Services in MoH, BS Clinics:** Situation analysis was done in a nationwide survey. Provision of counseling services to first visit and revisit BS clients, availability of a separate space and a separate counselor in

MoH facilities was assessed. The survey in 1997 revealed that out of 163 health facilities, 152 (93%) health facilities provided counseling services and provision of methods to follow-up clients. Only 41 health facilities had separate space for BS counseling, 31 had assigned a separate nurse for counseling. Only 22 Arabic speaking nurses were exclusively allocated for BS clinics (10 regional, 5 Wilayat, 3 local hospitals and 4 EHCs). Regional administrators were requested to allocate a separate room and trained Arabic speaking nurse for the BS clinics for better communication by reorganizing the resources.

**Table 1**  
**Assessment of BS Services Provision, Availability of Separate Room & Counselors\***

Region	Health Facilities	BS Services	Sep. Counseling Room	Nurse for BS
Muscat	21	19	7	4
N. Batinah	15	15	9	4
S. Batinah	13	13	3	3
N. Sharqiyah	12	12	3	2
S. Sharqiyah	16	16	2	2
Dakhliyah	17	17	6	3
Dhahira	17	17	4	2
Dhofar	38	30	3	1
Al Wustah	8	7	0	0
Musandam	6	6	2	1
<b>TOTAL</b>	<b>163</b>	<b>152</b>	<b>41</b>	<b>22</b>

\* as of June 1997

**Exit interviews of BS Clients:** Quality of counseling in selected MoH clinics from all the regions were assessed by conducting exit interviews of first-visit birth spacing clients. Initial survey was done in 1995 with the launching of the BS program and another was conducted after more than 4 years in Dec'98 to Jan'99. Results of both these surveys indicated that the demeanor

of the service providers was friendly, adherence to protocols was good, and service providers respected the client's method preference. However IEC materials were used less frequently and inadequate information was given to the clients on the side effects and complications. The outcome of the survey was published (*Are MoH birth spacing clients making informed contraceptive choices?*) in the Community Health & Disease Surveillance Newsletter (Vol. 8, No. 4, Oct-Dec.'99).

**Midwifery Survey:** A survey was done in 1993 to assess number of nurses skilled in

midwifery available in MoH institutions and their appropriate job allocation. Data were compared with the WHO recommendations of 1 nurse for 200 deliveries. The result showed an over all shortage of 60% of nurses skilled in midwifery in the country. Although the allocation of available midwifery nurses was satisfactory. The midwifery training course was recommended.

**Maternal Risk Evaluation Study :** A case control study was conducted in MoH health facilities between June 1992 to June 1994 to evaluate the contributory risk fac-

**Table 1**  
**Maternal Risk Evaluation, A case control study**  
**June 1992 – June 1994**

RISK FACTORS IN MOTHER & CHILD		OUTCOME			
		LBW (n=443)	Late Foetal Deaths (n=270)	Poor Apgar Score (n=193)	Poor Maternal Outcome (n=185)
Age 18 or over 35 years			+	+	+
Consanguinity		+	+		+
Weight < 45 OR > 90 Kg		+		+	+
Gravida 5 or More			+		
OBSTETRIC HISTORY	Abortion	+	+		+
	APH				+
	Caesarian		+	+	
	IUGR	+	+	+	+
	LBW	+	+	+	
	Pregnancy induced Hypertension	+			
	Still Birth		+	+	+
	Recent Abortion		+	+	
CURRENT OBSTETRIC PROBLEMS	APH	+	+	+	+
	IUGR	+	+	+	+
	Pregnancy induced Hypertension		+	+	+
	Premature Rupture of Membrane	+		+	+
	Mal-Presentation			+	+
	Rhesus Incompatibility		+	+	
	Current Medical Problem				
	Anaemia	+			+
	CV diseases			+	+
	Diabetes	+	+	+	
	Hypertension	+	+	+	+
	Malaria	+			
Syphilis	+				

*“It was observed in an ANC register survey that anaemia was 23% at the time of booking where as 39% of women became anaemic at some or the other time during their pregnancy.”*

tors resulting in 4 bad pregnancy outcomes viz. *low birth weight (LBW), foetal death (FD), Poor APGAR Score and poor maternal outcome.* A score system was devised for each factor to predict the probability of poor outcome. Additional care would be given to the women in proportion to the anticipated risk. Although the scoring system could not be developed but the study revealed information on the main contributory factors e.g.

- **LBW:** history of previous LBW, intra-uterine growth retardation (IUGR), presence of pregnancy induced hypertension (PIH), ante partum haemorrhage (APH) and weight of mother less than 45kg.
- **FD:** history of Diabetes mellitus (DM), previous FD and abortions, multigravida and current DM.
- **Poor APGAR score:** previous history of FD, presence of DM, mal-presentation of foetus and presence of IUGR.

- **Poor maternal outcomes:** presence of hypertension, DM and history of previous FD.

### Health Facility Assessment Survey:

A survey on the availability of manpower, equipment and provision of BEOS & CEOS in MoH facilities was done in 1995 & 1998 as recommended by WHO. Aim was to ensure that the facilities provide the services as per their category. Results showed that the categorization of health facilities was not based on the functions provided by them. Of the total 34 type 'C' health facilities (28 local and 6 Wilayat MoH hospitals), 17 health facilities provide BEOS, two of the local hospitals (Dibba & Masirah) in addition provided some of the functions of secondary care facility (CEOS). Most Wilayat hospitals were providing CEOS. Regional hospital of Haima and Al-Nahda did not provide MCH services that a district hospital is supposed to provide. Some hospitals did not have the equipments that

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*“The NWCCP workshops are utilized as a platform for sharing the information on the various research & studies conducted & the new policies.”*

## MGRS—The Cross Sectional Study

*(Continued from page 2)*

counsel the mother on the benefits of breastfeeding and help solve any difficulties they may have regarding breastfeeding.

### Additional Studies

Two additional studies are being conducted in conjunction with the two main studies mentioned above. They are the Motor Development Study (MDS) and the Twelve Month Study (TMV). The MDS involves the testing of the children recruited in the longitudinal study in six milestones: sitting without support, crawling with the stomach off the floor, standing with assistance, walking with assistance, standing alone and walking

alone. Six members of the follow-up team have been trained to conduct these tests, which begin when the child is 5 months old and end when the child can walk.

The TMV involves one home-visit of a sample of children screened during the longitudinal study but were not recruited because they refused to breastfeed their child, they smoked, or they refused to join the study. In addition, a sample of children of families who decided to dropout of the study before their child was a year old, is also visited and their measurements taken.



**Table 2**  
**Health Facility (HF) Assessment: 1998**

Type of HF	Total HF	HF providing MCH Services	HF 'NOT' providing all MCH Services	HF providing BS Services		
				Follow-up & Supply of Methods	Methods 1-4 to First-visit Clients	All Methods including IUCD
Type 'A'	64	61	3	61	23	14
Type 'B'	53	36	17	53	32	13
Type 'C'	34	11	23	33	30	20
Secondary	12	9	3	10	10	10
Tertiary	1	1	0	1	1	1
<b>TOTAL</b>	<b>164</b>	<b>118</b>	<b>46</b>	<b>158</b>	<b>96</b>	<b>58</b>

are needed to carry out BEOS. There was some mismatch of manpower deployment in maternity wards and in labour rooms of some of the health facilities with respect to number of deliveries conducted by them. Some local hospitals either did have female doctors or if they had, they were not skilled to provide some of the elements of BEOS. The results of survey were shared with high-level MoH policy makers for further action.

## Research Related Management & Information Materials

**Reproducibility of Client Held Maternal Health Card (1992):** The aim was to evaluate whether to continue with the current practice of client keeping the maternal health card or to make it health facility based. It was seen that 99.6% women had produced the maternal health card on their first follow-up visit to the clinic. Hence the system of client-held card was continued.

**Permanent Obstetric Record:** Pilot study (Jan' to Sep' 1994). A maternal health record that could accommodate information of seven pregnancies of a woman (current plus six future pregnancies) was designed and piloted in North Sharqiyah and South Batinah region. The objective

was to test the feasibility of doing away with the hospital based records (the duplicate white copy of green maternal health card) and continuing with only the client-held green maternal health card along with the permanent obstetric record (POR), that would allow entering the important information of each pregnancy as it occurs and until seven pregnancies of a woman are completed.

Aim was also to save time of filling the duplicate record and save the space for storing white duplicate MHC, and also to test the design of the POR.

Evaluation through a structured questionnaire filled by the service providers revealed that providers did like the idea of POR with some proposals for modifications but suggested it to be hospital based and simultaneously wanted white duplicate copy of MHC to be continued as well.

The reason given was that duplicate copy of MHC had as many details of the patient as on the green MHC. Although the space was saved, POR had failed to reduce the work load and time spent in filling the records.

Hence the on going system of having duplicate white copy along with the green MHC was continued.

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*“Anaemia in pregnancy was 23% at the time of booking where as 39% of women became anaemic at some or the other time during their pregnancy. Less than 1% women were severely anaemic through out the course of pregnancy.”*

## Research through Data Surveys

**Anaemia during Pregnancy:** To assess the level of anaemia in Pregnancy data on the anaemia was collected from the ANC Register for the cohort cases, booked in 1995 It was seen that anaemia was 23% at the time of booking, where as 39% of women became anaemic at some or the other time during their pregnancy. Less than 1% women were severely anaemic through out the course of pregnancy.

A workshop was conducted in January 1996 with the aim of developing the strategies to combat anaemia during pregnancy and in other target groups and to develop system for screening, supplementing and treating anaemia in identified target groups.

The workshop recommendations were shared with concerned policy makers for their opinion and action.

**STD Prevalence In Pregnancy.** A survey on the cohort ANC cases registered in 1996 was done to assess the prevalence of syphilis in pregnancies by reviewing the cases in the antenatal register (VDRL positive). Of the registered cases in the year 1996, only 77 cases were positive for VDRL test. Data were shared with head of communicable diseases where by the monthly report form on STDs was modified to monitor the prevalence on regular basis.

**Adolescent's Knowledge Attitude And Practice (KAP) Survey :** A survey to assess the health needs of the adolescents and to determine the variables that affect their behaviour was conducted in school through the self administered questionnaire to 3,114 school students in the age group of between 15-19 yrs in 82 girls schools and 87 boys schools, of 9 regions. The data is in the process of evaluation. Survey will facilitate in determining the

kind of policies, strategies, activates that are to be adopted and type of information education and communication materials that are to be developed to improve the KAP of the adolescents on the health issues and to bring about positive social behaviours.

## Intersectoral Collaboration

To seek support of the various Government and non-Government agencies in the country as well as the international agencies has been one of the important strategies of MoH. This collaboration has produced optimal output and desirable impact on the maternal and child health, and birth spacing programmes.

## Social Mobilization

Efforts have been made to stimulate social response of the community on the issue of the safe motherhood. This social mobilization has enabled MoH to enhance service utilization, and to promote and advocate new initiatives. It has also helped to build a consensus for common actions by all members of the community, their leaders and the policy makers.

### References:

- *Making pregnancy safer draft strategy for the consultation-20<sup>th</sup> Aug 1999*
- *Mother and baby package*
- *World health day, safe motherhood, 7th April 1998*
- *Quality of maternity care December 2000 Silver Bullet or Red Herring*
- *A survey on Knowledge, attitude & practices of Omani community on birth spacing April 1994. DFCH*
- *A survey on Knowledge, attitude & practices of Omani community on birth spacing December 1997, DFCH*
- *A survey on Knowledge, Attitude & Practices of the Adolescents on health issues and social behaviours, DFCH*

*“ The intersectoral collaboration has produced optimal output & desirable impact on the maternal & child health, & birth spacing programmes.”*





### *Summary of Safe Motherhood Policies Adopted by MoH in Oman (1990—2001)*

Objective	Policies	Monitoring indicator	Outcome
Provide optimal care to the antenatal women in order to improve the health of the women and her baby in-utero and her pregnancy outcome	All women should be booked in ANC clinics of their respective catchment area health facility. All women should receive Iron, multivitamin and folic acid routinely and counseling on the nutrition and healthy life style  High risk cases should be visited at home	% of women booked in ANC clinic  % of women anemic in each first trimester  % of women anemic in each first trimester  % of home visits done	99 % of women have been seen by the skilled attended in the ANC clinic  12% are anaemic in first trimester  18.2% are anemic in second trimester  6.26% of women are anaemic in third trimester  (Over all 36.5% of ANC women are anaemic )  10 % of women are visited at home
Early risk detection and early intervention	1) all women should be encouraged to book in first trimester, as early as at 6 weeks gestation  2) All women should make at least 6 visits to the ANC clinic of which one visit should be in the last 4 weeks before delivery.  3) Ensure compliance with the risk assessment and referral as per the antenatal flow chart and match the place of the delivery with the delivery need of the mother  4) All women should be screened for, DM (RBS), hypertension & Eclampsia, STI (VDRL), Rh incompatibility ( Blood grouping & Rh typing)  5) Referral from PHC facility to the facility with Obstetrician at 34 weeks of gestation for clinical evaluation and abdominal scan	% of women booked in first trimester  % of women making at least 6 visits to the ANC clinic  % of women making at least one visit should be in the last 4 weeks before delivery  All facilities comply with the risk assessment and referral  % of women diabetic  % of women hypertensive	57.6% Women are booked in first trimester and only 3.9% are booked in third trimester.  75.7% are making at least 6 visits to ANC clinic  71.3% ANC women are making at least one visit in the last 4 weeks before delivery  compliance with the risk assessment and referral to higher health care level is more than 95%  1.2% are diabetic  1. % are hypotensive
Ensure that all women receive optimal care during delivery by the skilled attendant as to avoid untoward outcome of the mother and the baby, and any complication that can result in reproductive morbidity	All women should be educated to delivery in hospital and in the type of facility as per the anticipated level of care required during the delivery ( based on the assessment during ANC period)	% of women attended by the skilled attended during delivery	92% of the women receive care by the skilled attended during delivery
All women should receive optimal post natal care to establish lactation, prevent any post partum complication in the baby are in the mother	All women should visit the postnatal clinic at 2 and 6 weeks  All women should be screened for post natal infection, screened for anaemia (Hb%), and clinically for hypertension and any pre-existing disease under surveillance.  Women and babies at high risk postnatally should be visited at home	% of women making post natal visits at 2 weeks  % of women making post natal visits at 6 weeks  % of women anemic post-natally  % of women visited at home postnatally	59 % women make visit to post natal clinic in the health care facility at 2 weeks  82% women make visit to postnatal clinic  14.5% women are anaemic postnatally  5% of women are visited at home postnatally
Allow all women should have their subsequent pregnancy after an interval of 3 years or more to recuperate from the pregnancy losses and have enough time to look after the newborn and the family	Educate all women on the benefits of spacing the pregnancies at all contact opportunities with the health care system	% of women with birth interval:  < 2 years  2 – 3 years  > 3 years	23.7% women have birth interval < 2 years  43.6% women have birth interval 2 - 3 years  32.7% women have birth interval > 3 years

## Communicable Diseases Quarterly Report

### Fourth Quarter (October to December 2001)

ICD Code	Diseases	2001				2000	2001		
		Fourth Quarter				Q4	Q1	Q2	Q3
		Oct	Nov	Dec	Total	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
<b>GROUP 'A' DISEASES</b>									
A00	Cholera	1	-	-	1	2	-	-	5+2(i)
A20	Plague	<i>Never Reported</i>							
A36	Diphtheria	<i>Last Case in 1992</i>							
A39	Meningococcal infection	-	-	1	1	1	9	4	1
A80	Poliomyelitis	<i>Last Case in 1993</i>							
	<b>Acute Flaccid Paralysis</b>	1	1	1	3	3	5	3+1 (i)	3
B05	Measles	2	4	5	11	-	1 (i)	1 (i)	2
B06	Rubella & [CRS]	-	-	-	0	-	-	-	1
A95	Yellow fever	<i>Never Reported</i>							
A82	Rabies	-	-	-	0	-	-	-	-
A75.0	Louse-borne typhus	<i>Never Reported</i>							
A68	Relapsing fever	<i>Last Case in 1996</i>							
A33	Tetanus Neonatorum (NNT)	<i>Last Case in 1995</i>							
A99	Viral Hemorrhagic fever	-	-	-	0	-	-	-	-
<b>GROUP 'B' DISEASES</b>									
A03.0	Typhoid fever	12	7	4	23	27	19	19	32
A01.4	Paratyphoid fever	2	2	4	8	2	4	2	4
A02	Food poisoning	158	57	57	272	176	160	299	435
A22	Anthrax	<i>Never Reported</i>							
A23	Brucellosis	18	12	9	39	52	25	37	41
A37	Pertussis	5	1	1	7	11	16	20	11
A35	Tetanus (Excluding NNT)	1	-	-	1	1	-	1	1
A90	Dengue	-	-	-	0	-	-	-	1 (i)
	<b>Viral Hepatitis - Total</b>	<b>108</b>	<b>90</b>	<b>87</b>	<b>285</b>	<b>290</b>	<b>376</b>	<b>478</b>	370
B15.9	Viral Hepatitis - HBsAg '+' (ELISA)	12	1	1	14	12	9	14	8
B15.0	Viral Hepatitis - HBsAg Negative	79	72	69	220	220	299	385	290
B17	Viral Hepatitis - Unspecified	17	17	17	51	58	68	79	72
B55	Leishmaniasis	2	-	-	2	10	3	2	1
B65	Schistosomiasis	-	2 (i)	-	2 (i)	-	2 (i)	-	0
B74	Filariasis	-	-	-	0	-	-	-	3 (i)
B72	Dracunculiasis	<i>Certified by WHO as Eradicated from Oman</i>							
G00.0	Haemophilus Meningitis	1	4	3	8	7	2	5	7
G00-G03	Meningitis - (All others)	11	4	17	32	33	19	26	20
A30	Leprosy	-	1	-	1	4	1	-	2
A15-A19	Pulm. Tuberculosis Sputum Positive	12	9	5	26	22	38	25	22
	Pulm. Tuberculosis Sputum Negative	2	3	3	8	4	1	10	7
	Extra Pulmonary Tuberculosis	4	9	6	19	15	18	29	21
B50-B54	Malaria (All sources)	70	51	40	161	151	100	122	252
A50-A53	Syphilis	24	7	9	40	48	31	49	36
A54	Gonococcal Infections	19	19	5	43	74	81	70	48
<b>GROUP 'C' DISEASES</b>									
A03	Shigellosis	160	84	129	373	497	485	290	360
A06	Amoebiasis	494	378	555	1,427	1,246	1,431	1,152	992
A09	Acute Gastro-Enteritis & Diarrhoea	10,785	8,294	10,647	29,726	33,591	32,521	22,219	23,434
B01	Chicken Pox	980	929	1,261	3,170	2,766	3,886	4,557	3,104
B26	Mumps	251	226	217	694	1,175	809	1,371	620
A71	Trachoma	52	42	39	133	148	139	171	130
J10-J11	Influenza	599	379	385	1,363	1,209	901	789	692

(i) = Imported

## Communicable Diseases Quarterly Report by Regions

### Fourth Quarter (October to December 2001)

ICD Code	Diseases	Total	Muscat	Dhofar	Dakhiyah	North Sharqiyah	South Sharqiyah	North Balinah	South Balinah	Dhahira	Musandam	Al-Musatah
<b>GROUP 'A' DISEASES</b>												
A00	Cholera	1	-	-	-	-	-	-	-	1	-	-
A20	Plague	<i>Never Reported</i>										
A36	Diphtheria	<i>Last Case in 1992</i>										
A39	Meningococcal infection	1	-	-	-	-	-	-	1	-	-	-
A80	Poliomyelitis	<i>Last Case in 1993</i>										
	<b>Acute Flaccid Paralysis</b>	3	1	-	-	1	-	-	1	-	-	-
B05	Measles	11	-	-	-	1	-	-	-	10	-	-
B06	Rubella & [CRS]	0	-	-	-	-	-	-	-	-	-	-
A95	Yellow fever	<i>Never Reported</i>										
A82	Rabies	0	-	-	-	-	-	-	-	-	-	-
A75.0	Louse borne typhus	<i>Never Reported</i>										
—A68	Relapsing fever	<i>Last Case in 1996</i>										
A33	Tetanus Neonatorum (NNT)	<i>Last Case in 1995</i>										
A99	Viral Haemorrhagic fever	0	-	-	-	-	-	-	-	-	-	-
<b>GROUP 'B' DISEASES</b>												
A03.0	Typhoid fever	23	5	-	3	5	2	5	1	2	-	-
A01.4	Paratyphoid fever	8	1	-	4	-	-	2	-	1	-	-
A02	Food poisoning	272	50	-	31	6	23	37	41	76	1	7
A22	Anthrax	<i>Never Reported</i>										
A23	Brucellosis	39	-	39	-	-	-	-	-	-	-	-
A37	Pertussis	7	5	-	-	-	-	1	1	-	-	-
A35	Tetanus (Non-Neonatal)	1	-	-	-	-	-	1	-	-	-	-
A90	Dengue	0	-	-	-	-	-	-	-	-	-	-
	<b>Viral Hepatitis - Total</b>	285	16	44	24	59	43	34	41	14	4	6
B15.9	V. Hepatitis - HBsAg Positive (ELISA)	14	-	3	1	7	-	2	1	-	-	-
B15.0	Viral Hepatitis - HBsAg Negative	220	6	38	19	49	29	29	39	6	2	3
B17	Viral Hepatitis - Not Tested	51	10	3	4	3	14	3	1	8	2	3
B55	Leishmaniasis	2	-	2	-	-	-	-	-	-	-	-
B65	Schistosomiasis	2 (i)	-	-	-	2 (i)	-	-	-	-	-	-
B74	Filariasis	0	-	-	-	-	-	-	-	-	-	-
B72	Dracunculiasis	<i>Certified by WHO as Eradicated from Oman</i>										
G00.0	Haemophilus Meningitis	8	1	1	-	1	3	1	-	1	-	-
G00-G03	Meningitis (Others)	32	6	2	1	2	3	13	4	1	-	-
A30	Leprosy	1	-	-	1	-	-	-	-	-	-	-
A15-A19	Pulm. Tuberculosis Sputum Positive	26	9	2	2	1	1	7	3	1	-	-
	Pulm. Tuberculosis Sputum Negative	8	-	-	2	-	4	1	-	1	-	-
	Extra Pulmonary Tuberculosis	19	5	4	4	-	4	1	-	1	-	-
B50-B54	Malaria (All sources)	161	65	7	11	9	6	23	12	20	7	1
A50-A53	Syphilis	40	12	-	5	-	-	17	6	-	-	-
A54	Gonococcal Infections	43	6	-	5	1	9	12	4	-	2	4
<b>GROUP 'C' DISEASES 2</b>												
A03	Shigellosis	373	83	19	55	28	20	9	11	30	15	103
A06	Amoebiasis	1,427	84	6	282	177	358	109	81	113	30	187
A09	Acute Gastro-Enteritis & Diarrhoea	29,726	4,111	3,478	3,304	2,922	3,790	5,602	3,789	1,447	592	691
B01	Chicken Pox	3,170	376	146	373	72	122	1,297	540	180	33	31
B26	Mumps	694	133	242	76	16	17	82	61	63	3	1
A71	Trachoma	133	3	-	49	18	1	13	46	2	-	1
J10-J11	Influenza	1,363	621	-	32	208	-	408	-	94	-	-

(i) = Imported

## Notified Communicable Diseases by Regions

### Annual Report 2001

ICD Code	Diseases	Total	Muscat	Dhofar	Dakhliah	North Sharqiyah	South Sharqiyah	North Batinah	South Batinah	Dhahira	Musandam	Al Wustah
<b>GROUP 'A' DISEASES</b>												
A00	Cholera	6+2(i)	-	-	-	-	-	2+1(i)	-	4+(i)	-	-
A20	Plague	<i>Never Reported</i>										
A36	Diphtheria	<i>Last Case in 1992</i>										
A39	Meningococcal infection	15	4	-	2	3	2	-	3	1	-	-
A80	Poliomyelitis	<i>Last Case in 1993</i>										
	<b>Acute Flaccid Paralysis</b>	15	2	2+1(i)	3	1	-	3	2	1	-	-
B05	Measles	13+2 (i)	1 (i)	-	-	1	-	1 (i)	-	12	-	-
B06	Rubella & [CRS]	0	-	-	-	-	-	-	-	-	-	-
A95	Yellow fever	<i>Never Reported</i>										
A82	Rabies	0	-	-	-	-	-	-	-	-	-	-
A75.0	Louse borne typhus	<i>Never Reported</i>										
A68	Relapsing fever	<i>Last Case in 1996</i>										
A33	Tetanus Neonatorum (NNT)	<i>Last Case in 1995</i>										
A99	Viral Haemorrhagic fever	0	-	-	-	-	-	-	-	-	-	-
<b>GROUP 'B' DISEASES</b>												
A03.0	Typhoid fever	94	30	8	15	9	4	18	6	4	-	-
A01.4	Paratyphoid fever	18	2	-	6	-	2	4	2	1	-	1
A02	Food poisoning	1,167	165	12	262	40	54	214	140	271	1	8
A22	Anthrax	<i>Never Reported</i>										
A23	Brucellosis	162	1	159	-	1	-	-	1	-	-	-
A37	Pertussis	54	14	8	1	2	5	1	2	21	-	-
A35	Tetanus (Non-Neonatal)	3	-	-	-	-	1	1	1	-	-	-
A90	Dengue	1 (i)	1 (i)	-	-	-	-	-	-	-	-	-
	<b>Viral Hepatitis - Total</b>	1,555	104	178	217	241	181	187	236	71	23	111
B15.9	V. Hepatitis - HBsAg Positive (ELISA)	59	1	7	4	20	2	6	11	6	1	1
B15.0	Viral Hepatitis - HBsAg Negative	1,243	40	162	192	200	139	151	220	41	8	90
B17	Viral Hepatitis - Not Tested	253	63	14	21	21	40	30	6	24	14	20
B55	Leishmaniasis	11	1	8	-	2	-	-	-	-	-	-
B65	Schistosomiasis	4	1	-	-	2	-	-	-	1	-	-
B74	Filariasis	3(i)	-	-	-	-	-	1(i)	-	-	2(i)	-
B72	Dracunculiasis	<i>Certified by WHO as Eradicated from Oman</i>										
G00.0	Haemophilus Meningitis	25	4	3	2	3	5	3	1	3	-	1
G00-G03	Meningitis (Others)	97	12	5	6	5	8	36	11	12	-	2
A30	Leprosy	4	-	-	1	2	-	-	-	1	-	-
A15-A19	Pulm. Tuberculosis Sputum Positive	109	28	12	8	3	9	33	12	4	-	-
	Pulm. Tuberculosis Sputum Negative	25	-	1	4	1	7	7	3	2	-	-
	Extra Pulmonary Tuberculosis	87	22	11	12	2	5	19	12	4	-	-
B50-B54	Malaria (All sources)	635	332	30	31	26	16	75	46	62	12	5
A50-A53	Syphilis	176	29	18	14	4	11	76	9	9	2	4
A54	Gonococcal Infections	256	64	18	12	3	44	60	12	14	10	19
<b>GROUP 'C' DISEASES</b>												
A03	Shigellosis	1,523	281	66	298	242	129	22	66	111	80	228
A06	Amoebiasis	5,047	331	27	1,169	708	871	642	261	403	122	513
A09	Acute Gastro-Enteritis & Diarrhoea	1,09,065	16,631	12,209	12,484	8,928	12,148	21,291	14,438	7,265	1,762	1,909
B01	Chicken Pox	15,038	3,478	622	2,108	591	730	4,098	2,168	920	257	66
B26	Mumps	3,661	684	894	409	175	323	401	249	517	6	3
A71	Trachoma	587	21	-	208	68	11	62	198	18	-	1
J10-J11	Influenza	3,706	1,682	9	43	269	-	1,396	3	304	-	-

(i) = Imported

## Selected Notified Communicable Diseases by Wilayah

### Annual Report 2001

Region	Wilayah	Acute Flaccid Paralysis (AFP)	Measles	Rubella	Pertussis	TB (Total)	TB Sputum Positive	Tetanus (Ex. NNT)	Malaria (All)	Viral Hepatitis (Total)	Leprosy	Meningo. Infection	Leishmaniasis
<b>MUSCAT</b>	Muscat		1 (i)		2	5	3		7	16		1	1
	Seeb				5	15	10		139	30		1	
	Muttrah					8	4		47	14		1	
	Bowsher	1			6	10	4		97	37			
	Al Amerat				1	2	2		42	6		1	
	Quriyat					10	5			1			
<b>DHOFAR</b>	Salalah	2+1 Yemen			5	20	11		30	140			4
	Thumrait				3					10			3
	Taqah					2				20			
	Mirbat					2	1			3			
	Sudah									9			
	Rakhyut									1			1
	Dhalqut												
	Muqshan												
	Shaleem												
<b>NORTH BATINAH</b>	Sohar		1 (i)		1	15	7		34	11			
	Shinas	1				3			5	24			
	Liwa					2	2		4	4			
	Saham					12	8	1	14	31			
	Khabura	1				9	4		4	35			
	Suwaiq	1				18	12		14	82			
<b>SOUTH BATINAH</b>	Rustaq	1			2	6		1	8	114		1	
	Nakhl								4	10			
	Wadi Maawil								2	11			
	Al Awabi					1				29			
	Musanah					9	7		10	25			
	Barka	1				11	5		22	48		2	
<b>DAKHLIYAH</b>	Nizwa					9	1		16	37			
	Bahla					4	3		5	20			
	Adam					2			2	2			
	Hamra	1								16	1		
	Manah								1	4			
	Sumail	1			1	3	2		2	46			
	Izki	1				3	2		2	73		2	
	Bid Bid					3			3	19			
<b>DHAHIRA</b>	Ibri				16	3			18	49	1		
	Yanqul				1	1	1		2	2			
	Dhank				1	1	1		3	2			
	Buraimi	1	12		3	4	1		29	18		1	
	Mahda					1	1		10				
<b>NORTH SHARQIYAH</b>	Ibra					1	1		5	51			
	Mudhaibi				2				12	73	1	2	2
	Bidiyah									30	1		
	Al-Qabel		1			1	1		9	19			
	Dima Al-Tayeen	1				2	1			65		1	
	Wadi Bani Khalid								3				
<b>SOUTH SHARQIYAH</b>	Sur				2	7	5		2	31			
	Masirah					9	2			27			
	Al Kamil & Al Wafi					2			4	15			
	Bilad Bani Bu Ali					2			8	65		2	
	Bilad Bani Bu Hassan				3	3	2	1	2	43			
<b>MUSANDUM</b>	Khasab								1	13			
	Dibba								9	6			
	Bukha								1	2			
	Madha								1	2			
<b>AL-WUSTAH</b>	Haima								3	59			
	Duqum								1	34			
	Mahoot									12			
	Al-Jazer								1	6			
<b>NATIONAL TOTAL</b>		15	15	0	54	221	109	3	635	1,555	4	15	11

(i) = Imported

## Age Distribution of Communicable Diseases

### Annual Report 2001

ICD Code	Diseases	Total	Age Groups in Years								
			< 1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	> 45
<b>GROUP 'A' DISEASES</b>											
A00	Cholera	6+2 (i)	-	-	-	1	2	1+1 (i)	1+1 (i)	-	1
A20	Plague	<i>Never Reported</i>									
A36	Diphtheria	<i>Last Case in 1992</i>									
A39	Meningococcal infection	15	5	3	-	2	-	1	2	1	1
A80	Poliomyelitis	<i>Last Case in 1993</i>									
	<b>Acute Flaccid Paralysis</b>	15	1	9	5	-	-	-	-	-	-
B05	Measles	13+2 (i)	2	1+2 (i)	6	1	-	1	1	1	-
B06	Rubella & [CRS]	0	-	-	-	-	-	-	-	-	-
A95	Yellow fever	<i>Never Reported</i>									
A82	Rabies	0	-	-	-	-	-	-	-	-	-
A75.0	Louse borne typhus	<i>Never Reported</i>									
A68	Relapsing fever	<i>Last Case in 1996</i>									
A33	Tetanus Neonatorum	<i>Last Case in 1995</i>									
A99	Viral Haemorrhagic fever	0	-	-	-	-	-	-	-	-	-
<b>GROUP 'B' DISEASES</b>											
A03.0	Typhoid fever	94	1	11	20	12	10	8	16	11	5
A01.4	Paratyphoid fever	18	-	-	3	2	4	3	1	1	4
A02	Food poisoning	1,167	16	157	268	186	128	116	151	91	54
A22	Anthrax	<i>Never Reported</i>									
A23	Brucellosis	162	-	27	25	29	22	13	17	11	18
A37	Pertussis	54	27	4	14	8	-	-	1	-	-
A35	Tetanus (Non NNT)	3	-	-	-	-	-	-	-	-	3
A90	Dengue	1 (i)	-	1	-	-	-	-	-	-	-
	<b>Viral Hepatitis - Total</b>	1,555	8	373	750	195	55	47	43	30	48
B15.9	V. Hepatitis - HBsAg positive (ELISA)	59	-	4	8	6	8	11	5	6	11
B15.0	V. Hepatitis - HBsAg Negative	1243	6	324	660	160	31	18	20	9	15
B17	V. Hepatitis - Unspecified	253	2	45	85	31	16	18	18	15	23
B55	Leishmaniasis	11	-	2	1	2	1	-	2	1	2
B65	Schistosomiasis	4 (i)	-	-	2 (i)	1 (i)	-	-	-	-	1 (i)
B74	Filariasis	3 (i)	-	-	-	-	-	-	2 (i)	1 (i)	-
B72	Dracunculiasis	<i>Certified by WHO as Eradicated from Oman</i>									
G00.0	Haemophilus type b, Meningitis	25	18	5	2	-	-	-	-	-	-
G00-G03	Meningitis (Others)	97	23	14	26	15	9	1	3	2	4
A30	Leprosy	4	-	-	-	-	-	1	-	1	2
A15-A19	Pulm. Tuberculosis: Sputum Positive	109	-	-	-	3	11	10	21	16	48
	Pulm. Tuberculosis: Sputum Negative	25	-	3	4	2	5	1	2	-	8
	Extra-Pulmonary Tuberculosis	87	-	4	1	1	11	11	17	17	25

**Note:**

1. The quarterly data are provisional & should be scrutinized & verified by the Epidemiologist/Focal Point of communicable diseases in the regions & a corrected feedback report should be sent to DSDC for updating.
2. Previous quarter data would be finalized in the following quarter after receiving the feedback from the regions.
3. Tuberculosis & Leprosy data are for nationals only.
4. (i) = Imported case.
5. [CRS] cases are included in the National Registry on the basis of the year of birth, & 'NOT' according to the reporting year.

## Monthly Incidence of Communicable Diseases: *Jan. to Dec. 2001* & Annual Incidence: 1991 to 2000

Diseases	2001													2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total										
<b>GROUP 'A' DISEASES</b>																							
Cholera	-	-	-	-	-	-	1 (i)	5+1(i)	-	1	-	-	6+2(i)	8+1(i)	7 (i)	-	-	-	-	-	-	-	
Plague	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	
Diphtheria	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1	2	
Meningococcal infection	-	-	9	3	-	1	1	-	-	-	-	1	15	28	2	4	8	7	4	2	15	7	27
Poliomyelitis	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	4	
Acute Flaccid Paralysis	1	2	2	1	2	1	1	2	-	1	1	1	15	10	21	8	8	23	20	16	16	16	
Measles	-	-	1 (i)	-	1 (i)	-	-	-	2	2	4	5	13+2(i)	15	9	5	12	24	68	181	3,108	1,834	220
Rubella (& CRS)	-	-	-	-	-	-	-	-	-	-	-	-	0	3	5	4	7	10	46	109	1,253	211	6
Yellow fever	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	
Rabies	-	-	-	-	-	-	-	-	-	-	-	-	0	-	1	1	1	-	-	-	1 (i)	1	1
Louse-borne typhus	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	
Relapsing fever	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	1	1	-	1	-	-
Tetanus Neonatorum	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	1	-	-	-	1	
Viral Hemorrhagic Fevers	-	-	-	-	-	-	-	-	-	-	-	-	0	-	2	3	1	1	2	NA	NA	NA	NA
<b>GROUP 'B' DISEASES</b>																							
Typhoid fever	2	7	11	4	11	4	12	13	7	12	7	4	94	117	106	89	114	147	213	152	117	102	100
Paratyphoid fevers	2	1	1	2	-	-	-	1	3	2	2	4	18	20	13	16	23	24	22	43	23	22	21
Food poisoning	39	40	82	78	120	101	226	119	90	158	57	57	1167	953	838	1062	978	753	596	512	531	338	259
Anthrax	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
Brucellosis	11	14	18	18	10	9	13	15	15	18	12	9	162	307	316	307	203	205	348	431	472	371	350
Whooping cough	7	7	2	2	8	10	6	3	2	5	1	1	54	190	205	484	694	73	108	168	239	45	26
Tetanus (Non NNT)	-	-	-	-	1	-	-	1	-	1	-	-	3	6	1	5	5	3	7	7	7	10	8
Denque	-	-	-	-	-	-	-	1 (i)	-	-	-	-	1 (i)	-	-	-	-	-	-	-	-	-	-
Viral Hepatitis - Total	167	123	122	164	180	137	123	118	136	108	90	87	1,555	1,164	1,308	1,219	1,943	2,167	2631	1,969	1,322	1,465	1,066
V.Hepatitis HBsAg+(ELISA)	3	5	4	6	10	6	3	2	6	12	1	1	59	49	85	313	499	437	622	494	420	368	245
V.Hepatitis -HBsAg Neg.	138	98	96	128	146	113	101	99	104	79	72	69	1,243	863	1,099	860	1,341	1,531	1,813	1,289	703	767	402
V.Hepatitis -Unspecified	26	20	22	30	24	18	19	17	26	17	17	17	253	252	124	46	103	199	196	186	199	330	419
Leishmaniasis	1	2	2	1	1	-	-	1	-	2	-	1	11	17	22	30	31	49	27	29	40	14	3
Schistosomiasis	2 (i)	-	-	-	-	-	-	-	-	-	2 (i)	-	4 (i)	1+2(i)	3 (i)	11 (i)	10 (i)	7	6	7	14	6	9
Filariasis	-	-	-	-	-	-	-	2 (i)	1 (i)	-	-	-	3 (i)	2 (i)	1 (i)	1 (i)	2 (i)	5 (i)	-	-	-	-	1
Dracunculiasis	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1 (i)	-
Haemophilus Meningitis	3	-	-	2	2	3	3	3	1	1	4	3	25	20	31	23	17	20	19	12	11	4	NA
Meningitis (others)	10	8	3	10	9	5	12	4	4	11	4	17	97	154	175	127	167	221	171	142	131	49	NA
Leprosy	-	1	-	-	-	-	-	1	1	-	1	-	4	12	27	39	31	37	38	35	43	36	17
Pulm. TB Sputum Pos.	17	9	11	10	7	8	7	7	7	12	9	5	109	115	85	109	120	110	107	99	93	114	117
Pulm. TB Sputum Neg.	-	-	1	1	7	2	3	-	3	2	3	3	25	30	38	26	20	35	56	58	57	80	99
Extra-Pulmonary TB	7	7	4	8	9	12	8	6	7	4	9	6	87	98	70	77	91	71	64	69	51	50	73
Malaria	34	32	34	33	43	46	63	108	81	70	51	40	635	696	446	882	1027	1,265	1801	7,215	16,787	14,827	19,274
Syphilis	12	15	18	12	15	27	23	8	6	24	7	9	176	183	184	199	331	328	379	465	402	377	196
Gonococcal Infections	30	27	34	22	29	20	10	19	22	19	19	5	256	276	364	247	362	313	310	354	440	639	574
<b>GROUP 'C' DISEASES</b>																							
Shigellosis	235	147	109	115	100	84	63	120	177	160	84	129	1,523	1,582	1,427	1,381	1,738	2,636	2449	2,388	1,641	1,680	1,971
Amoebiasis	624	475	326	522	366	315	295	262	435	494	378	555	5,047	4,312	4,387	4,381	5,567	6,969	3512	3,450	3,392	2,766	5,105
Acute GE & Diarrhoea	12,507	9,830	10,803	9,625	6,878	6,160	6,514	7,799	9,223	10,785	8,294	10,647	1,09,065	112,212	105,378	96,908	135,506	162,535	178,823	196,761	198,975	193,709	227,127
Chicken Pox	1,194	1,310	1,605	1,739	1,555	1,401	1,210	921	933	980	929	1,261	15,038	15,803	12,103	9,345	23,293	18,591	14,185	22,261	23,793	22,600	17,779
Mumps	361	276	303	356	573	472	250	234	142	251	226	217	3,661	10,443	12,628	5,951	7,909	23,285	14,574	5,419	5,390	10,655	15,654
Trachoma	64	34	47	74	65	37	49	46	38	52	42	39	587	1,012	1,445	2,279	4,097	5,979	8,426	11,328	13,196	10,142	10,117
Influenza	266	314	325	302	304	206	207	130	289	599	379	385	3,706	4,682	5,027	4,914	11,215	31,892	62,818	60,056	82,426	61,244	51,933

(i) = Imported

# Animal Bite Surveillance by Regions of Oman

## Annual Report 2001

Region	Population at Risk	Type of Animal					Total Animal Bites reported	Rate per 10,000 Population
		Fox or Wild	Dog	Cat	Other Domestic	Others (unknown)		
Muscat	661,145	3	130	90	7	4	234	3.5
Dhofar	224,993	2	4	13	4	0	23	1.0
North Batinah	423,460	1	69	40	28	0	138	3.3
South Batinah	243,593	7	75	98	21	2	203	<b>8.3</b>
Dakhliyah	272,141	4	17	139	5	1	166	<b>6.1</b>
Dhahira	214,997	2	38	26	13	0	79	3.7
North Sharqiyah	140,342	7	19	120	24	2	172	<b>12.3</b>
South Sharqiyah	166,233	1	46	15	10	0	72	4.3
Musandam	34,007	0	2	6	0	0	8	2.4
Al Wustah	20,345	3	0	5	6	0	14	<b>6.9</b>
<b>National Total</b>	<b>2,401,256</b>	<b>30</b>	<b>400</b>	<b>552</b>	<b>97</b>	<b>9</b>	<b>1109</b>	<b>4.6</b>

*Note: Rodent Bites excluded*



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### NEWS IN BRIEF

- As a part of the Phase 1 of the Poliovirus containment plan, the stock of Poliovirus & other infectious material from SQU Hospital laboratory was destroyed in the last week of December 2001.
- Ministry of Health has launched a study to estimate the burden of disease (BoD) in Oman from October 2001.

#### **Your opinion matters to us:**

*Any suggestions to improve upon the contents & the design of this Newsletter will always be gratefully received.*

#### **Your contribution is valuable to us:**

*Please write to us concerning your ideas and experiences, both good and bad. Sharing them with a wider audience could benefit others, leading to new ideas, techniques and policies and helping to avoid struggling with problems others have already solved.*

**Editorial Board**

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