

CENTRAL STATISTICS OFFICE

Ministry of Finance and Economic Development

2000
HOUSING AND POPULATION CENSUS

REPUBLIC OF MAURITIUS

ANALYSIS REPORT

*VOLUME VI – HEALTH & QUALITY OF LIFE, MORBIDITY AND
MORTALITY*

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FOREWORD

The Central Statistics Office conducted a Housing and Population Census in year 2000. Census 2000 was the seventeenth for the Island of Mauritius and the seventh for the Island of Rodrigues.

A series of table reports covering housing and living conditions, demographic and fertility characteristics, economic characteristics, educational characteristics, household characteristics, geographical and migration characteristics and disability was published during the following year.

Analysis and evaluation of the census data are currently being carried out and the results published in a series of analytical reports. The present report is the sixth of the series and covers health & quality of life, morbidity and mortality. The chapter on living conditions, environment and quality of life includes a subsection on burden of disease.

It is hoped that the report will be useful to the public in general and to policy makers, planners and researchers in particular.

I would like to thank all staff who contributed in one way or another in the preparation of this report. A special thanks goes to the Chief Health Statistician and staff of the Ministry of Health and Quality of Life for their contribution.

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Symbols and abbreviations

- Nil
- ... Not available
- .. Not applicable

Percentages have been rounded to one decimal place. Consequently rounding errors may occur in some of the tables.

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Chapter 1 - Health

1.1 Introduction

The World Health Organisation (WHO) defines health as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity.

This chapter gives an overview of the health situation in Mauritius. It provides information on health facilities, personnel and supplies.

1.2 Health Policy

Health is recognized by the Government as a fundamental human right. As such, health care is provided free of charge in all public health institutions. The general policy of the Government in the health sector is to promote total human development through the enhancement of the quality of life of each and every citizen. The target "Health for all by the year 2000" having been largely achieved, the objective, now is to consolidate the process already initiated, and the adoption of an integrated approach to health planning and health delivery. This takes into account non-communicable diseases, the increasing demand for better quality services and high-tech medicine, and the need for greater efficiency in the use of health services.

Rapid industrialisation and economic growth in the past decades have brought major changes in the lifestyle of the population. The growing epidemic of non-communicable diseases (NCDs) in the Republic of Mauritius has placed health education high on the agenda of policy makers. The shift from curative to preventive service is being consolidated in order to stem down diseases like diabetes, hypertension and heart diseases as well as the related risk factors such as alcohol, smoking and high consumption of salt, sugar and fatty foods.

The main objectives of the government in respect to health are as follows:

- Developing a comprehensive health service in order to meet the health needs of the population;
- Investigating the influence of physical environment and psychosocial domestic factors on the incidence of human diseases and disability;
- Planning and carrying out measures for the promotion of health;
- Instituting and maintaining measures for the prevention of diseases including the epidemiological surveillance of important communicable diseases;
- Providing better facilities for the treatment of diseases, including mental diseases, by maintenance of hospital and dispensary services;
- Making provisions for the rehabilitation of the disabled;
- Controlling the practice of medicine, dentistry and pharmacy; and
- Initiating and conducting operational bio-medical health studies of diseases of major importance in the country.

1.3 Health delivery system

The government health service delivery is based on a regionalized system characterised by a network of accessible health care delivery institutions at primary, secondary and tertiary levels.

The primary health care addresses the main health problems in the community through the provision and promotion of health and preventive, curative and rehabilitative services. The network consists mainly of Area Health Centres and Community Health Centres. These peripheral units are the first points of contact and patients are referred from these centres to hospitals whenever required. The services provided at the primary health centres include maternal and child health care, family planning, immunisation programme, treatment of common diseases and injuries, and health promotion.

The secondary health care services are delivered through five regional (Sir Seewoosagur Ramgoolam National hospital, Jawaharlall Nehru hospital, Victoria hospital, Flacq hospital and Dr Jeetoo hospital) and three district (Mahebourg hospital, Souillac hospital and Long Mountain hospital) general hospitals as well as through four specialised hospitals (ENT hospital, S. Bharati hospital, Brown Sequard hospital and Poudre d'Or hospital). The different services provided include accident and emergency services, general medicine, general and specialised surgery, gynaecology and obstetrics, chest medicine, orthopaedics, traumatology, paediatrics and intensive care services. Radiotherapy services are provided at Victoria Hospital. The "Service d'Aide Medicale d'Urgence" (SAMU) which operates on a 24 hour basis is attached to the accident emergency departments of each regional hospital.

Each of the specialised hospitals delivers care in only one speciality as follows: Brown Sequard hospital in psychiatry, Poudre d'Or hospital in pneumology, S. Bharati hospital in ophthalmology, ENT hospital in otorhinolaryngology (i.e. ear, nose and throat) and the Cardiac Centre mainly in cardiology.

The tertiary health care services include high tech medical care such as open-heart surgery, renal transplant, neurosurgery, vitreo-retinal surgery, haemodialysis, etc. The Central Health Laboratory, the Virology Unit, and the Blood Bank provide support services.

A wide range of health care services, including the services of medical practitioners, pharmacies and laboratories is also provided in the private sector. Sugar Estates provide primary health care to their employees and members of their families. The public and private health sectors operate on a collaborative manner rather than a competitive one.

1.4 Health services

Table 1.1 gives a brief picture of the availability of different health services in the Island of Mauritius. A major development is the opening of a Cardiac Centre in December 1997. Also, increases were noted in the number of dental clinics from 22

in 1990 to 40 in 2000 and in that of private nursing homes from 8 in 1990 to 13 in 2000.

Table 1.1 - Health Institutions, Island of Mauritius - 1990 & 2000

Type of facility	1990		2000	
	Number of units	Number of beds	Number of units	Number of beds
Regional hospital	3	1,554	5	2,548
District hospital	4	318	3 ^{1/}	152
Specialised hospital	4	1,032	4	1,066
Cardiac Centre	-	-	1	53
Dispensary service point ^{2/}	127	-	134 ^{3/}	-
Maternal and child service point	137	-	140	-
Dental Clinic	22	-	40	-
Chest Clinic	1	-	1	-
Social hygiene Clinic	1	-	1	-
National Day Care Centre for the immuno-suppressed	-	-	1	-
Private Nursing home	8	215	13	572
Sugar Estate Dispensary	25	-	26	-

1/ Flacq hospital which was a district hospital has been upgraded to a regional hospital

2/ includes 8 day-care service beds at Dr Y. Cantin Community Hospital in 2000

3/ including one Community Hospital and 2 Mediclinics.

The out-patient departments of all hospitals provide minor curative services as well as maternal and child health care, and family planning services. These services are also provided by 134 other health institutions namely the Community Hospital (one), the Mediclinics (two), the Area Health Centres (23) and the Community Health Centres (108) located all around the Island of Mauritius.

Out of the 26 Area Health Centres in 1990, one was converted into a Community Hospital (Black River) and two others into mediclinics (L'Escalier and Belvedere) during the last decade. These three centres provide additional services such as X-ray facilities. In 2000, there were 40 dental clinics in government general hospitals, Community Hospital, Mediclinics and Area Health Centres compared to 22 in 1990.

The Chest Clinic situated near the Dr. A. G. Jeetoo Hospital in Port Louis is the only institution of its kind. The clinic provides for services to detect pulmonary tuberculosis among the population. A Social Hygiene Clinic, located near Dr. Bouloux AHC at Cassis, provides for treatment to patients suffering from sexually transmitted diseases. Since the end of 1999, a new clinic, namely the National Day Care Centre for the Immuno-Suppressed, situated in the same complex, provides care to people with the HIV infection as well as those suffering from AIDS.

The number of beds in government health institutions and private nursing homes has significantly increased over the last decade. Increases of 31.5% and 166.0% respectively were noted. The expansion was more important in the private sector as a result of higher demand as more persons can now afford the personalized care of the

private nursing homes and to sophisticated medical equipment following improvement in the living standards of the population.

The number of centres providing basic health care services drastically increased during the period 1983 to 1990 with the opening of about 80 centres following the setting up of the community based health system all around the country. The number, which was 164 in 1990, has remained unchanged since then.

Pathological tests (biochemistry, haematology, virology, microbiology and parasitology) are conducted mainly at the Central Laboratory found at the Victoria Hospital. The other four regional hospitals also provide for laboratory services. During the year 2000, these laboratories carried out more than five million pathological tests, representing more than 80% increase over the 1995 figure. It should be mentioned that the Public Health Laboratory found at Roche Bois, which used to carry out tests for the detection of malaria, was closed down at the end of 1996. Tests for the detection of malaria are now performed at the Central Laboratory. The Food Analysis Laboratory of the Government Analyst Division found at Réduit is responsible for carrying out tests for food toxicology; it also covers tests on pesticides, water and pharmaceutical products.

In the Island of Rodrigues, health facilities are provided mainly by the public sector. One general hospital (Queen Elizabeth Hospital) and two health centres (La Ferme and Mont Lubin) provide for in-patient facilities with a total of 171 beds at the end year 2000 (Table 1.2). Out-patient care facilities are available at these three institutions as well as at the Community Health Centres which numbered 13 in 2000. The latter also provide for maternal and child health, and family planning services besides services for the treatment of common diseases and injuries. Dental services are available only at the general hospital and at the two Health Centres. A system of mobile dispensaries serves the population in remote and scattered areas.

Table 1.2 - Health Institutions, Island of Rodrigues - 1990 & 2000

Institution	1990		2000	
	Number of units	Number of beds	Number of units	Number of beds
Hospital (Queen Elizabeth)	1	108	1	107
Health Centres (La Ferme and Mont Lubin)	2	50	2	64
Community Health Centres	10	-	13	-
Health Offices (Port Mathurin)	1	-	1	-
Dental Clinics (Hospital and Health Centres)	3	-	3	-
Expanded Programme on Immunization	16	-	17	-

1.5 Health personnel

At the end of 2000, there were 1,080 doctors in the Republic of Mauritius compared to 857 in 1990. The doctor to population ratio improved from 1:1,244 in 1990 to 1:1,105 in 2000.

Table 1.3 - Selected health manpower statistics as at end of year 1990 and 2000
Republic of Mauritius

Grade	1990		2000	
	Number	Population per grade	Number	Population per grade
A. Doctor				
Employed by Ministry of health - of which specialists	521 (158)		663 ^{1/} (224)	
In private practice	336		417	
Total	857	1,244	1,080	1,105
B. Dentist				
Employed by Ministry of health	37		47	
In private practice	96		99	
Total	132	8,074	146	8,172
C. Pharmacist				
Employed by Ministry of health	9		17	
In private practice	118		278	
Total	127	8,392	295	4,045
D. Qualified nurse and midwife				
Employed by Ministry of Health	2,768	385	2,748 ^{2/}	434

1/ excluding 23 doctors (included in figure in private practice) working under the " Bank of Doctors" scheme

2/ excluding 58 nurses working under the "Bank of Nurses" scheme

In 2000, 663 doctors or 61.4% were employed in the public sector, the number of specialists being 224 (Table 1.3). In 1990, 521 doctors or 60.8% were in the public sector and the number of specialists was 158.

As a solution to the shortage of doctors and qualified nurses in the public service, the Ministry of Health & Quality of Life decided to create a "bank of doctors" and a "bank of nurses". In 1999, 35 doctors from the private sector were providing their services on a temporary basis in the government hospitals under this scheme. However, in 2000, there were only 23 such doctors as the Ministry recruited more doctors to work on a permanent basis.

With the first intake of students of the SSR medical school now in their final clinical training years, and with the support from France and UK in producing generalists and specialists, the prospects for sustained growth in medical staff are more assured. Nurse training is also expanding and becoming more specialised. Through regional collaboration, courses for other health professions are being established while a dental school and dental hospital are being developed.

In 2000, around 20 doctors of whom 12 were specialists, were recruited from overseas, mainly from India. This decision was taken mainly to cater for the shortage

of specialists in different fields such as anaesthesia and neurosurgery. The number of foreign doctors recruited has continued to increase after the year 2000.

The number of dentists at the end of 2000 was 146 compared to 132 in 1990. However, the dentist to population ratio indicates that increase in the number of dentists is slow in pace as compared to population growth (1:8,074 in 1990 compared to 1:8,172 in 2000). The number of dentists in the public sector in 2000 was 47 compared to 37 in 1990.

There were 295 pharmacists at the end of 2000, of whom 17 were employed in the public sector and 278 in the private sector. The pharmacist to population ratio was 1:4,045 as compared to 1:8,392 at the end of 1990 when there were 9 pharmacists in the public sector and 118 in the private sector. The increase (from 9 to 17) in the number of pharmacists in the public sector during the last decade was mainly due to the modernisation of the pharmaceutical departments of the government hospitals. On the other hand, the 135.6% increase in the number of pharmacists working in the private sector is mainly explained by the rapid growth in the commercialisation of pharmaceutical products.

At the end of 2000, the number of nurses and midwives in the public sector was 2,748 with an additional 58 nurses working under the "Bank of Nurses" scheme. This scheme was set up in 1999 because of the shortage of qualified nurses in the public sector. The bank of nurses constitutes mainly of nursing officers already employed by the Ministry of Health & Quality of Life, but were ready to work during the days they were off duty.

Comparatively, the number of nurses and midwives in the public sector was 2,768 in 1990. In spite of the increase in the number of patients visiting government health institutions during the last decade, the number of nurses employed in the public sector has remained more or less the same. The main reason was high staff turnover: there has been high demand for nurses by the private nursing homes which increased from 8 in 1990 to 13 in 2000, and also by foreign countries such as the United Kingdom.

In Rodrigues, the number of doctors in post increased from 8 in 1990 to 18 in 2000. The doctor to population ratio was 1:4,700 in 1990 and 1:1,988 in 2000. Specialists in various fields from the Island of Mauritius visit the island on a regular basis. The number of nurses and midwives went up from 85 in 1990 to 114 in 2000. At the end of 2000, there were three dentists, six dispensers, three laboratory technicians, two radiographers and two health inspectors in post in the island.

1.6 Medical supplies

Medicines are dispensed free of charge in the public health services. The Ministry of Health & Quality of Life has a list of about 600 essential medicines, which it procures mostly through open international tender, the share of the two local manufacturers being limited. The private sector imports some 5,000 pharmaceutical products through wholesale pharmacies. In order to minimize the risks of counterfeit, importation takes place directly from suppliers abroad. In 2000, there were 29 wholesalers and around 200 retailers with 295 registered pharmacists. The wholesale

and retail prices incorporate profit mark-ups; the wholesaler is allowed a mark-up of 14% and the retailer mark-up of 27%. Total import of medicines in 2000 was around one billion rupees.

Health care is also provided, on a very limited scale, by other systems like ayurvedic, homeopathy and other traditional medicines. It is to be noted the pharmacy department of the Ministry of Health has instituted full control on the entry and the conditions of import of health supplements, herbal medicines, and nutraceuticals, especially those addressing athletes, as stipulated in the provisions of the Pharmacy Act 1983 and the Food Act 1998. New procedures have been established to regulate the prescriptions of psychotropic and dangerous drugs while pharmaceutical products received by individuals through parcel post are controlled. Also, advertisements on medicines are done under control.

1.7 Activities carried out in government hospitals (Island of Mauritius)

At the end of 2000, 3,819 hospital beds were available in the public sector. They were distributed as follows: 2,548 beds in the 5 regional general hospitals, 152 beds in the 3 district general hospitals and 1,119 beds in the 4 specialised hospitals, the Skin Diseases Infirmary and the Cardiac Centre. (Table 1.4).

In 2000, the number of admissions in the government health establishments was 204,673, representing an increase of 44.8% over the 1990 figure of 141,367. The total number of surgical operations performed in 2000 was 36,293 on in-patients and 40,621 on out-patients. The corresponding figures in 1990 were 23,047 and 46,272 respectively. In 2000, the total number of attendances at the out-patient departments of hospitals was 2,680,003 compared to 1,696,668 in 1990, that is an increase of 58.0% during the inter-censal period.

Table 1.4 - Summary of work performed in government hospitals - 1990 and 2000
Island of Mauritius

Hospital	Number of admissions		Number of beds as at end of year		Number of operations performed on				Number of attendances at out-patients departments	
					In-patients ^{1/}		Out-patients		1990	2000
	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000
Dr. A.G. Jeetoo (P.Louis)	29,445	41,453	420	530	6,794	5,860	18,647	8,803	433,870	534,685
S.S.R.N. (Pamplemousses) ^{2/}	29,569	36,622	463	535	5,504	7,009	12,124	7,925	286,135	436,756
Long Mountain	1,575	915	43	23	-	-	730	970	58,051	57,892
Flacq (Central Flacq) ^{3/}	7,541	21,342	91	282	-	3,673	1,924	4,176	101,206	240,825
J. Nehru (Rose Belle) ^{4/}	--	27,394	--	518	--	4,935	--	7,282	--	281,997
Mahebourg	10,782	6,052	91	83	109	116	2,563	2,409	94,061	98,056
Souillac	9,132	7,335	93	46	-	-	1,528	2,099	62,989	67,067
Victoria & P.M.O.C. (Quatre Bornes)	42,121	45,444	671	683	5,872	9,412	7,240	2,437	434,391	547,463
Sub-total (general)	130,165	186,557	1,872	2,700	18,279	31,005	44,756	36,101	1,470,703	2,264,741
Brown Sequard (psychiatry) (Beau Bassin)	3,728	5,855	887	891	-	-	-	-	44,500	83,186
Poudre D'or (chest)	301	485	54	53	79	137	-	-	6718 ^{5/}	27,773
S. Bharati (eye) (Moka)	2,882	4,003	53	59	1,805	2,744	1,443	3,560	90,932	139,004
E.N.T. Centre (Vacoas)	4,291	5,181	38	63	2,884	1,703	73	960	83,815	140,656
Cardiac Centre (Pamplemousses) ^{6/}	--	2,592	--	53	--	704	--	-	--	24,643
Total	141,367	204,673	2,904	3,819	23,047	36,293	46,272	40,621	1,696,668	2,680,003

1/ including examinations under anaesthesia

4/ The hospital became operational in December 1990

2/ including Skin Diseases Infirmary

5/ attendances at Chest Clinic, Port-Louis

3/ The hospital was upgraded to a regional hospital in 1998

6/ The centre became operational in December 1997

Table 1.5 - Deliveries in government general hospitals

Island of Mauritius

Year	Live births		Still births	Total	
	No.	% of which low ^{1/} birth weight	No.	No.	% over total births registered
1990	17,138	8.2	300	17,438	78.7
1991	17,481	9.5	308	17,789	81.5
1992	18,375	11.5	251	18,626	82.9
1993	17,933	13.4	298	18,231	82.9
1994	17,634	12.4	229	17,863	83.8
1995	16,674	13.9	264	16,938	84.2
1996	16,847	15.3	231	17,078	84.1
1997	16,182	15.0	214	16,396	83.7
1998	15,717	14.3	197	15,914	83.9
1999	16,594	14.4	191	16,785	84.9
2000	16,747	14.3	215	16,962	86.3

^{1/} birthweight of less than 2,500 grammes

The number of deliveries in government hospitals decreased from 17,438 (17,138 live births and 300 still births) in 1990 to 16,962 (16,747 live births and 215 still births) in 2000. However, the proportion of deliveries in these hospitals over births registered increased from 78.7% to 86.3% during the period 1990-2000. The percentages of low birth weight (less than 2,500 grammes) among live births in government hospitals increased from 8.2% in 1990 to 14.3% in 2000.

Table 1.6 - Deliveries by type in government general hospitals

Island of Mauritius

Year	Normal delivery			Instrumental		Caesarean		Total
	By midwife	By doctor	Total	No.	% of total	No.	% of total	
1990	2,235	12.8	17,438
1991	13,831	737	14,568	741	4.2	2,480	13.9	17,789
1992	14,185	676	14,861	607	3.3	3,158	17.0	18,626
1993	14,191	320	14,511	548	3.0	3,172	17.4	18,231
1994	13,566	445	14,011	590	3.3	3,262	18.3	17,863
1995	12,625	296	12,921	613	3.6	3,404	20.1	16,938
1996	12,675	262	12,937	633	3.7	3,508	20.5	17,078
1997	11,962	171	12,133	585	3.6	3,678	22.4	16,396
1998	11,522	281	11,803	492	3.1	3,619	22.7	15,914
1999	11,817	311	12,128	452	2.7	4,205	25.1	16,785
2000	11,484	473	11,957	389	2.3	4,616	27.2	16,962

In 2000, the percentage of deliveries by caesarean section in government hospitals was 27.2. As shown in table 1.6, this percentage which was only 12.8% in 1990 has continuously increased since then.

1.8 Activities carried out in government hospital and health centres in Rodrigues

At the end of 2000, there were one general hospital with 107 beds and two Health Centres with 64 beds in the Island of Rodrigues (Table 1.2). The number of admissions in these institutions was 9,538 while the number of attendances at the out-patient departments was 117,336. Some 784 live births and three still-births occurred in the maternity sections of the three centres during the year 2000. Some 83 or 10.6% of the live births had a birth weight of less than 2,500 grammes.

Table 1.7 - Admissions in hospital/health centres - 2000

Island of Rodrigues

Institution	Number of admissions		
	Male	Female	Total
Queen Elizabeth Hospital	2,373	3,588	5,961
Mont Lubin Health Centre	738	1,131	1,869
La Ferme Health Centre	694	1,014	1,708
Total	3,805	5,733	9,538

Table 1.8 - Deliveries in hospital/health centres - 2000
Island of Rodrigues

Institution	Number of deliveries		
	Live births	Still births	Total
Queen Elizabeth Hospital	742	2	744
Mont Lubin Health Centre	19	1	20
La Ferme Health Centre	23	-	23
Total	784	3	787

In 2000, there were 13 Community Health Centres with 32,981 attendances (Table 1.9).

Table 1.9 - Out-patient attendances - 1990 & 2000
Island of Rodrigues

Institution	1990	2000
Queen Elizabeth Hospital	23,564	65,258
Mont Lubin Health Centre	16,295	29,451
La Ferme Health Centre	16,807	22,627
Community Health Centres	36,778	32,981
Total	93,444	150,317

1.9 Some achievements during the recent years

The overall health status of the population of the Republic of Mauritius has considerably improved over the last few decades. Life expectancy at birth increased from 61.0 for males and 65.9 for females in 1972 to 68.2 and 75.3 respectively in 2000. Infant mortality rate, defined as the number of infant deaths in a year per 1,000 live births during the year, has gradually declined from 65.1 per 1000 live-births in 1972 to 15.9 in 2000.

The number of hospital beds in the public sector goes up from 2,904 in 1990 to 3,819 in 2000, that is an increase of 31.5%. A new regional hospital for the southern region of Mauritius, namely the Jawaharlal Nehru Hospital became operational at Rose-Belle in December 1990. This has greatly reduced the pressure on Victoria Hospital, which was providing for advanced treatment to patients from Souillac and Mahebourg Hospitals. The district hospital at Flacq has been upgraded into a regional hospital. As a result, patients residing in the eastern part of the island need no longer be transferred to SSRN Hospital for advanced treatment.

Various improvements have been brought to most of the existing infrastructure of the hospitals during the last decade. Two Area Health Centres, one at L'Escalier and the other one at Belvédère, were upgraded to Medi-Clinics and the Dr.Y.Cantin Area

Health Centre was upgraded to a Community Hospital. All the three centres are now equipped with modern facilities.

Various services involving new technology have been introduced at the hospital level. Laparoscopic surgery is now routinely undertaken at Victoria Hospital while lithotripsy services (crushing renal stones) are available at SSRN and J. Nehru Hospitals. SSRN Hospital has been equipped with the necessary medical instruments to carry out mammography. Haemodialysis services are available at the main regional hospitals. Cardiac surgery is performed on a full time basis at the Cardiac Centre located near the SSRN Hospital. The service of invasive cardiology with angiography and angioplasty is also available at the centre.

Among other improvements in the public health sector noted during the last decade, is the Neonatal Intensive Care Service for newborns launched in May 1999. This service, which was initially located at Victoria Hospital, has been extended to SSRN Hospital. It has been unanimously recognised that this new service has largely contributed to reducing infant mortality during the past few years. The Infant Mortality Rate, which stood at 20.4 in 1990, decreased drastically to 14.3 in 2001.

Another major achievement is the setting up of a SAMU service. This service provides medically equipped vehicles for the transportation of patients to hospitals in emergency cases. Doctors, nurses and life-saving devices are readily available on board these vehicles.

A National Day Care Centre for the Immuno-Suppressed (NDCCI) became operational in December 1999. The NDCCI provides for various services to people living with HIV/AIDS as well as to those requesting voluntary testing and counseling as regards the infection. The centre, to which an AIDS physician is attached, also coordinates activities in connection with the "Prevention of Mother to Child Transmission" and provides for "post-exposure prophylaxis" services to health care workers involved with HIV/AIDS patients. Furthermore, the Blood Bank at Victoria Hospital has been equipped with sophisticated testing equipments with a view to preventing HIV transmission by blood and its products.

Another recent achievement is the coming into force as from 1st January 2000 of the Food Regulations 1999 made under the Food Act 1998. The new legislation, which provides for the modernisation and consolidation of the law, replaced the Food and Drugs Act of 1940, and all Regulations made under it. The Food Regulations have been worked out according to international norms and standards. They provide for more effective and efficient protection for consumers. It is expected that these regulations will reduce the current levels of sickness, disability, morbidity resulting from food related diseases and poisoning.

The introduction of the Mental Health Care Act 1998 has been a major milestone in the development of the mental health programme in the Republic of Mauritius. Mental health services have been decentralised to general hospitals.

1.10 Plan for the future

Responding to the evolving aspirations of the population and the needs of the health sector, a new plan of action is being currently studied. The Action Plan aims at ensuring that the country has the necessary health services and the capacity to deliver them in the most cost-effective way. Health services will be more efficient with results approaching those achieved in many developed countries.

The Action Plan proposes the introduction of the following:

- 24-hour family doctor service
- High technology services to tackle the complications arising from diabetes and hypertension including new and extended cardiac surgery programme, transplant programme, extended renal dialysis programme, joint replacement surgery, spinal injury and extended neurosurgical services and complex eye surgery
- National Institute for Non Communicable Disease
- National oncology centre
- Health promotion and preventive medicine services for every community
- Patients' Charter system to protect consumer interests
- Information system with a smart card for tracking and improving the quality of treatment, linked to the present carnet de santé
- Staff retention, productivity scheme and quality improvement programme
- Better maintenance and repair of buildings and equipment
- Special development support for Rodrigues and the outer islands
- Improvements in dental services to promote better dental health and extend existing services

Proposals for the following developments have been made for Rodrigues:

- A mental health facility
- A SAMU service
- A family doctor service
- The NCD programme
- Maternal and Child Health Service to be strengthened to reduce infant mortality
- Paediatric services to be strengthened
- Specialist orthopaedic services will be available
- Development, renovation and maintenance of buildings and equipment
- The extension of medical education programme for other professionals
- Patients linked through the patient information service to the National Complaints Commission and their own regional service
- Further decentralisation of operational management to promote local decision-making on local matters and local management of operational budgets
- Rationalisation of the services at Mont-Lubin and La Ferme Area Health Centres

With a view to creating a sustainable health service fit for the 21st century, the Action Plan has set out key health sector targets as follows:

- Increase in expectation of life at birth to above 75 years
- Reduce infant mortality rate to single figure within the next five years (i.e below 10 infant deaths per thousand live births)
- Maintain maternal mortality rate below 20 per hundred thousand live births
- Perinatal mortality rate (still births and deaths within the first week) to below 20 per thousand live and still births.

Service targets have also been set:

- Double the number of open heart operations
- Save 500 lives a year from end stage renal failure
- Halve the amputation rate among diabetic patients
- Provide decent hospital and community services for those who are mentally ill
- Provide hospitals with modern facilities (Jeetoo, Victoria, Brown Sequare, ENT, Mahebourg, Souillac, Poudre d'Or and Long Mountain)
- Provide a 24 hour family doctor service to everyone
- Increase health personnel by 3,900
- Improve the effectiveness and efficiency of preventive and curative clinical services and financial and general management

The Plan will identify and pursue consumer targets including the reduction of waiting time, improvement in privacy, better quality of reception and 'hotel' services, protection of patients' human and civil rights, the establishment of informed consent as a basis for all clinical intervention, and the involvement of the community in planning and evaluation of health services.

One of the implications of the Action Plan will be to raise the resource commitment to the health sector from its current level of about 2.8% of GDP to beyond 3%. The Action Plan proposes a 75% increase in the health budget, the commitment of Rs 4 to 5 billion for capital schemes for the replacement, improvement and expansion of services, and the employment of a further 3,900 professional, technical and supporting staff.

Several options for funding the Action Plan are proposed; they are:

- Increase in the state budget
- Introduction of health insurance with monthly contributions from employers, employed people and self employed
- Conversion of National Savings Fund (NSF)
- Extra incentives to expand the private sector
- Health taxes on tobacco and alcohol
- Efficiency drive within the existing services, and
- Charges for services provided.

Chapter 2 – Living condition, environment and quality of life

2.1 Introduction

The type of environment one lives in enhances the quality of life. The immediate concerns are housing conditions – the quality and the availability of facilities, the environment as well as sanitation and hygiene.

2.2 The housing situation

The housing conditions of the population have improved considerably during the past decade. Thus, the proportion of residential buildings made of concrete walls and roof increased from 70.6% in 1990 to 86.3% in 2000 while the percentage of households living in improvised dwellings decreased from 1.6% in 1990 to only 0.7% in 2000.

In 2000, amenities needed for a healthy life were available to most households. Electricity was available to 99.0% of households compared to the already high figure of 96.9% ten years ago. The percentage of households having their water supply from fountains, wells, and rivers dropped from 10.5% in 1990 to 1.8% in 2000. Only 1.0% of households did not have bathroom facilities compared to 5.5% in 1990. About 88.8% of households had flush type of toilet compared to 62.8% in 1990, while those having pit latrines dropped from 36.5% to 11.0%.

Kitchen facilities were available to 99.2% of households. About 88.5% of them had their kitchen inside while the remaining outside. Households are now using cleaner sources of energy for cooking purposes. Thus, in 2000, 91.5% were using gas for cooking purposes compared to 50.3% in 1990. In contrast, the percentage of households using wood and charcoal dropped from 26.3% in 1990 to 4.5% in 2000.

There has been a marked improvement in the method of refuse disposal, this having a direct bearing on the health of individuals. Census 2000 figures show that 91.5% of households had their refuse collected by authorized collectors compared to 47.1% at the 1990 Census. Conversely, the proportion of households who dumped their refuse on the roadsides or in the backyard decreased from 30.6% to 2.6% during the same period.

The degree of overcrowding, as measured by the average number of persons per room used for living purposes decreased from 1.2 in 1990 to 0.9 in 2000, indicating improvement in the living conditions of the population.

2.3 The environment

2.3.1 The Environment Protection Act

At the national level, numerous policy measures have been devised to improve the environment and enhance the quality of life.

The Environment Protection Act (EPA) which provides for the legal framework for the protection and management of the environment of the country was passed in 1991. Under the Act, the Department of Environment was established. The Department, which is now part of the Ministry of Environment, is responsible for all environmental issues, including those relating to coastal and maritime management. The EPA 2002 was proclaimed towards the end of 2002 and replaces the EPA 1991. The Act pledges “every person in Mauritius shall use his best endeavours to preserve and enhance the quality of life by caring responsibility for the natural environment of Mauritius.” The new Act contains features that are geared to institutional strengthening for the enforcement of environmental law, better management of coastal zones and for sustainable development. The act also establishes standards and guidelines for radioactive emission, and built-up environment and landscape, and provides for pollution control regulations. Some of the measures undertaken to improve our environment and thus to enhance the quality of life are described below.

2.3.2 Air quality

Poor air quality is the result of human activity. Mauritius has witnessed a rapid industrialisation coupled with an increase in the number of motor vehicles. This has resulted in an increase in air pollution more specifically in areas with dense traffic and in the vicinity of industries. Other sources of atmosphere pollution are cane burning during the harvest season and burning of household, commercial and industrial solid waste. Air pollution can cause irritation of skin, eye, nose and throat and may result in more serious respiratory problems such as bronchitis, pneumonia and asthma. Following an assessment of the air quality carried out in 1993 across the island, several measures have been taken to curb down the level of atmospheric pollution.

In 2002, the Road Traffic Regulations were promulgated and provide the necessary legal framework for the control of vehicle emissions; road traffic officers have been empowered to enforce the regulations and issue notices and contraventions. The use of unleaded petrol by motor vehicles was introduced while all new and imported second-hand petrol driven vehicles and certain types of existing vehicles must be fitted with catalytic converters so as to reduce emissions of toxic gases.

The enforcement mechanism provided by the EPA has enabled the control of air pollution from other sources. Thus, the imposition of some types of dust arrestors in the coal fire boilers and asphalt plants, of water sprayers at stone crushing plants and of the application of industrial air pollution abatement technology has contributed in the reduction of air pollution.

2.3.3 Solid waste

It is estimated that about 1,200 tonnes of solid waste are produced daily. On the average, a person generates about 0.7 kg of solid waste daily and this figure is expected to go up to 0.9 kg by year 2010. The type of waste generated has changed in the advent of new materials and technology. Thus, around 70 million plastic bottles, 250 million plastic bags and 13 million aluminium cans are put on the market

annually. Currently, about 92% of households are serviced by refuse collectors, and the remaining either dump their refuse on the road sides or in the backyard or use ash pits to dispose of. Household and commercial solid wastes are collected by local authorities and are brought to the only landfill of the island, Mare Chicose Sanitary Landfill, either directly or through four transfer stations where they are compacted. The landfill receives daily 1,000 tonnes of waste against 300 tonnes as planned originally, with as consequence a reduction in the life span of the landfill.

A feasibility study on environmental solid waste management was conducted in 1999 and recommends various scenarios for solid waste disposal in the short, medium and long term. From a national strategic point of view, it was felt that a diversified approach for waste disposal involving landfilling and incineration together with minimisation measures and recycling be adopted. The overall objective is to reduce the generation of waste as well as the environmental impact to ensure that the health of the population and the quality of the environmental resources are not adversely affected.

Following the promulgation of the Environment Protection (Polyethylene (PET) Bottle Permit) Regulations in 2001, the aim of which is to develop 'product responsibility' in the bottlers for the proper management of the bottles even after it has been sold, a PET bottles recycling project was set up by the association of bottlers. Bins have been placed at strategic places around the country for the collection of the PET bottles. Until now, about 60 tonnes of bottles have been collected and exported for recycling. Furthermore, a local company is currently recycling some 45 tonnes of plastic waste annually. The recycled plastic is used for the manufacture of refuse bags, plastic furniture, and other products. Measures have also been taken to ban the manufacture and import of some type of plastic carry bags. Plastic bags, besides being non-biodegradable, contain, if coloured, harmful toxic metals like chromium and copper, which may cause allergies. Since 1997, some paper recycling is also carried out by a local company. The company produces mainly corrugated cardboard boxes.

2.3.4 Waste water

The domestic and industrial wastewaters also present serious problems to the health of the population. Currently, only 20% of households, mostly in the urban regions of Port Louis and Plaines Wilhems, are connected to the sewerage network. The current system provides only preliminary treatment before discharge into the sea. The remaining 80% of households have recourse mostly to absorption pits or septic tanks leading to an increase in the water usage and in the risk of polluting nearby surface or underground water.

In 1994, the National Sewerage Master Plan, which aims at connecting at least 50% of households to the sewerage network by 2010 and 80% by 2020, was adopted. Many components of the Plan are currently being implemented. Among which is the Grand Baie Sewerage Project which aims at providing sewerage facilities in the regions from Trou aux Biches to Cap Malheureux as well as the St Martin Sewerage Treatment Plant which is being upgraded. Treated water from these plants will be used for

irrigation while studies have been carried out for the use of treated sludge as fertilisers in sugar cane fields.

2.4 Preventive health

Prevention of illnesses and the spread of communicable and non-communicable diseases is an important element of the health services. The government, in addition to the curative health facilities mentioned in the preceding chapter, provides for services to promote health through a number of programmes and activities.

The Health Inspectorate Division of the Ministry of Health & Quality of Life carries out a number of activities to raise awareness on the control of communicable diseases and to maintain sanitary standards. The activities include talks to school children and to members of the public on personal and environmental hygiene, disinfections, pest control, control over places where food is sold, examination of foods offered in restaurants or public places, inspection at the central abattoir, and visits to educational, commercial and industrial establishments. During the year 2000, 62,261 inspections were carried out and 3,939 notices were served in connection with non-compliance with standards as stipulated in the Food Act.

All incoming planes and ships require clearance from the Health Inspectorate before disembarking passengers while passengers from certain countries at risk are put under surveillance for malaria and other infectious diseases. Furthermore, some ships are subject to rat extermination operations. In order to control the spread of infectious diseases, the staff of the Health Inspectorate Division spray DDT to kill adult mosquitoes and larviciding abate(temphos) to kill larvae on stagnant water.

The Non-Communicable Disease Programme, which coordinates all activities aimed at controlling the NCDs, is based on two axes. The first one is the early detection of diseases such as diabetes mellitus, hypertension, and breast and cervical cancer through the ongoing screening programme carried out throughout the island by the "Caravane de Santé".

The main objectives of the NCD mobile service are to:

- a) screen people for NCD's, which include diabetes, hypertension, problem of vision, obesity and breast and cervical cancer.
- b) give each citizen a health card with details of his/her health status including results of the NCD's test;
- c) educate the community on risk factors for NCDs and behavioural changes needed to cope with changing patterns of diseases.

The NCD mobile service comprises five caravanes in Mauritius and one in Rodrigues. The "Caravane de Sante" which was launched in March 2001, has visited more than 180 localities in Mauritius up to end of June 2003. Some 132,983 persons have been screened. More than 30,000 women aged between 35 and 60 years have been screened for breast and cervical cancers.

About 7,947 new cases of diabetes and 25,557 new cases of hypertension have been recorded (Table 2.1). It has also been noted that more than 70% of persons screened are not doing physical exercises at all. The results of the smears reported up to date, indicate that 670 cases of smears are abnormal. All these women have been recalled for treatment. Out of the 31,832 women screened for breast cancer, 964 were detected with disorders.

Table 2.1 - Report on NCD Mobile Service (Caravane de Sante)

Period covered: 22nd March 2001 to 30th June 2003

		Total		Male		Female	
		No.	% of population screened	No.	% of population screened	No.	% of population screened
	Population screened	132,983		49,266		83,717	
New cases	Number of new cases with Diabetes Mellitus (DM)	7,947	6.0	3,511	7.1	4,436	5.3
	Number of new cases with Hypertension (HBP)	25,557	19.2	11,450	23.2	14,107	16.9
	Number of new cases with both DM and HBP (included above)	2,433	1.8	1,229	2.5	1,204	1.4
	Number of cases with overweight and obesity	65,788	49.5	21,649	43.9	44,139	52.7
Old cases	Persons already following treatment for DM	11,778	8.9	4,144	8.4	7,634	9.1
	Persons already following treatment for HBP	17,635	13.3	5,425	11.0	12,210	14.6
	Number of persons not doing exercises	94,272	70.9	27,548	55.9	66,724	79.7

The second axis of the NCD programme is health promotion. It aims at raising awareness on the risk factors, such as smoking and alcohol consumption, at encouraging the practice of physical exercises and at adopting a healthy nutritional habit. The Health Promotion Programme reached 95,819 persons between March 2001 and June 2003.

The Maternal and Child Health Division of the Ministry of Health & Quality of Life, as well as NGO's (Non-Governmental Organisations) like Action Familiale and the Mauritius Family Planning Association provide advice and various services to the population in the field of family planning. Antenatal services are available in hospitals and in most of the places where primary health care services are provided. Care is provided to expecting women from the first contact with the health system, usually the third month of pregnancy, to the time of delivery.

The school health service consists mainly of visiting and screening students of all primary schools and of some pre-primary schools. A group of nursing staff, sometimes accompanied by a doctor, examines the students in order to detect any health problem such as nits and lice, underweight and dental problems. The dental health service, besides being involved in the curative activities, also works for the prevention of dental and periodontal diseases. In this context, preprimary and primary schoolchildren as well as expectant and nursing mothers are screened on a regular basis.

The immunization programme is another important branch of the preventive health services. The programme, in force since 1960, covers vaccines against poliomyelitis, tuberculosis, measles, mumps, rubella, diphtheria, pertussis, tetanus and hepatitis B. Vaccines against diseases such as yellow fever, influenza, typhoid fever, and meningitis are done under request. In 2000, the coverage of immunizations against tuberculosis (BCG) was 88% of total registered livebirths, and that against Diphtheria, Poliomyelitis and Whooping Cough (DPT) was 88%. Coverage against Measles (MMR), and Hepatitis B introduced in 2000 was 84% and 88% respectively. The corresponding figures for BCG, DPT and MMR in 1990 were 87%, 85% and 76% respectively

Tabel 2.2 - Immunisation coverage in the Republic of Mauritius, 1990 & 2000

Disease (vaccine)	Coverage rate per 100 registered live births	
	1990	2000
Tuberculosis (BCG)	87	88
Diphtheria, poliomyelitis and whooping cough (DPT)	85	88
Measles (MMR)	76	84
Hepatitis B (Hep)	.. ^{1/}	88

1/ was not covered by the Expanded Programme
on Immunisation prior to year 2000

2.5 Haemodialysis

Haemodialysis services are now available free of cost in the public sector. At the end of the year 2000, there were 114 patients on dialysis in the three regional hospitals. The total number of dialysis sessions performed in these centres amounted to 12,466 for the year 2000. The corresponding figures in the private establishments were 379 patients for 49,628 sessions. On average, a patient needs 3 sessions per week.

2.6 CT-Scan

CT-Scan service which was not yet available in government hospitals in 2000, is now available at the Sir Seewoosagar Ramgoolam and Victoria hospitals. Prior to the availability of the service in hospitals, all patients in need were referred to various private establishments and all costs were borne by the Ministry of Health and Quality of Life. In 2000, 4,598 requests to have access the CT scan services in private clinics were made from patients of the nine government hospitals. The highest number came from Victoria Hospital with 1,160 requests, accounting for 25.2 % of the total requests, followed by SSRN Hospital with 1,063 requests or 23.1%, Dr Jeetoo Hospital with 913 requests or 19.9 %, J. Nehru Hospital with 518 requests or 11.3% and Flacq Hospital with 512 requests or 11.1%. The four specialised hospitals altogether made 432 requests. The overall positivity rate of the CT-Scan tests for all hospitals was 62.9 %. The positivity rates for the five regional hospitals ranged from 57.4 % to 71.2 % with an average rate of 64.7 % while that for the four specialised hospitals was 45.6%.

2.7 Occupational Health

Another component of preventive health is the provision of services as regards occupational and work related diseases in out-patients clinics. People working in environment where the risks of developing health problems are high, are regularly screened at different sites around the Island of Mauritius. In 2000, the total number of attendances at these clinics was 3,640, of whom 3,035 were males. During the same year, 201 persons were detected as new cases of occupational and work related diseases.

Table 2.3 - New cases of occupational and work related diseases seen at occupational health clinics by sex - 2000

Condition	Number of cases		
	Total	Male	Female
Backache	49	38	11
Contact dermatitis	48	43	5
Musculoskeletal pain (other than backache)	29	22	7
Noise induced hearing loss	16	16	-
Occupational/work related asthma	12	8	4
Allergic rhinitis	12	10	2
Stress related symptoms	10	5	5
Upper respiratory tract irritation	7	7	-
Pesticide poisoning/overexposure	7	7	-
Chemical intoxication (other than solvents)	5	5	-
Organic toxic syndrome (solvents)	3	2	1
Chronic obstructive lung disease	3	2	1
Total	201	165	36

2.8 Community based rehabilitation programme

The Community Based Rehabilitation (CBR) Programme of the Ministry of Health & Quality of Life which came into operation during the early 90's provides supportive services for the rehabilitation of disabled persons. These services consist mainly of visits to disabled persons by the CBR programme staff in their home and to institutions involved in the rehabilitation or care of such persons.

Disabled persons in need of support are referred to various government specialised agencies as well as NGO's for care, assistance and supply of supportive appliances. During the year 2000, 1,885 new cases were identified by the CBR Programme; this brings the total number of persons covered by the Programme to 8,040.

Table 2.4 - Activities of the CBR programme in 2000

Type of activity	No.
Visits to disabled persons	23,387
Referrals to specialised agencies	4,327
Visits to institutions	1,540
Appliances delivered	873

Table 2.5 - Appliances delivered under the CBR programme in 2000

Type of appliances	No.
Walking aids	367
Wheelchairs	228
Adapted appliances	119
Splints/calipers	73
Hearing aids	21
Artificial limbs	31
Other appliances	34

2.9 Survey on nutrition

A survey on Nutrition in Mauritius and Rodrigues was conducted in 1995 by the Ministry of Health and Quality of Life with the collaboration of the World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF). The objective of the survey was to assess the general nutritional status of the child, adult and pregnant woman in relation to micronutrient content.

The results showed that anaemia due to iron deficiency was practically non-existent in children, adult and pregnant women in Mauritius, but was still a problem, though minimal, in children of Rodrigues. There was no evidence of micronutrient malnutrition related to vitamin A, iodine and iron. The prevalence of exclusive breastfeeding was 12.2 weeks in Mauritius and 17.7 weeks in Rodrigues. About 98.1% of surveyed mothers considered breast milk as the best food for newborns. However for reasons such as insufficiency of milk and refusal of children, only 89% of the mothers reported to have breastfed their child.

The nutritional status of the adult Mauritians was similar to the affluent countries. About 39% of the adult Mauritians were obese or overweighted. The figures for India and China were 3.5% and 8.2% respectively whereas the corresponding figures for France and U.S.A were 32.4% and 55.2% respectively.

2.10 NCD surveys

Non-communicable disease (NCD) surveys were carried out in the Republic of Mauritius in 1987, 1992 and 1998 using comparable methodology and criteria at all three surveys. The surveys were conducted among a sample of adult population aged 30 years and over in the islands of Mauritius and Rodrigues.

For better comparison of results, age-standardised prevalence rates have been calculated to remove the effect of change in the age structure of the population. In 1998, the age-standardised prevalence rate of diabetes among the surveyed population was 19.5% compared to 16.9% in 1992 and 14.3% in 1987, showing continuous increase. One out of 5 persons surveyed had Type 2 diabetes (non-insulin dependent) and one out of 6 had impaired glucose tolerance (increased risk of developing diabetes). It was also found that the control of diabetes among those who had the disease was poor, that is, the glucose level in their blood was high due to non-intake of prescribed drugs or non-conformity to appropriate dieting regime.

The 1998 survey results indicate that the number of persons with hypertension increased by 20% compared with the 1987 survey results. The overall hypertension prevalence rate, which decreased from 30.2% in 1987 to 26.2% in 1992 rose in 1998 to reach a level of 29.6%. A similar trend is noted in the crude prevalence of high cholesterol. Thus, among the male population the rate decreased from 56.4% in 1987 to 33.8% in 1992 and rebound to 49.7% in 1998. The corresponding figures among the female population for the years 1987, 1992 and 1998 were 52.9%, 31.7% and 37.6% respectively.

Based on the survey results, cigarette smoking is seen to decrease continuously for adults aged 30 years and above. The crude prevalence rate for males, which was 57.9% in 1987, fell to 47.3% in 1992 and 42.0% in 1998. The corresponding figures for females for the years 1987, 1992 and 1998 were 7.0%, 4.8% and 3.3% respectively. However, among youngsters the perception is that cigarette smoking is on the increase. According to a study conducted by the Mauritius Institute of Health in 2000 among students aged 11-20 attending secondary colleges, it was found that 19% of them were smokers.

Table 2.6 - Prevalence of selected diseases by sex, Island of Mauritius - 1987, 1992 and 1998
Adult population aged 30 years and above

1. Age standardised prevalence rate

Disease/ sex	Year		
	1987	1992	1998
Diabetes mellitus			
Male	14.2	16.3	18.4
Female	14.5	17.4	20.6
Both Sexes	14.3	16.9	19.5
Impaired Glucose Tolerance			
Male	15.6	14.9	11.8
Female	22.5	19.3	20.2
Both Sexes	19.3	17.3	16.6
Hypertension			
Male	31.7	26.5	30.0
Female	28.9	26.1	29.5
Both Sexes	30.2	26.2	29.6
Obesity & Overweight			
Male	24.8	33.4	36.1
Female	35.7	45.7	44.2
Both Sexes	30.5	40.0	40.6

2. Crude prevalence rate

Disease/ sex	Year		
	1987	1992	1998
High Cholesterol			
Male	56.4	33.8	49.7
Female	52.9	31.7	37.6
Both Sexes	54.5	32.7	42.9
Abusive alcoholic Consumption			
Male	18.2	14.4	15.9
Female	2.1	1.6	0.5
Both Sexes	9.6	7.5	7.2
Cigarette Smoking			
Male	57.9	47.3	42.0
Female	7.0	4.8	3.3
Both Sexes	30.6	24.3	20.2

The prevalence of asthma measured at the 1998 NCD Survey was 3.8% in the adult population. About 73% of them had used inhalers.

2.11 Survey on knowledge, attitudes, beliefs and practices (HIV/AIDS)

The National AIDS Control and Prevention Programme (NACP) was established in the 1987. The aim of the programme is to sensitise the population through educational activities on the primary prevention of HIV infections. The activities include training of medical and paramedical staff, awareness sessions among girls and women, and educational programme in secondary schools. Particular attention is given to sex workers, sailors, drug addicts, prison inmates, homosexuals and workers of the tourist sector.

In 2001, government approved a multi-sectoral National HIV/AIDS strategic plan for 2001 to 2005 and its implementation has already started. Some of the objectives of the strategic plan are to generate an environment conducive to effective HIV/AIDS control, to reduce new HIV infection among high risk groups, to reduce mother to child transmission of HIV and to provide care and support to people infected and affected by HIV. It should be noted that as from 1987, HIV antibodies screening among blood donors is mandatory in order to assure safe blood transfusion.

A household based survey on the Knowledge, Attitudes, Beliefs and Practices related to HIV/AIDS in the Republic of Mauritius was conducted from October 1996 to February 1997. The aim of the community based survey was to formulate recommendations in view of increasing the knowledge and strengthening the preventive practices against the transmission of HIV/AIDS infection in the population.

Some findings of the study are given below:

- (a) 1.4 % of the respondents of the Island of Mauritius had sexual intercourse with non-regular partners; the corresponding figure for Rodrigues was 10.0%.
- (b) 1.0% of the respondents in Mauritius did not use condoms as a protective measure with non-regular partners compared to 7.6% in Rodrigues.
- (c) Respondents who had heard of AIDS had some knowledge on the disease and were aware of the danger it represents to humanity. In fact, 92.7% of the respondents in Mauritius and 81.2% of the respondents in Rodrigues had a fairly appreciable knowledge on the disease.
- (d) In Mauritius, 5.4% of the respondents had never heard about condoms whereas 11.7% had never seen one. The corresponding figures in Rodrigues were 9.1% and 19.2% respectively.
- (e) In Mauritius, 9.4% of respondents did not know if one can contract a disease through sex as compared to 9.1% in Rodrigues.

2.12 Burden of disease study

A national burden of disease study for Mauritius for the year 1993 was carried out in 1995 and updated in 1998. The burden of disease study used a methodology developed by Dr Murray and colleagues for the Global Burden of Disease (GBD) Study. The study measured the combined impact of incidence of death and disability on health in DALYs (Disability Adjusted Life Years). The two components of DALY are the YLL (years of life lost due to premature mortality) and the YLD (years lived with a disability). For Mauritius, the mortality data for 1993 were adjusted using data of years 1989 to 1993. The morbidity data were those available or estimated for year 1993. The diseases were divided into three groups, namely:

- Communicable Diseases, Maternal and Neonatal Conditions
- Non-communicable Diseases
- Injuries

The results of the 1993 burden of disease study in Mauritius showed that 61.2% of DALYs was due to deaths that occurred in 1993 and the remainder due to disabling outcomes of diseases. Males contributed to 58.4% (84,719 DALYs) of the total burden and females to 41.6% (60,297 DALYs). The percentages of DALYs among the males and among the females in each of the three groups of diseases, namely, Communicable Diseases, Maternal and Neonatal Conditions; Non-communicable Diseases and Injuries, are given below:

Table 2.7 - Percentage distribution of DALYs by sex and group of diseases

Group of diseases	Male	Female	Both Sexes
Communicable Diseases Maternal and Neonatal Conditions	14	16	15
Non-communicable Diseases	74	76	75
Injuries	12	8	10
Total	100	100	100

The study shows that a high proportion, about 75%, of the DALYs were due to the non-communicable diseases. The percentage was nearly similar for males and for females. DALYS due to “Communicable Diseases, Maternal and Neonatal Conditions” are mainly attributable to neonatal conditions. As regards the burden of diseases due to injuries, DALYS for males was found to be 50% higher than for females. In the injury group, road traffic accidents and suicides predominated among men while among women suicides were the most important factor.

Table 2.8 - Ranking of the ten most prominent diseases by sex

Disease	Both Sexes		Male		Female	
	% of DALYs	Rank	% of DALYs	Rank	% of DALYs	Rank
Ischaemic heart disease	10.7	1	11.8	1	9.1	2
Depression	6.4	2	3.9	7	10.0	1
Stroke	6.4	3	6.5	3	6.1	4
Diabetes	6.2	4	5.5	4	7.1	3
Alcohol abuse	4.4	5	7.3	2	0.4	10
Low birth weight	3.5	6	3.6	8	3.5	5
Road traffic accidents	3.2	7	4.6	5	1.2	9
Liver cirrhosis	2.9	8	4.1	6	1.3	8
Suicide	2.6	9	2.9	9	2.3	7
Hypertensive heart disease	2.6	10	2.2	10	3.1	6

From the table above, ischaemic heart disease, stroke and diabetes were important contributors to the burden of diseases in both men and women. It is worth mentioning that depression was the first contributor for women while it was the seventh for men.

It must be pointed out that the Burden of Disease in Mauritius reflected the 1993 health status of the population of the country taking into consideration the preventive and curative services already in place. The study confirmed that non-communicable diseases especially cardio-vascular diseases constitute the most important health problem in Mauritius. One of the priorities of the Ministry of Health & Quality of Life is to improve the measures to prevent or treat hypertension and diabetes, which are the main causes of cardio-vascular diseases.

Chapter 3 - Morbidity

3.1 Introduction

Morbidity statistics are an important complement to mortality statistics in the study of the health status of the population of a country. Mortality statistics are useful but they do not reveal the whole burden of ill-health in a country. There are diseases that are responsible for a lot of suffering and absorb a large amount of health resources, but do not occupy a prominent place in mortality statistics as they do not often lead to death. A study of morbidity in addition to mortality provides a much more comprehensive picture of the health scene than the study of mortality alone.

3.2 Sources of morbidity statistics in Mauritius and their limitations

The main sources of morbidity statistics in Mauritius are, as in many other countries, hospital in-patient data and records of first attendances at dispensaries. Another important source is the notification of communicable diseases to the sanitary authorities. Other sources are from the school health services, occupational health unit, epidemiological surveillance, HIV/AIDS Unit, etc.

The main weaknesses of morbidity statistics are comparability over time as diagnostic means improve (e.g laboratories, X-ray facilities, high tech equipment).

In spite of these difficulties, valuable information on the evolution of morbidity patterns can be gathered from an examination of data from the sources mentioned above. It should be noted that the distribution of out-patient attendances by cause is not available. In 2000, a total of 204,673 cases was treated as in-patients in government hospitals and 27,131 in private clinics. The corresponding figures for 1990 were 141,710 and 16,986 respectively. First attendances at dispensary service points, can also give an indication on the patient morbidity situation.

3.3 Morbidity patterns (Island of Mauritius)

The principal causes of general hospitals discharges for the years 1990 and 2000 are given in Table 3.1. A large percentage (17.0%) of cases was due to complications of pregnancy, childbirth, and the puerperium. The percentages for the diseases of the circulatory, genitourinary, respiratory and digestive systems were 9.2%, 7.3%, 6.9% and 6.8% respectively. The group "Injury and poisoning" represented some 11% of the discharges.

Women who delivered normally constituted 6.6% of all cases treated as in-patients in government general hospitals in 2000. Some 1.3% of all cases were for complications of abortion and a further 9.1% for other complications of pregnancy, childbirth and the puerperium so that in all, about one sixth of all cases treated in general hospitals were in connection with pregnancy, childbirth and the puerperium. "Heart diseases" (excluding "Hypertensive diseases", "Acute rheumatic fever" and "Diseases of pulmonary circulation") were responsible for 4.2% of cases treated, while "bronchitis (chronic and unspecified), emphysema and asthma" were responsible for 2.6%. Table 3.2 gives further details.

Table 3.1 - General hospital discharges (including deaths) by I.C.D.^{1/} Chapter - 1990 & 2000
Island of Mauritius

ICD Chapter (1975 Revision)	1990		2000	
	Number	%	Number	%
1 Infectious and Parasitic diseases	4,385	4.0	7,310	4.2
2 Neoplasms	1,386	1.3	3,780	2.2
3 Endocrine, nutritional and metabolic diseases, and immunity disorders	3,957	3.6	7,194	4.1
4 Diseases of the blood and blood-forming organs	938	0.9	1,379	0.8
5 Mental disorders	1,562	1.4	4,713	2.7
6 Diseases of the nervous system and sense organs	1,571	1.4	1,934	1.1
7 Diseases of the circulatory system	10,279	9.4	16,028	9.2
8 Diseases of the respiratory system	7,298	6.7	12,021	6.9
9 Diseases of the digestive system	8,370	7.6	11,768	6.8
10 Diseases of the genitourinary system	6,779	6.2	12,718	7.3
11 Complications of pregnancy, childbirth and the puerperium	24,616	22.5	29,565	17.0
12 Diseases of the skin and subcutaneous tissue	3,640	3.3	5,934	3.4
13 Diseases of the Muskeletal system and connective tissue	3,727	3.4	7,838	4.5
14 Congenital anomalies	302	0.3	751	0.4
15 Certain conditions originating in the perinatal period	2,963	2.7	4,080	2.4
16 Symptoms, signs and ill-defined conditions	13,268	12.1	27,520	15.9
17 Injury and poisoning	14,392	13.2	19,018	11.0
Total	109,433	100.0	173,551	100.0

1/ International Statistical Classification of Diseases, Injuries and Cause of Death, Revision of 1975

Table 3.2 - Principal causes of general hospital discharges(including deaths) by sex - 2000
Island of Mauritius

Cause (I.C.D. 1975 Revision)	Male	Female	Both Sexes	
	No.	No.	No.	%
1. Complications of pregnancy, childbirth, and the puerperium	-	15,723	15,723	9.1
2. Delivery without mention of complications	-	11,534	11,534	6.6
3. Heart diseases ^{1/}	3,651	3,704	7,355	4.2
4. Abdominal pain	3,461	3,877	7,338	4.2
5. Ill-defined intestinal infections (colitis, enteritis, gastro-enteritis, diarrhoea)	3,250	3,417	6,667	3.8
6. Diabetes mellitus	2,527	3,170	5,697	3.3
7. Acute respiratory infections (excluding pneumonia and influenza)	2,496	2,180	4,676	2.7
8. Hypertensive disease	1,810	2,842	4,652	2.7
9. Bronchitis (chronic and unspecified), emphysema and asthma	2,233	2,332	4,565	2.6
10. Ankylosing spondylitis and other dorsopathies	2,516	1,727	4,243	2.4
11. Gastritis and duodenitis	2,371	1,800	4,171	2.4
12. Fractures	2,589	1,158	3,747	2.2
13. Cellulitis and abscess	1,955	1,168	3,123	1.8
14. Intracranial and internal injuries, including nerves	2,087	999	3,086	1.8
15. Chest pain	1,549	1,171	2,720	1.6
16. Rheumatism, excluding the back	1,358	1,219	2,577	1.5
17. Alcohol dependence syndrome	2,394	146	2,540	1.5
18. Noninflammatory disorders of vagina	-	2,437	2,437	1.4
19. Poisonings and toxic effects	1,140	1,290	2,430	1.4
20. Abortion	-	2,308	2,308	1.3
21. Malaise and fatigue	967	1,339	2,306	1.3
22. Cerebrovascular disease	1,240	997	2,237	1.3
23. Pyrexia of unknown origin	1,108	1,106	2,214	1.3
24. Nausea and vomiting	916	1,135	2,051	1.2
25. Nephritis, nephrotic syndrome and nephrosis	1,025	929	1,954	1.1
26. Convulsions	1,233	676	1,909	1.1
27. Dyspnoea and respiratory abnormalities	887	901	1,788	1.0
28. Open wound and injury to blood vessels	1,215	323	1,538	0.9
29. Renal colic	1,020	430	1,450	0.8
30. Gastrointestinal haemorrhage	1,011	360	1,371	0.8
31. Diseases of male genital organs	1,228	-	1,228	0.7
32. Anaemias	378	839	1,217	0.7
33. Benign neoplasm of uterus	-	1,168	1,168	0.7
34. Hypoglycaemia	589	510	1,099	0.6
35. Hernia of abdominal cavity	718	348	1,066	0.6
36. Urinary tract infection, site not specified	393	657	1,050	0.6
37. Appendicitis	452	392	844	0.5
38. Epilepsy	504	327	831	0.5
39. Haemorrhoids	375	417	792	0.5
40. Nondependent abuse of alcohol	611	81	692	0.4
41. Burns	394	289	683	0.4
All other causes	21,120	21,354	42,474	24.5
TOTAL	74,771	98,780	173,551	100.0

^{1/} excluding "Hypertensive disease", "Acute rheumatic fever" and "Diseases of pulmonary circulation"

Note: The above table is based on data received on in-patients from the regional and district hospitals.

Statistics by cause of attendance are not available for those attending out-patient departments of hospitals, but are available only for Area Health Centres, Community Health Centres and mobile dispensaries. These statistics provide a fairly good picture of the morbidity situation characterising the first contact of the public with the health system. Table 3.3 reveals that influenza topped the list with 22.4% of first attendances in 2000. In second place was superficial injury, contusion and crushing with intact skin surface, with 5.7%. In third place was abdominal pain and colic with 5.4%, followed by gastritis and duodenitis with 5.3% and symptoms involving head and neck with 4.3%.

Table 3.3 - Principal causes of first attendances^{1/} for the treatment of common diseases

and injuries at mediclinics, area health centres, community health centres and mobile dispensaries - 2000

(excluding area and community health centres functioning as the unsorted out-patient department of a hospital)

Island of Mauritius

Cause (I.C.D. 1975 Revision)	First attendances			
	Male	Female	B.Sexes	
			No.	%
1. Influenza	131,509	138,361	269,870	22.4
2. Superficial injury, contusion and crushing with intact skin surface	39,159	29,232	68,391	5.7
3. Abdominal pain and colic	30,388	34,924	65,312	5.4
4. Gastritis and duodenitis	31,463	31,867	63,330	5.3
5. Symptoms involving head and neck	24,170	27,400	51,570	4.3
6. Infectious colitis, enteritis, gastro-enteritis, diarrhoea	24,111	24,687	48,798	4.1
7. Laceration and open wound	25,477	19,152	44,629	3.7
8. Diseases of the eye and adnexa	20,904	21,346	42,250	3.5
9. Diseases of the ear and mastoid process	14,252	15,198	29,450	2.4
10. Pyrexia of unknown origin	12,009	12,930	24,939	2.1
11. Symptoms involving respiratory system and other chest symptoms	11,397	12,644	24,041	2.0
12. Chronic diseases of tonsils and adenoids	11,272	12,547	23,819	2.0
13. Hypertensive disease	10,720	10,855	21,575	1.8
14. Rheumatism, excluding the back	8,253	11,946	20,199	1.7
15. Diseases due to helminths	8,876	9,460	18,336	1.5
16. Diabetes mellitus	8,721	8,927	17,648	1.5
17. Acute bronchitis and bronchiolitis	8,610	8,766	17,376	1.4
18. Fractures, dislocations, sprains and strains	9,419	7,269	16,688	1.4
19. Scabies	8,033	8,278	16,311	1.4
20. Chronic bronchitis, emphysema and asthma	7,585	7,944	15,529	1.3
21. Avitaminoses and other nutritional deficiency	6,236	8,620	14,856	1.2
22. Anaemias	3,718	8,111	11,829	1.0
23. Symptoms involving urinary system	4,632	6,945	11,577	1.0
24. Arthropathies and related disorders	4,295	5,499	9,794	0.8
25. Ankylosing spondylitis and other dorsopathies	3,880	4,450	8,330	0.7
All other causes	112,076	135,054	247,130	20.5
TOTAL	581,165	622,412	1,203,577	100.0

^{1/} Excluding attendances after normal working hours at certain health centres

3.4 Morbidity in Rodrigues

In 2000, the number of discharges at Queen Elizabeth Hospital, Mont Lubin and La Ferme Health Centres was 9,145 (Table 3.4). The main causes of discharges were “complications of pregnancy, childbirth and the puerperium” (14.3%), “acute respiratory infections” (4.9%), “abdominal pain” (4.1%), “bronchitis-chronic and unspecified, emphysema and asthma” (4.0%), “hypertensive disease” (3.8%), “diabetes mellitus” (3.7%) and “ill-defined intestinal infections (colitis, enteritis, gastro-enteritis, diarrhoea)” (3.7%).

In the same year, the principal causes of first attendances at area and community health centres which numbered 16,021 (Table 3.5) were “symptoms involving respiratory system and other chest diseases” (5.9%), “influenza” (5.8%), “abdominal pain and colic” (5.4%), “symptoms involving head and neck” (4.9%), “gastritis and duodenitis” (4.4%), and “ill-defined intestinal infections - colitis, enteritis, gastro-enteritis, diarrhoea” (3.9%). Scabies were responsible for 1.2% of first attendances compared to about 9.5% in 1990 when scabies was the principal cause for first attendances. This is an indication that environmental hygiene and sanitation have improved during the past decade.

Table 3.4 - Principal causes of discharges from hospital and health centres - 2000
Island of Rodrigues

Cause I.C.D.1975 revision	Discharges			
	Male	Female	Total	
			No.	%
1. Complications of pregnancy, childbirth and the puerperium	-	1,308	1,308	14.3
2. Ill-defined intestinal infections (colitis, enteritis, gastro-enteritis, diarrhoea)	152	182	334	3.7
3. Bronchitis (chronic and unspecified), emphysema, and asthma	196	170	366	4.0
4. Acute respiratory infections	228	218	446	4.9
5. Delivery without mention of complications	-	302	302	3.3
6. Hypertensive disease	131	213	344	3.8
7. Diabetes mellitus	96	238	334	3.7
8. Abdominal pain	210	169	379	4.1
9. Heart diseases ^{1/}	90	104	194	2.1
10. Non-inflammatory disorders of vagina	-	293	293	3.2
11. Cellulitis and abscess	121	93	214	2.3
12. Pyrexia of unknown origin	83	108	191	2.1
13. Gastritis and duodenitis	99	79	178	1.9
14. Nausea and vomiting	94	112	206	2.3
15. Convulsions	99	42	141	1.5
16. Poisonings and toxic effects	61	45	106	1.2
17. Rheumatism, excluding the back	98	69	167	1.8
18. Fractures	85	63	148	1.6
19. Appendicitis	38	68	106	1.2
19. Ankylosing spondylitis and other dorsopathies	74	59	133	1.5
21. Superficial injury	87	36	123	1.3
22. Dyspnoea and respiratory abnormalities	81	64	145	1.6
23. Malaise and fatigue	47	103	150	1.6
24. Symptoms involving urinary system	44	23	67	0.7
25. Cerebrovascular disease	19	24	43	0.5
26. Symptoms involving head and neck	59	38	97	1.1
27. Chest pain	44	26	70	0.8
28. Epilepsy	65	25	90	1.0
29. Non-dependent abuse of alcohol	38	3	41	0.4
30. Neurotic disorders	19	34	53	0.6
31. Disorders of eye and adnexa	33	33	66	0.7
32. Anaemias	10	16	26	0.3
33. Open wound and injury to blood vessels	25	7	32	0.3
34. Abortion	-	60	60	0.7
35. Alcohol dependence syndrome	23	4	27	0.3
35. Gastrointestinal haemorrhage	28	9	37	0.4
37. Symptoms involving cardiovascular system	10	35	45	0.5
38. Inflammatory disease of breast	-	35	35	0.4
39. Gout	23	3	26	0.3
40. Alcoholic psychoses	10	3	13	0.1
All other causes	1,029	980	2,009	22.0
T otal	3,649	5,496	9,145	100.0

1/ excluding "Acute rheumatic fever", "Hypertensive disease" and "Diseases of pulmonary circulation"

Table 3.5 - Principal causes of first attendances at community health centres

for the treatment of common diseases and injuries - 2000

Island of Rodrigues

Cause I.C.D.1975 Revision	First attendances			
	Male	Female	B.sexes	
			No.	%
1. Symptoms involving respiratory system and other chest diseases	389	552	941	5.9
2. Influenza	361	572	933	5.8
3. Gastritis and duodenitis	279	424	703	4.4
4. Abdominal pain and colic	346	525	871	5.4
5. Symptoms involving head and neck	263	524	787	4.9
6. Superficial injury, contusion and crushing with intact skin surface	283	229	512	3.2
7. Ill-defined intestinal infections (colitis, enteritis, gastro-enteritis, diarrhoea)	277	346	623	3.9
8. Diseases due to helminths	202	292	494	3.1
9. Bronchitis (chronic and unspecified), emphysema, and asthma	176	198	374	2.3
10. Pyrexia of unknown origin	187	251	438	2.7
11. Diseases of the eye and adnexa	196	319	515	3.2
12. Laceration and open wound	180	109	289	1.8
13. Chronic diseases of tonsils and adenoids	48	72	120	0.7
14. Diseases of the ear and mastoid process	134	203	337	2.1
15. Acute bronchitis and bronchiolitis	93	89	182	1.1
16. Scabies	84	116	200	1.2
17. Avitaminoses & other nutritional deficiency	51	124	175	1.1
18. Anaemias	32	119	151	0.9
19. Rheumatism, excluding the back	73	105	178	1.1
20. Symptoms involving urinary system	65	125	190	1.2
21. Fractures, dislocations, sprains and strains	78	64	142	0.9
22. Diseases of teeth and supporting structures	63	81	144	0.9
23. Arthropathies and related disorders	85	159	244	1.5
24. Hypertensive disease	113	34	147	0.9
25. Ankylosing spondylitis and other dorsopathies	55	117	172	1.1
26. Symptoms involving heart	10	63	73	0.5
27. Diabetes mellitus	23	132	155	1.0
28. Burn	16	20	36	0.2
All other causes	2,003	3,892	5,895	36.8
Total	6,165	9,856	16,021	100.0

3.5 Incidence of cancer (Island of Mauritius)

Figures relating to the incidence of cancer, that is new cases diagnosed, in the Island of Mauritius, obtained from the National Cancer Registry are given in Tables 3.6 and 3.7 for the periods 1989 to 1996 and 1997 to 1998 respectively.

From 1989 to 1996, there were 7,442 new cases of cancer, that is an annual average of 930. About 41.6% were males. For the period 1997 to 1998, 2,484 new cases were diagnosed, that is an annual average of 1,242. The percentage of males was 46.2%. The 33.5% increase in the annual average figure should be interpreted with care, as it could be a result of an improvement in the registration system.

The most common types of cancer among males were that of the haematopoietic system, that is, bone marrow, lymph nodes etc. The proportion of that type of cancer increased from 6.0% in the 1989-1996 period to 9.4% in the 1997-1998 period. During the same period, cancer of the stomach decreased slightly from 8.6% to 8.4%, that of the trachea, bronchus and lung from 12.1% to 8.4% while that of the prostate gland increased from 6.5% to 7.8%.

Among females, the most common types of cancer were that of the breast. The percentage which was 25.0% in the 1989-1996 period decreased slightly to 24.7% in the 1997-1998 period. During the same period, that of the cervix uteri decreased from 19.7% to 14.2%, that of the ovary from 5.6% to 5.0% while that of the haematopoietic system increased from 3.3% to 4.8%.

Table 3.6 - Incidence of cancer in the Island of Mauritius, period 1989-1996

Site of tumour (I.C.D. - Oncology 1975 Revision)	Male		Female		B.Sexes	
	No	%	No	%	No	%
Hypopharynx, oropharynx and nasopharynx	96	3.1	40	0.9	136	1.8
Base of tongue	71	2.3	27	0.6	98	1.3
Major salivary glands	25	0.8	19	0.4	44	0.6
Floor of mouth	29	0.9	10	0.2	39	0.5
Other & ill-defined sites of lip, oral cavity and pharynx	77	2.5	31	0.7	108	1.5
Total lip, oral cavity and pharynx	298	9.6	127	2.9	425	5.7
Stomach	266	8.6	151	3.5	417	5.6
Recto-sigmoid junction and anus	178	5.8	164	3.8	342	4.6
Oesophagus	114	3.7	76	1.7	190	2.6
Colon	80	2.6	97	2.2	177	2.4
Gall bladder	29	0.9	77	1.8	106	1.4
Liver and intra-hepatic bile ducts	51	1.6	42	1.0	93	1.2
Pancreas	45	1.5	40	0.9	85	1.1
Other & ill-defined sites of digestive organs	26	0.8	19	0.4	45	0.6
Total digestive organs	789	25.5	666	15.3	1,455	19.6
Trachea, bronchus and lung	373	12.1	65	1.5	438	5.9
Larynx	116	3.7	22	0.5	138	1.9
Other & ill-defined sites of respiratory system	21	0.7	9	0.2	30	0.4
Total respiratory system	510	16.5	96	2.2	606	8.1
Total bones, joints and articular cartilage	46	1.5	41	0.9	87	1.2
Total haematopoietic system	186	6.0	144	3.3	330	4.4
Total skin	125	4.0	120	2.8	245	3.3
Total connective, subcutaneous & soft tissues	34	1.1	25	0.6	59	0.8
Total breast	16	0.5	1,085	25.0	1,101	14.8
Cervix uteri	-	-	855	19.7	855	11.5
Ovary	-	-	245	5.6	245	3.3
Corpus uteri	-	-	113	2.6	113	1.5
Vagina and vulva	-	-	85	2.0	85	1.1
Other & ill-defined sites of female genital organs	-	-	59	1.4	59	0.8
Total female genital organs	-	-	1,357	31.2	1,357	18.2
Prostate gland	200	6.5	-	-	200	2.7
Penis	47	1.5	-	-	47	0.6
Testis	36	1.2	-	-	36	0.5
Total male genital organs	283	9.1	-	-	283	3.8
Bladder	184	5.9	69	1.6	253	3.4
Kidney, pelvis and ureter	40	1.3	26	0.6	66	0.9
Total urinary tract	224	7.2	95	2.2	319	4.3
Brain	97	3.1	95	2.2	192	2.6
Eye and adnexa	18	0.6	6	0.1	24	0.3
Meninges, spinal cord and other sites of central nervous system	24	0.8	29	0.7	53	0.7
Total eye, brain & other sites of central nervous system	139	4.5	130	3.0	269	3.6
Thyroid gland	8	0.3	48	1.1	56	0.8
Other endocrine glands	23	0.7	22	0.5	45	0.6
Total endocrine glands	31	1.0	70	1.6	101	1.4
Total lymph nodes	100	3.2	81	1.9	181	2.4
All other sites	314	10.1	310	7.1	624	8.4
Grand total	3,095	100.0	4,347	100.0	7,442	100.0

Table 3.7 - Incidence of cancer in the Island of Mauritius, period 1997-1998

Site of tumour (I.C.D. - Oncology 1975 Revision)	Male		Female		B.Sexes	
	No	%	No	%	No	%
Hypopharynx, oropharynx and nasopharynx	40	3.5	17	1.3	57	2.3
Base of tongue	36	3.1	4	0.3	40	1.6
Major salivary glands	8	0.7	8	0.6	16	0.6
Floor of mouth	10	0.9	1	0.1	11	0.4
Other & ill-defined sites of lip, oral cavity and pharynx	24	2.1	17	1.3	41	1.7
Total lip, oral cavity and pharynx	118	10.3	47	3.5	165	6.6
Stomach	96	8.4	41	3.1	137	5.5
Recto-sigmoid junction and anus	62	5.4	43	3.2	105	4.2
Oesophagus	49	4.3	27	2.0	76	3.1
Colon	37	3.2	26	1.9	63	2.5
Gall bladder	13	1.1	21	1.6	34	1.4
Liver and intra-hepatic bile ducts	24	2.1	16	1.2	40	1.6
Pancreas	20	1.7	15	1.1	35	1.4
Other & ill-defined sites of digestive organs	8	0.7	10	0.7	18	0.7
Total digestive organs	309	26.9	199	14.9	508	20.5
Trachea, bronchus and lung	96	8.4	23	1.7	119	4.8
Larynx	50	4.4	2	0.1	52	2.1
Other & ill-defined sites of respiratory system	10	0.9	4	0.3	14	0.6
Total respiratory system	156	13.6	29	2.2	185	7.4
Total bones, joints and articular cartilage	28	2.4	19	1.4	47	1.9
Total haematopoietic system	108	9.4	64	4.8	172	6.9
Total skin	46	4.0	48	3.6	94	3.8
Total connective, subcutaneous & soft tissues	-	-	3	0.2	3	0.1
Total breast	9	0.8	330	24.7	339	13.6
Cervix uteri	-	-	190	14.2	190	7.6
Ovary	-	-	67	5.0	67	2.7
Corpus uteri	-	-	38	2.8	38	1.5
Vagina and vulva	-	-	28	2.1	28	1.1
Other & ill-defined sites of female genital organs	-	-	38	2.8	38	1.5
Total female genital organs	-	-	361	27.0	361	14.5
Prostate gland	90	7.8	-	-	90	3.6
Penis	10	0.9	-	-	10	0.4
Testis	7	0.6	-	-	7	0.3
Total male genital organs	107	9.3	-	-	107	4.3
Bladder	44	3.8	18	1.3	62	2.5
Kidney, pelvis and ureter	19	1.7	15	1.1	34	1.4
Total urinary tract	63	5.5	33	2.5	96	3.9
Brain	35	3.0	29	2.2	64	2.6
Eye and adnexa	2	0.2	-	-	2	0.1
Meninges, spinal cord and other sites of central nervous system	3	0.3	2	0.1	5	0.2
Total eye, brain & other sites of central nervous system	40	3.5	31	2.3	71	2.9
Thyroid gland	7	0.6	32	2.4	39	1.6
Other endocrine glands	6	0.5	9	0.7	15	0.6
Total endocrine glands	13	1.1	41	3.1	54	2.2
Total lymph nodes	53	4.6	26	1.9	79	3.2
All other sites	98	8.5	105	7.9	203	8.2
Grand total	1,148	100.0	1,336	100.0	2,484	100.0

3.6 HIV / AIDS cases

The first case of AIDS in the Republic of Mauritius was notified in 1987. By the end of 2000, 287 cases of HIV/AIDS of whom 221 (145 males and 76 females) were Mauritians, were registered by the Ministry of Health & Quality of Life. Out of the 221 Mauritians, 64 passed away leaving a presumable number of 157 living with the virus at the end of 2000.

Among the infected Mauritians, about 70% of the 221 infected Mauritians were heterosexuals; 17% were heterosexual/intravenous drug users and about 3% were babies born of infected mothers. 64 of them have passed away.

In 2000, a total of 54,601 HIV tests was carried out and 57 (50 Mauritians and seven foreigners) were found to be positive. The number of new cases among Mauritians increased by 78.6% from 28 in 1999 to 50 in 2000. These new cases of HIV were found mostly among persons of high-risk groups, including inmates of prisons.

Figure 3.1 - HIV/AIDS cases registered among Mauritians during period 1987-2000

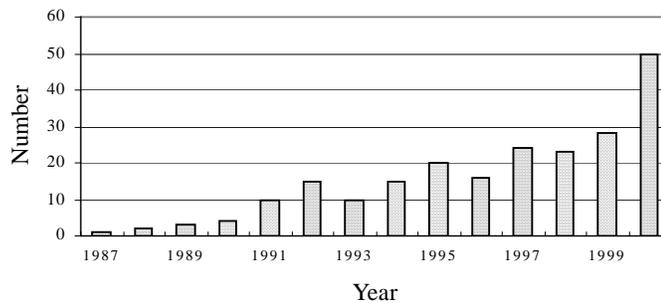


Figure 3.2 - HIV/AIDS cases registered among Mauritians during period 1987-2000, by mode of transmission

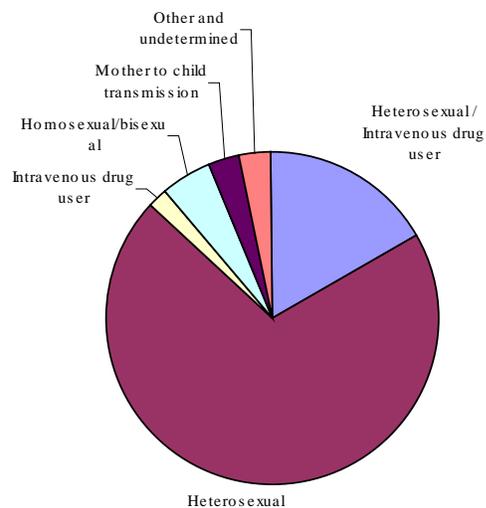


Table 3.8 - Statistics relating to notification of HIV/AIDS cases and death during period 1987-2000

Period	New cases of HIV/AIDS notified									Deaths registered among HIV/AIDS cases (Mauritian)		
	Mauritian			Non-Mauritian			Total			Male	Female	Both Sexes
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes			
1987-1994	43	17	60	24	6	30	67	23	90	19	3	22
1995	13	7	20	7	-	7	20	7	27	5	2	7
1996	9	7	16	5	2	7	14	9	23	4	2	6
1997	19	5	24	3	1	4	22	6	28	3	2	5
1998	13	10	23	5	1	6	18	11	29	2	3	5
1999	16	12	28	5	-	5	21	12	33	5	1	6
2000	32	18	50	3	4	7	35	22	57	10	3	13
Total	145	76	221	52	14	66	197	90	287	48	16	64

Table 3.9 - Statistics relating to HIV tests carried out during period 1987-2000

	1987 to 1997	1998	No. of tests	1999		2000		
				No.	Positive cases Rate per 100	No. of tests	Positive cases Rate per 100	
	No. of tests	No.	Rate per 100	No.	Rate per 100			
Blood donors - Island of Mauritius	167,740	22,497	25,536	2	0.01	27,885	3	0.01
Blood donors - Island of Rodrigues	2,165	536	500	-	-	500	-	-
Persons of high risk groups	21,787	3,325	3,737	23	0.62	4,218	28	0.66
Migrant workers (incoming foreigners)	-	-	-	-	-	1,777	-	-
Request for visa purposes (outgoing Mauritians)	4,129	-	31	-	-	38	-	-
Cardiac and renal patients undergoing surgery and their blood donors	5,696	1,647	2,024	-	-	2,184	-	-
Screening on target groups (incl. prison inmates)	24,746	4,426	4,485	6	0.13	3,319	20	0.60
Voluntary testing	520	170	195	-	-	334	-	-
Antenatal cases screened (Island of Mauritius)	-	6,099	11,736	2	0.02	13,454	6	0.04
Antenatal cases screened (Island of Rodrigues)	-	1,000	1,243	-	-	892	-	-
Total Tests	226,783	39,700	49,487	33	0.07	54,601	57	0.10

Chapter 4 - Mortality

4.1 Introduction

Mortality plays an important role in demography being one of the three factors of population change. In Mauritius, mortality statistics are usually obtained from the system of registration of vital events. Indicators derived from mortality statistics are essential tools for monitoring the health status of the population.

This chapter analyses the evolution in the level and pattern of mortality over time as well as differentials that exist due to demographic factors.

4.2 Trends in mortality level

Table 4.1 shows the evolution in the level of mortality as measured by the crude death rate (CDR) and the infant mortality rate (IMR). The crude death rate is defined as the number of deaths in a year per 1000 mid-year population while the infant mortality rate is defined as the number of infant deaths (aged less than one year) in a year per 1,000 live births.

The figures indicate a fall in the crude death rate from around 15 in the 1950's to around 7 in the 1980's for both the Republic of Mauritius and the Island of Mauritius. Thereafter, the rates oscillate at that level. In the Island of Rodrigues, the crude death rate fell from around 11 in the 50's to around 5 in the late eighties and the level does not vary much since then. It is to be noted that CDR does not take into account the age structure of the population and therefore it may not be appropriate to compare the rate for Mauritius with that of Rodrigues.

The infant mortality rate fell from around 80 in the early 50's to around 16 in 2000 in the Republic of Mauritius and the Island of Mauritius, and from around 110 to around 20 in the island of Rodrigues during the same period.

The general declining trend in mortality level over time is an indicator of improvement in the health status of the population.

Table 4.1 - Crude death rate and infant mortality rate, 1951 - 2000

Year	Republic of Mauritius		Island of Mauritius		Island of Rodrigues	
	CDR	IMR	CDR	IMR	CDR	IMR
1951-1955	14.6	82.0	14.7	81.3	11.1	109.4
1956-1960	11.7	69.6	11.6	68.2	14.5	115.2
1961-1965	9.3	61.3	9.2	60.4	11.8	86.6
1966-1970	8.5	67.2	8.5	66.3	11.2	89.7
1971	7.7	52.3	7.7	51.7	9.0	74.2
1972	7.9	65.1	7.9	63.8	9.3	75.4
1973	7.8	63.8	7.7	63.3	10.1	75.7
1974	7.3	46.4	7.3	45.6	9.8	71.9
1975	8.1	50.1	8.0	48.7	8.1	59.6
1976	7.7	40.2	7.8	40.7	7.8	57.2
1977	7.8	45.6	7.8	45.0	7.2	48.1
1978	7.1	34.7	7.1	33.9	8.2	56.4
1979	7.2	34.1	7.2	32.9	8.3	51.1
1980	7.2	32.9	7.1	32.3	8.6	57.1
1981	6.8	35.4	6.7	33.6	7.7	53.1
1982	6.6	30.4	6.6	29.4	7.0	56.7
1983	6.5	27.0	6.5	25.6	6.4	51.6
1984	6.6	24.8	6.6	23.1	6.5	53.7
1985	6.8	25.1	6.8	23.8	6.1	51.9
1986	6.6	27.3	6.7	26.3	5.6	48.8
1987	6.5	25.2	6.6	24.2	5.2	42.4
1988	6.6	22.5	6.6	22.0	5.5	44.4
1989	6.8	22.8	6.8	21.6	5.5	40.7
1990	6.6	20.4	6.7	19.9	5.8	40.7
1991	6.6	18.6	6.6	18.1	5.3	30.9
1992	6.5	18.6	6.5	18.4	5.1	26.5
1993	6.8	19.6	6.8	19.6	4.7	22.0
1994	6.7	18.1	6.7	18.0	4.7	21.1
1995	6.7	19.7	6.7	19.6	4.8	20.6
1996	6.8	22.1	6.8	22.2	4.9	20.3
1997	7.0	20.3	7.0	20.3	5.1	18.7
1998	6.8	19.3	6.8	19.4	5.0	21.5
1999	6.8	19.5	6.8	19.2	4.8	21.6
2000	6.7	15.9	6.8	15.8	5.1	23.5

4.3 Differentials by age and sex

Figure 4.1 shows that mortality varies with age, being relatively high during infancy, falls to a minimum at age 5-9 and thereafter increases with age.

As shown in table 4.2, the incidence of mortality is lower among females than among males at all ages. As a result, females tend to live longer than males.

Figure 4.1 - Male and female death rates, Republic of Mauritius -2000

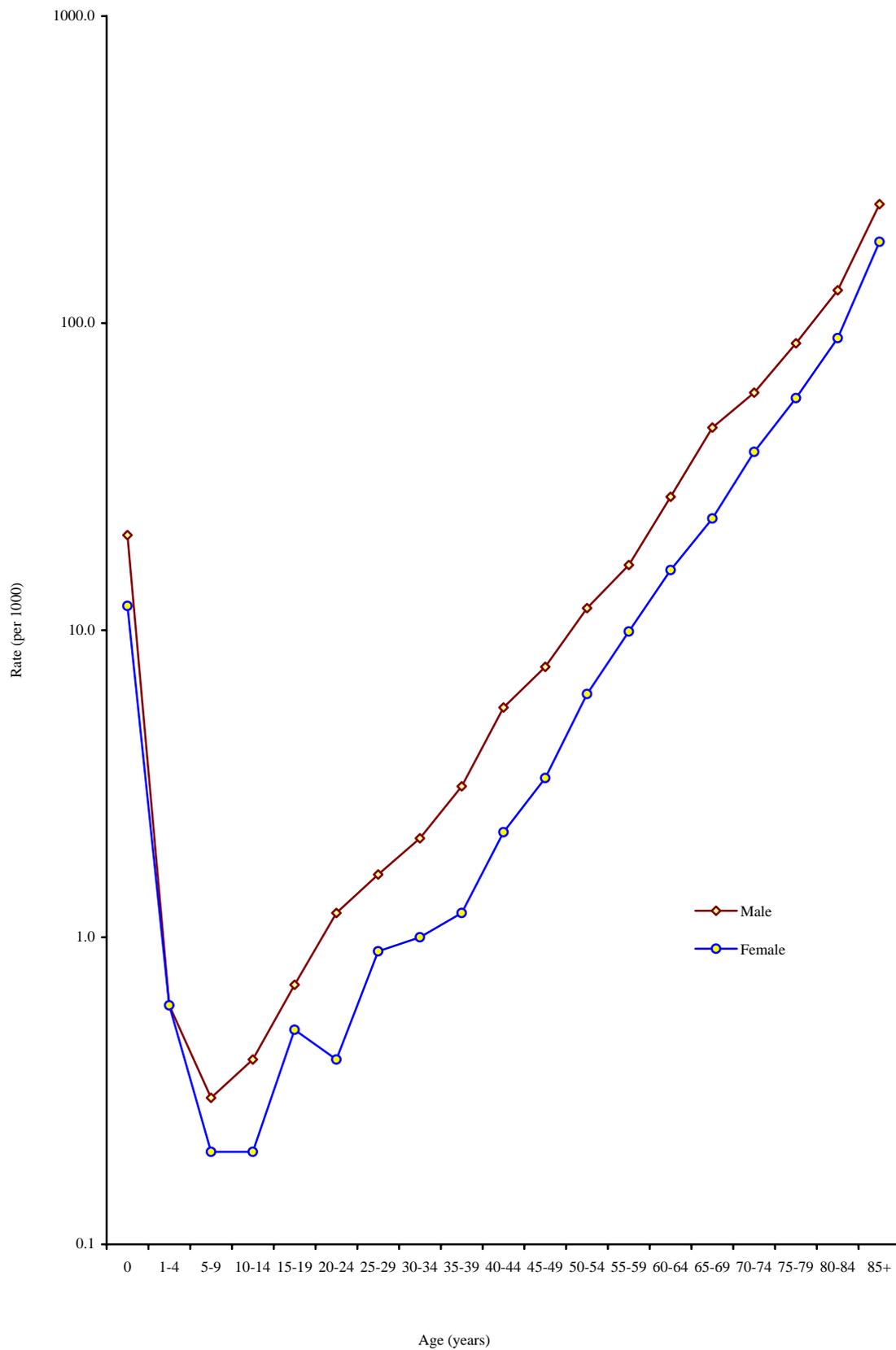


Table 4.2 - Death rates(per 1000) by age group and sex, Republic of Mauritius and Island of Rodrigues - 1990 & 2000

Age Group	Republic of Mauritius				Island of Rodrigues			
	1990		2000		1990		2000	
	Male	Female	Male	Female	Male	Female	Male	Female
0	25.5	18.6	20.4	12.0	41.8	35.6	20.4	20.9
1-4	0.9	0.8	0.6	0.6	0.9	1.8	0.7	2.1
5-9	0.3	0.3	0.3	0.2	0.3	0.5	0.0	0.0
10-14	0.5	0.3	0.4	0.2	0.7	0.2	0.5	0.0
15-19	0.7	0.7	0.7	0.5	0.8	0.3	0.8	0.0
20-24	1.1	0.9	1.2	0.4	1.9	0.3	0.4	0.4
25-29	1.7	0.8	1.6	0.9	0.8	0.3	1.9	0.6
30-34	2.6	1.1	2.1	1.0	2.0	0.9	2.7	1.8
35-39	3.9	1.4	3.1	1.2	2.8	1.8	2.3	0.0
40-44	6.5	2.4	5.6	2.2	5.7	5.5	5.7	1.2
45-49	9.6	3.9	7.6	3.3	6.7	2.9	6.0	3.1
50-54	15.5	5.9	11.8	6.2	13.0	5.6	8.8	3.6
55-59	20.9	9.7	16.3	9.9	16.6	9.6	13.9	4.8
60-64	32.9	15.9	27.2	15.7	30.1	12.3	4.3	9.5
65-69	47.2	25.9	45.7	23.1	36.8	23.6	24.8	21.3
70-74	69.0	42.5	59.4	38.1	59.0	34.1	65.1	38.3
75-79	99.3	64.7	86.0	57.0	101.1	70.7	52.6	77.4
80-84	153.0	102.2	128.0	89.4	123.1	96.0	142.9	93.8
85+	229.6	177.7	247.4	184.0	342.9	171.9	409.1	127.5
All Ages	7.7	5.5	7.6	5.8	6.3	4.0	5.3	4.6

Comparison of the age and sex - specific death rates for 1990 with 2000 indicate significant improvements at almost all ages except for the age bracket 5-29 years among males, and age brackets 25-29 and 50-59 among females where either little improvement, no improvement or even deterioration in mortality was registered.

For the Island of Rodrigues, due to the small size of its population and the small number of deaths occurring in a year, the age-specific death rates tend to fluctuate with the various age groups. Yet, the figures indicate an improvement in mortality at almost all ages except for the ages 25-34 among males and 20-34 among females where a deterioration is observed.

4.4 Deaths by cause

Cause specific death rates by 100,000 mid-year population for the year 1990 and 2000 are given in table 4.3. The causes of deaths have been categorised according to the "International Statistical Classification of Diseases, Injuries and Causes of death" (ICD-9) of the World Health Organisation.

"Diseases of the circulatory system" was the leading cause of death in the Republic in 2000 as in 1990, followed by "neoplasms" and "diseases of the respiratory system". When analysed by sex, death due to "diseases of the respiratory system", "diseases of the digestive system" and "injury and poisoning" appear to be significantly higher among males with rates of 77.7, 56.8 and 65.6 respectively against 47.1, 16.2 and 19.4 among females. Death rates by group cause in Rodrigues follow roughly the same pattern as in the Republic.

Table 4.3 - Cause specific death rates by sex, Republic of Mauritius and Island of Rodrigues - 1990 & 2000

Group	Cause	Republic of Mauritius				Island of Rodrigues			
		1990		2000		1990		2000	
		Male	Female	Male	Female	Male	Female	Male	Female
I	Infectious and parasitic diseases	20.0	12.7	9.9	10.7	19.5	9.7	5.6	5.5
II	Neoplasms	59.5	60.0	62.1	64.6	35.1	35.1	84.7	5.5
III	Endocrine nutritional and metabolic diseases and immunity disorders	43.5	39.5	32.3	35.2	9.8	37.0	11.3	33.2
IV	Diseases of the blood and blood forming organs	8.3	5.1	1.5	3.8	2.0	3.9	0.0	0.0
V	Mental disorders	17.0	1.3	7.1	0.3	23.4	0.0	0.0	0.0
VI	Diseases of the nervous system and sense organs	8.5	5.7	10.5	6.8	17.6	7.8	11.3	11.1
VII	Diseases of the circulatory system	315.8	232.0	354.1	314.2	234.1	231.7	197.7	193.6
VIII	Diseases of the respiratory system	71.1	51.5	77.7	47.1	95.6	44.8	56.5	33.2
IX	Diseases of the digestive system	41.2	14.9	56.8	16.2	46.8	5.8	33.9	5.5
X	Diseases of the genito urinary system	27.4	16.1	25.3	18.4	13.7	7.8	5.6	16.6
XI	Complications of pregnancy, childbirth and the puerperium	0.0	2.8	0.0	0.7	0.0	3.9	0.0	5.5
XII	Diseases of the skin and subcutaneous tissue	0.0	0.8	0.7	0.3	0.0	0.0	0.0	0.0
XIII	Diseases of the musculoskeletal system and connective tissue	0.6	1.1	0.5	1.8	2.0	2.0	0.0	0.0
XIV	Congenital anomalies	10.4	6.2	7.5	4.8	15.6	27.3	0.0	0.0
XV	Certain conditions originating in the perinatal period	38.0	25.5	23.6	13.4	52.7	42.8	45.2	38.7
XVI	Symptoms, signs and illdefined conditions	47.1	50.2	27.9	25.6	17.6	33.1	28.2	94.0
XVII	Injury and poisoning	65.0	29.5	65.6	19.4	50.7	25.3	45.2	16.6
	All Causes	773.4	554.9	763.2	583.5	636.1	517.9	525.4	459.1

An analysis of deaths at a lower level of disaggregation gives further insight about the specific diseases responsible for high death tolls. Table 4.4 shows that the main cause of death is the heart disease. This does not however imply that a high percentage of the population suffer from heart diseases. In fact, the mortality pattern of a country does not necessarily reflect the morbid conditions of its people. For instance, only 4.2% of all admissions in government general hospitals were due to heart diseases in 2000.

The percentage of deaths due to diabetes mellitus and hypertensive diseases decreased during the last decade. This trend could be partly due to the aggressive campaigns made by the Ministry of Health & Quality of Life against these diseases. Furthermore, with the implementation of the non-communicable disease (NCD) screening programme, the percentage of deaths due to such diseases is expected to further decrease during the coming years.

It is also observed that the percentage of deaths due to certain diseases of the respiratory system such as pneumonia and bronchitis (chronic and unspecified), emphysema and asthma has decreased from 1990 to 2000.

Table 4.4 - Selected principal causes of deaths^{1/} - Island of Mauritius - 1990 & 2000

Diseases	1990	2000
Heart diseases ^{2/}	23.4	29.8
Cerebrovascular diseases	13.1	16.2
Diabetes Mellitus	5.1	4.6
Nephritis, nephrotic syndrome and nephrosis	3.2	3.1
Pneumonia	3.5	2.9
Cirrhosis of liver, liver abscess, chronic liver idseases and its sequelae	2.3	2.9
Bronchitis (chronic & unspecified), emphysema and asthma	3.4	2.7
Hypertensive diseases	3.9	2.5
Senility without mention of psychosis	3.0	1.8
Septicaemia	1.0	1.1

1/ expressed as percentage over total deaths

2/ excluding "Acute rheumatic fever", "Hypertensive diseases" and " Diseases of the pulmonary circulation"

4.5 Death rates due to diseases of the circulatory system by age and sex

Diseases of the circulatory system are responsible for around 50% of all deaths in Mauritius. It would thus be enlightening to study the age profile of those who have died from these diseases. Table 4.5 gives the number of deaths as well as the death rates by age group due to these diseases. One of the salient features observed is that the death rate increases rapidly with age for both males and females to attain a high level for the population aged 60 years and above.

Table 4.5 - Deaths and death rates by sex due to diseases of the circulatory system,
Republic of Mauritius - 1990 & 2000

(a) Male

Age group	Deaths		Rates per 1,000 pop.	
	1990	2000	1990	2000
under 30	23	24	0.07	0.08
30-34	18	21	0.38	0.42
35-39	61	39	1.48	0.76
40-44	78	68	2.59	1.48
45-49	87	143	3.97	3.65
50-54	129	162	6.99	5.83
55-59	158	159	10.07	8.27
60+	1,117	1,467	28.86	31.52

(a) Female

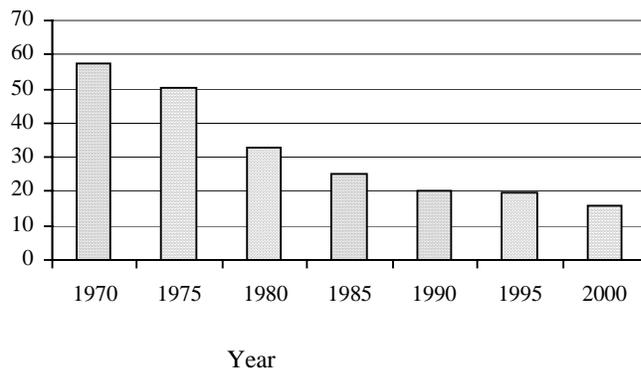
Age group	Deaths		Rates per 1,000 pop.	
	1990	2000	1990	2000
under 30	8	23	0.03	0.08
30-34	13	8	0.28	0.16
35-39	18	20	0.45	0.40
40-44	25	37	0.82	0.83
45-49	26	48	1.14	1.24
50-54	59	79	3.01	2.71
55-59	83	104	5.04	4.89
60+	997	1,562	20.42	25.63

4.6 Infant mortality

Infant mortality rate (IMR) is defined as the number of deaths in a year of babies aged under one year per 1,000 live births registered in that year. It is often used as an indicator of the level of development of a country.

There has been a 30% decline in the number of infant deaths from 462 in 1990 to 322 in 2000 with the IMR falling from 20.4 to 15.9. This drastic fall in IMR can be attributed to the coming into operation of the Neonatal Intensive Care Service in May 1999. This new service initially located at Victoria hospital and later extended to the Sir Seewoosagur Ramgoolam National Hospital, gives specialised treatment to newly born babies with complications after birth.

Figure 4.2 - Infant mortality rates, selected years
Republic of Mauritius



NB: Rates per 1,000 live births

In 2000, out of the 322 infant deaths registered in the Republic of Mauritius, 182(56.5%) and 73(22.7%) were early and late neonatal deaths respectively. In other words, 79.2% of infant deaths actually occurred under the age of one month. Since infant death is generally concentrated at the first days and weeks of life, an analysis of mortality rates at these ages would be useful. Early neo-natal mortality rate (death rates for children aged 0-6 days) in fact fell from 13.8 in 1990 to 9.0 in 2000 while neonatal mortality rate (death rates for children aged 0-27 days) fell from 15.4 to 12.6 during the same period. These are clear indications that there has been significant improvement in mortality especially at the early days of life.

In fact, figures from the Neonatal Intensive Care Service indicate that 307 newborns admitted for treatment in 2000, only 119 (38.8%) have died. Most of the admissions were due to " disorders related to length of gestation and fetal growth" (41.4%) and " respiratory and cardiovascular disorders specific to the perinatal period" (34.2%). (table 4.6).

Table 4.6 - Newborns treated (as in-patients) at the Neonatal Intensive Care Unit ^{1/} - Year 2000

(The figures given below are included in all tables pertaining to discharges from government general hospitals)

	Number of cases			of whom passed away		
	Male	Female	B.Sexes	Male	Female	B.Sexes
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery.	6	2	8	2	-	2
Disorders related to length of gestation and fetal growth.	76	51	127	31	19	50
Respiratory and cardiovascular disorders specific to the perinatal period .	61	44	105	21	11	32
Infections specific to the perinatal period.	19	7	26	10	4	14
Haemorrhagic and haematological disorders of fetus and newborn.	1	-	1	-	-	-
Transitory endocrine and metabolic disorders specific to fetus and newborn.	1	1	2	1	-	1
Digestive system disorders of fetus and newborn.	7	3	10	1	1	2
Other disorders originating in the perinatal period.	-	1	1	-	1	1
Congenital malformations of the nervous system.	3	-	3	3	-	3
Congenital malformations of the circulatory system.	4	5	9	1	4	5
Congenital malformations of the respiratory system.	-	1	1	-	-	-
Congenital malformations of the digestive system.	1	2	3	1	1	2
Congenital malformations of the urinary system.	1	1	2	1	1	2
Congenital malformations and deformations of the musculoskeletal system.	3	2	5	2	-	2
Other congenital malformations .	-	2	2	-	2	2
Other causes	-	2	2	-	1	1
Total	183	124	307	74	45	119
of whom birthweight were less than 2.5 kg	133	93	226	54	33	87

1/ located in the complex of Victoria Hospital

Table 4.7 - Principal causes of infant deaths, Republic of Mauritius - 1990 & 2000

Cause of infant deaths	1990		2000	
	Number	%	Number	%
Hypoxia, birth asphyxia and other respiratory conditions	133	28.8	71	22.1
Slow foetal growth, foetal malnutrition and immaturity	130	28.1	110	34.2
Congenital anomalies	50	10.8	56	17.4
Septicaemia and infections specific to the perinatal period	39	8.4	22	6.9
Ill-defined intestinal infections (colitis, enteritis, gastro-enteritis, diarrhoea)	16	3.5	3	0.9
Pneumonia	15	3.2	3	0.9
Meningitis	7	1.5	1	0.3
Bronchitis and bronchiolitis	4	0.9	4	1.2
Asthma	4	0.9	3	0.9
Perinatal Jaundice	0	0.0	1	0.3
All other causes	64	13.9	48	14.9
Total	462	100.0	322	100.0

The principal causes of infant deaths are "slow foetal deaths, foetal malnutrition and immaturity" causing more than one third of all infant deaths followed by "hypoxia, birth asphyxia and other respiratory conditions of newborn" (22.1%) and "Congenital anomalies" (17.4%).

It is also observed that there has been significant reduction in infant deaths due to all causes listed in the table 4.7 except for congenital anomalies with an increasing death toll of 56 in 2000 from 50 in 1990.

4.7 Child mortality

Table 4.8 shows the evolution of child mortality rate since the 50's. Significant improvement has been achieved over time and the current rate is relatively low.

Table 4.8 - Child mortality rate^{1/}, 1952-2000

Year	Republic of Mauritius	Island of Mauritius	Island of Rodrigues
1952	13.6	13.7	21.9
1962	6.8	6.6	19.8
1972	6.8	6.4	12.8
1983	1.5	1.4	5.3
1990	0.8	0.7	1.5
2000	0.6	0.6	1.5

1/ Defined as the number of deaths to children aged 1-4 years in a calendar year per 1,000 mid-year population of that age group

The table 4.9 shows that the leading cause of child death in 2000 is "injury and poisoning" responsible for 28.3% of child deaths followed by "congenital" anomalies (13.1%). A comparison of 1990 with 2000 figures indicates an increase in the number of deaths due to "injury and poisoning" and a decrease in the number of deaths due to "ill-defined intestinal infections".

Table 4.9 - Principal causes of child deaths, Republic of Mauritius - 1990 & 2000

Causes of child deaths	1990		2000	
	Number	%	Number	%
Congenital anomalies	11	18.6	6	13.1
Ill-defined intestinal infections (colitis, enteritis, gastro-enteritis, diarrhoea)	11	18.6	2	4.3
Injury and poisoning	7	11.9	13	28.3
Neoplasms	7	11.9	5	10.9
Pneumonia	6	10.2	2	4.3
Septicaemia	4	6.8	2	4.3
All other causes	13	22.0	16	34.8
Total	59	100.0	46	100.0

4.8 Maternal mortality

There has been significant fall in maternal mortality during the past decades. The maternal mortality rate defined as the number of deaths due to "pregnancy, childbirth and the puerperium" per 10,000 live births during that year, fell from 17.7 in 1972 to 2.0 in 2000. The rate is however still higher than those prevailing in developed countries (e.g. around 0.7 in the United States of America).

Table 4.10 - Maternal mortality rate, Republic of Mauritius, 1972-2000

Year	1972	1983	1990	2000
Rate	17.7	5.2	6.6	2.0

4.9 Old age mortality

Around 60% of deaths in 2000 occurred to elderly people (aged 60 years and over). Table 4.11 shows that around 60% of the deaths among the elderly in 2000 were due to "diseases of the circulatory system" compared to around 50% in 1990. The second most common cause of deaths among the elderly was the "diseases of the respiratory system" responsible for around 11% of deaths followed by "neoplasms" (9%). Analysis of the 2000 figures by sex indicate that deaths due to "diseases of the circulatory system" were higher among females (around 62%) compared to males (around 57%). In contrast, deaths due to "diseases of the respiratory system" were higher among males (12%) compared to females (8%) and similarly with "neoplasms" (10% against 9%).

Table 4.11 - Deaths by cause among deceased aged 60 years and above, Republic of Mauritius - 1990 & 2000

Group	Cause	1990			2000		
		Male	Female	Both Sexes	Male	Female	Both Sexes
I	Infectious and parasitic diseases	48	38	86	26	42	68
II	Neoplasms	197	204	401	248	222	470
III	Endocrine nutritional and metabolic diseases and immunity disorders	122	149	271	110	152	262
IV	Diseases of the blood and blood forming organs	28	20	48	5	17	22
V	Mental disorders	22	3	25	7	2	9
VI	Diseases of the nervous system and sense organs	13	8	21	12	13	25
VII	Diseases of the circulatory system	1,117	997	2,114	1,467	1,562	3,029
VIII	Diseases of the respiratory system	270	212	482	322	213	535
IX	Diseases of the digestive system	74	50	124	122	55	177
X	Diseases of the genito urinary system	85	55	140	91	73	164
XI	Complications of pregnancy, childbirth and the puerperium	-	-	-	-	-	-
XII	Diseases of the skin and subcutaneous tissue	-	2	2	2	1	3
XIII	Diseases of the musculoskeletal system and connective tissue	-	1	1	2	5	7
XIV	Congenital anomalies	-	1	1	-	-	-
XV	Certain conditions originating in the perinatal period	-	-	-	-	-	-
XVI	Symptoms, signs and illdefined conditions	226	253	479	132	141	273
XVII	Injury and poisoning	53	32	85	42	25	67
	All Causes	2,255	2,025	4,280	2,588	2,523	5,111

4.10 Life table mortality measures

The mortality data obtained from vital statistics and the census data being of good quality permit the construction of reliable life tables. Life tables for the Republic of Mauritius and the island of Rodrigues are given in tables 4.12 to 4.14.

A life table gives a summary of the current level and pattern of mortality of a country. The life expectancy at birth is an important measure of the level of mortality obtained from the life table. This measure, unlike the crude death rate, is comparable across countries as it is more robust against changing population age structure.

1/

Table 4.12 - Abridged Life Table by sex - Republic of Mauritius, 1999 - 2001

Male

Age	m(x)	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)	Survival ratio	Mortality 5/
0	0.01969	0.01840	100,000	1,840	98,528	6,817,166	68.17	0.98120 2/	23
1-4	0.00059	0.00231	98,160	226	392,073	6,718,638	68.45	0.99726 3/	23
5-9	0.00030	0.00150	97,934	146	489,257	6,326,566	64.60	0.99833	23
10-14	0.00040	0.00202	97,787	198	488,442	5,837,308	59.69	0.99742	23
15-19	0.00063	0.00314	97,590	306	487,182	5,348,866	54.81	0.99545	23
20-24	0.00120	0.00597	97,283	581	484,964	4,861,685	49.97	0.99255	22
25-29	0.00180	0.00894	96,702	865	481,350	4,376,721	45.26	0.99077	21
30-34	0.00191	0.00951	95,838	911	476,909	3,895,371	40.65	0.98743	21
35-39	0.00316	0.01566	94,926	1,487	470,913	3,418,462	36.01	0.97975	20
40-44	0.00504	0.02490	93,439	2,327	461,378	2,947,549	31.55	0.96843	20
45-49	0.00783	0.03841	91,112	3,499	446,813	2,486,171	27.29	0.95099	19
50-54	0.01238	0.06003	87,613	5,259	424,916	2,039,358	23.28	0.92954	19
55-59	0.01701	0.08156	82,353	6,717	394,975	1,614,442	19.60	0.89511	19
60-64	0.02787	0.13028	75,637	9,854	353,548	1,219,467	16.12	0.84377	19
65-69	0.04103	0.18607	65,783	12,240	298,311	865,919	13.16	0.78297	20
70-74	0.05847	0.25507	53,542	13,657	233,568	567,608	10.60	0.70515	22
75-79	0.08434	0.34827	39,885	13,891	164,700	334,040	8.38	0.50695 4/	24
80-84	0.12113	0.46487	25,995	12,084	99,762	169,340	6.51		
85+	0.19993	1.00000	13,910	13,910	69,577	69,577	5.00		

1/ Excluding Agalega and St Brandon

2/ Survival ratio from birth to age (0-4)

3/ Survival ratio from age (0-4) to age (5-9)

4/ Survival ratio from age 75+ to age 80+

5/ From Coale and Guang, "New Regional Model Life Tables at High Expectation of Life".

Note: In calculating the life table an average of the deaths registered for the years 1999 -2001 and the 2000 mid year population have been used.

Table 4.12 - Abridged Life Table by sex - Republic of Mauritius^{1/}, 1999 - 2001 (cont'd)

Female

Age	m(x)	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)	Survival	Mortality ⁵
0	0.01355	0.01274	100,000	1,274	98,980	7,530,154	75.30	0.98658 ^{2/}	23
1-4	0.00059	0.00231	98,726	228	394,310	7,431,174	75.27	0.99785 ^{3/}	23
5-9	0.00019	0.00093	98,497	91	492,229	7,036,863	71.44	0.99895	23
10-14	0.00026	0.00129	98,406	127	491,710	6,544,635	66.51	0.99826	23
15-19	0.00044	0.00218	98,278	214	490,857	6,052,924	61.59	0.99779	23
20-24	0.00045	0.00224	98,064	219	489,773	5,562,067	56.72	0.99655	23
25-29	0.00094	0.00466	97,845	456	488,083	5,072,295	51.84	0.99543	23
30-34	0.00090	0.00448	97,388	436	485,852	4,584,211	47.07	0.99484	23
35-39	0.00117	0.00584	96,952	567	483,344	4,098,360	42.27	0.99162	23
40-44	0.00220	0.01092	96,386	1,053	479,296	3,615,015	37.51	0.98637	22
45-49	0.00330	0.01636	95,333	1,560	472,765	3,135,720	32.89	0.97738	22
50-54	0.00588	0.02899	93,773	2,718	462,070	2,662,955	28.40	0.96155	22
55-59	0.00987	0.04819	91,055	4,387	444,306	2,200,885	24.17	0.94114	22
60-64	0.01452	0.07008	86,667	6,073	418,154	1,756,579	20.27	0.91218	22
65-69	0.02259	0.10690	80,594	8,616	381,432	1,338,424	16.61	0.86382	23
70-74	0.03691	0.16896	71,978	12,162	329,488	956,993	13.30	0.79731	24
75-79	0.05539	0.24327	59,817	14,552	262,704	627,505	10.49	0.58135 ^{4/}	25
80-84	0.08716	0.35784	45,265	16,197	185,831	364,801	8.06		
85+	0.16241	1.00000	29,067	29,067	178,970	178,970	6.16		

1/ Excluding Agalega and St Brandon

2/ Survival ratio from birth to age (0-4)

3/ Survival ratio from age (0-4) to age (5-9)

4/ Survival ratio from age 75+ to age 80+

5/ From Coale and Guang, "New Regional Model Life Tables at High Expectation of Life".

Note: In calculating the life table an average of the deaths registered for the years 1999 -2001 and the 2000 mid year population have been used.

Table 4.13 - Abridged Life Table by sex - Island of Mauritius, 1999 - 2001

Male

Age	m(x)	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)	Survival ratio	Mortality level 4/
0	0.01960	0.01832	100,000	1,832	98,535	6,809,422	68.09	0.98127 1/	23
1-4	0.00060	0.00234	98,168	229	392,098	6,710,888	68.36	0.99725 2/	23
5-9	0.00030	0.00150	97,939	147	489,284	6,318,790	64.52	0.99831	23
10-14	0.00041	0.00205	97,792	201	488,459	5,829,506	59.61	0.99743	23
15-19	0.00062	0.00308	97,591	300	487,206	5,341,047	54.73	0.99545	23
20-24	0.00121	0.00603	97,291	587	484,988	4,853,841	49.89	0.99255	22
25-29	0.00178	0.00888	96,704	859	481,374	4,368,853	45.18	0.99081	21
30-34	0.00191	0.00949	95,845	910	476,952	3,887,478	40.56	0.98736	21
35-39	0.00319	0.01581	94,935	1,501	470,924	3,410,526	35.92	0.97955	20
40-44	0.00510	0.02516	93,434	2,351	461,294	2,939,602	31.46	0.96820	20
45-49	0.00788	0.03862	91,084	3,518	446,623	2,478,308	27.21	0.95053	19
50-54	0.01253	0.06076	87,566	5,320	424,528	2,031,685	23.20	0.92889	19
55-59	0.01713	0.08213	82,246	6,754	394,341	1,607,156	19.54	0.89409	19
60-64	0.02823	0.13183	75,491	9,952	352,576	1,212,815	16.07	0.84212	19
65-69	0.04147	0.18788	65,539	12,314	296,912	860,239	13.13	0.78199	20
70-74	0.05848	0.25511	53,225	13,578	232,182	563,327	10.58	0.70451	22
75-79	0.08476	0.34969	39,647	13,864	163,575	331,146	8.35	0.50603 3/	24
80-84	0.12191	0.46716	25,783	12,045	98,802	167,571	6.50		
85+	0.19977	1.00000	13,738	13,738	68,768	68,768	5.01		

1/ Survival ratio from birth to age (0-4).

2/ Survival ratio from age (0-4) to age (5-9).

3/ Survival ratio from age 75+ to age 80+.

4/ From Coale and Guang," New Regional Model Life Tables at High Expectation of Life".

Note: In calculating the life table an average of the deaths registered for the years 1999 -2001 and the 2000 mid year population have been used.

Table 4.13 - Abridged Life Table by sex - Island of Mauritius, 1999 - 2001 (cont'd)

Female

Age	m(x)	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)	Survival ratio	Mortality level 4/
0	0.01297	0.01221	100,000	1,221	99,024	7,527,257	75.27	0.98713 ^{1/}	23
1-4	0.00057	0.00224	98,779	222	394,543	7,428,234	75.20	0.99789 ^{2/}	23
5-9	0.00019	0.00096	98,558	95	492,523	7,033,691	71.37	0.99891	23
10-14	0.00027	0.00135	98,463	132	491,984	6,541,168	66.43	0.99821	23
15-19	0.00045	0.00223	98,330	219	491,104	6,049,184	61.52	0.99777	23
20-24	0.00044	0.00222	98,111	218	490,011	5,558,080	56.65	0.99652	23
25-29	0.00095	0.00475	97,893	465	488,304	5,068,069	51.77	0.99538	23
30-34	0.00090	0.00449	97,428	438	486,047	4,579,766	47.01	0.99484	23
35-39	0.00117	0.00583	96,991	566	483,539	4,093,719	42.21	0.99153	23
40-44	0.00224	0.01113	96,425	1,073	479,443	3,610,180	37.44	0.98625	22
45-49	0.00331	0.01641	95,352	1,565	472,849	3,130,738	32.83	0.97727	22
50-54	0.00592	0.02916	93,787	2,734	462,100	2,657,889	28.34	0.96123	22
55-59	0.00998	0.04867	91,053	4,431	444,187	2,195,789	24.12	0.94044	22
60-64	0.01472	0.07101	86,622	6,151	417,731	1,751,602	20.22	0.91167	22
65-69	0.02260	0.10697	80,471	8,608	380,834	1,333,871	16.58	0.86367	23
70-74	0.03697	0.16921	71,863	12,160	328,914	953,037	13.26	0.79686	24
75-79	0.05557	0.24398	59,703	14,566	262,100	624,123	10.45	0.58005 ^{3/}	25
80-84	0.08784	0.36013	45,137	16,255	185,047	362,023	8.02		
85+	0.16320	1.00000	28,882	28,882	176,976	176,976	6.13		

1/ Survival ratio from birth to age (0-4)

2/ Survival ratio from age (0-4) to age (5-9)

3/ Survival ratio from age 75+ to age 80+

4/ From Coale and Guang, "New Regional Model Life Tables at High Expectation of Life".

Note: In calculating the life table an average of the deaths registered for the years 1999 -2001 and the 2000 mid year population have been used.

Table 4.14 - Abridged Life Table by sex - Island of Rodrigues, 1998 - 2002

Male

Age	m(x)	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)	Survival ratio	Mortality level 4/
0	0.02336	0.02174	100,000	2,174	98,261	7,015,869	70.16	0.97741 ^{1/}	23
1-4	0.00088	0.00343	97,826	335	390,445	6,917,608	70.71	0.99560 ^{2/}	23
5-9	0.00066	0.00331	97,491	323	486,555	6,527,163	66.95	0.99778	23
10-14	0.00030	0.00151	97,168	146	485,474	6,040,608	62.17	0.99790	24
15-19	0.00054	0.00269	97,022	261	484,455	5,555,134	57.26	0.99447	22
20-24	0.00168	0.00837	96,760	810	481,777	5,070,678	52.40	0.99251	22
25-29	0.00132	0.00660	95,950	633	478,168	4,588,902	47.83	0.99062	21
30-34	0.00245	0.01217	95,317	1,160	473,684	4,110,734	43.13	0.99122	22
35-39	0.00107	0.00535	94,157	504	469,524	3,637,050	38.63	0.99123	23
40-44	0.00246	0.01220	93,653	1,143	465,408	3,167,525	33.82	0.98332	23
45-49	0.00429	0.02121	92,510	1,962	457,646	2,702,117	29.21	0.96599	22
50-54	0.00965	0.04710	90,548	4,264	442,079	2,244,471	24.79	0.94390	22
55-59	0.01355	0.06555	86,284	5,656	417,279	1,802,392	20.89	0.91772	22
60-64	0.02110	0.10019	80,628	8,078	382,944	1,385,113	17.18	0.88361	23
65-69	0.02881	0.13439	72,550	9,750	338,374	1,002,169	13.81	0.82160	23
70-74	0.05179	0.22925	62,800	14,397	278,007	663,795	10.57	0.71044	22
75-79	0.09014	0.36782	48,403	17,803	197,507	385,787	7.97	0.48804 ^{3/}	23
80-84	0.14103	0.52133	30,600	15,952	113,117	188,281	6.15		
85+	0.19487	1.00000	14,647	14,647	75,163	75,163	5.13		

1/ Survival ratio from birth to age (0-4)

2/ Survival ratio from age (0-4) to age (5-9)

3/ Survival ratio from age 75+ to age 80+

4/ From Coale and Guang," New Regional Model Life Tables at High Expectation of Life"

Note: In calculating the life table an average of the deaths registered for the years 1998 -2002 and the 2000 mid year population have been used.

Table 4.14 - Abridged Life Table by sex - Island of Rodrigues, 1998 - 2002 (cont'd)

Female

Age	m(x)	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)	Survival ratio	Mortality level 4/
0	0.02074	0.01936	100,000	1,936	98,451	7,609,009	76.09	0.97823 ^{1/}	22
1-4	0.00156	0.00607	98,064	596	390,665	7,510,558	76.59	0.99577 ^{2/}	22
5-9	0.00021	0.00106	97,468	104	487,048	7,119,893	73.05	0.99954	24
10-14	0.00000	0.00000	97,365	0	486,824	6,632,845	68.12	0.99913	24
15-19	0.00035	0.00174	97,365	170	486,399	6,146,021	63.12	0.99718	23
20-24	0.00078	0.00390	97,195	379	485,027	5,659,622	58.23	0.99519	22
25-29	0.00115	0.00573	96,816	555	482,692	5,174,595	53.45	0.99513	22
30-34	0.00080	0.00401	96,261	386	480,340	4,691,902	48.74	0.99587	23
35-39	0.00085	0.00425	95,875	407	478,356	4,211,563	43.93	0.99262	23
40-44	0.00212	0.01052	95,467	1,004	474,826	3,733,207	39.10	0.98592	22
45-49	0.00357	0.01768	94,463	1,670	468,141	3,258,380	34.49	0.97871	22
50-54	0.00506	0.02498	92,793	2,318	458,172	2,790,239	30.07	0.97080	23
55-59	0.00682	0.03352	90,475	3,033	444,796	2,332,067	25.78	0.95002	23
60-64	0.01387	0.06702	87,443	5,860	422,563	1,887,272	21.58	0.92130	23
65-69	0.01912	0.09123	81,582	7,443	389,306	1,464,709	17.95	0.87329	23
70-74	0.03614	0.16575	74,140	12,288	339,978	1,075,403	14.51	0.79978	24
75-79	0.05495	0.24155	61,851	14,940	271,907	735,425	11.89	0.63027 ^{3/}	25
80-84	0.08182	0.33962	46,911	15,932	194,727	463,518	9.88		
85+	0.11525	1.00000	30,979	30,979	268,791	268,791	8.68		

1/ Survival ratio from birth to age (0-4)

2/ Survival ratio from age (0-4) to age (5-9)

3/ Survival ratio from age 75+ to age 80+

4/ From Coale and Guang, "New Regional Model Life Tables at High Expectation of Life"

Note: In calculating the life table an average of the deaths registered for the years 1998 -2002 and the 2000 mid year population have been used.

4.11 Life expectancy at birth by sex

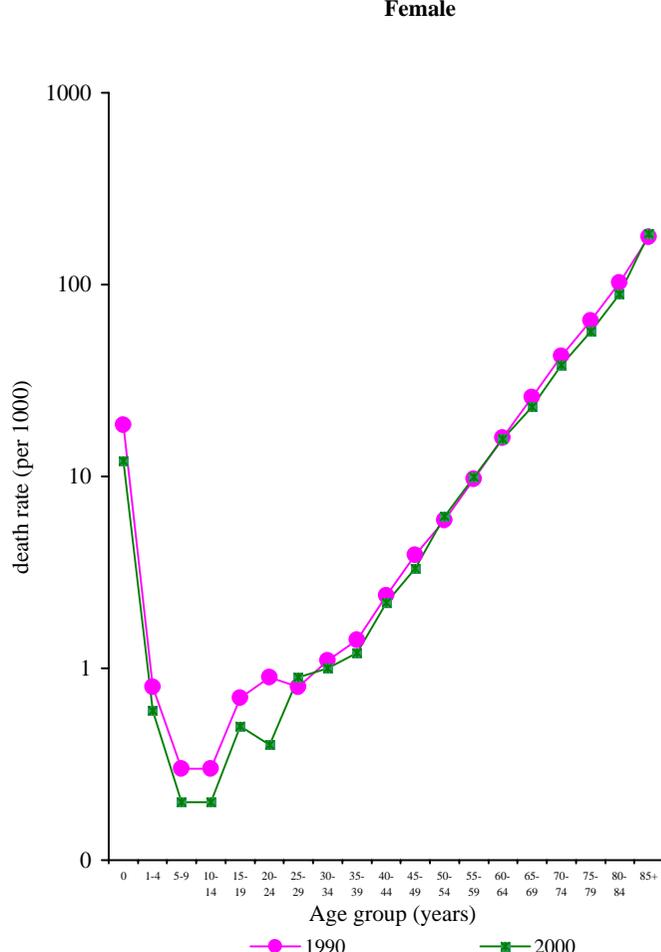
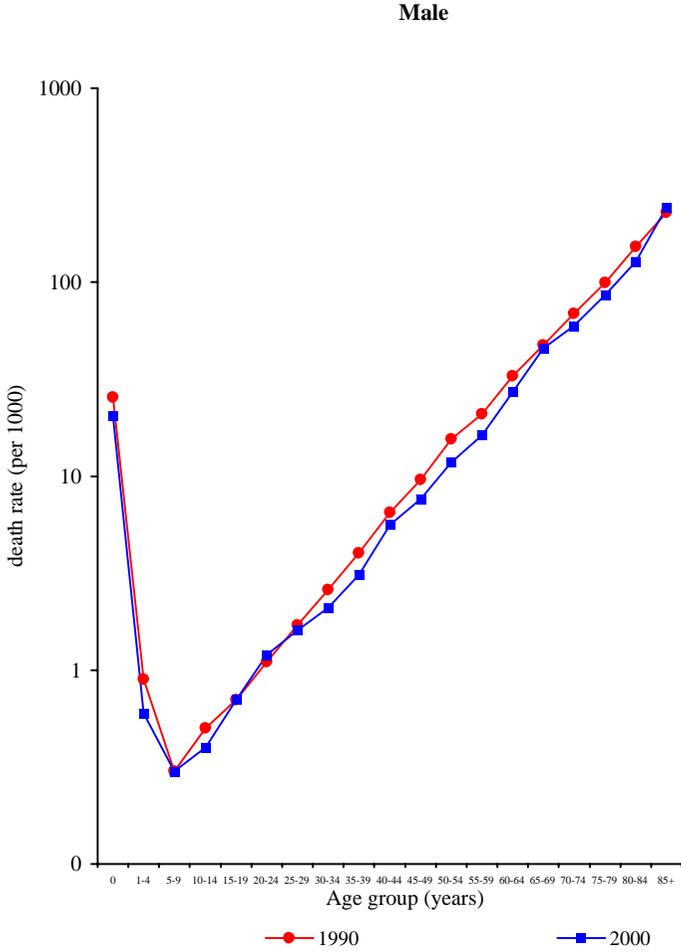
Table 4.15 gives the male and female life expectancy at birth for the census years 1972 onwards. It shows a continuous increase in life expectancy over time. The average annual gain, however, has generally decreased over time except for males during the intercensal period 1990-2000. In fact, the average annual gains for males were 0.31 year in period 1972-83, 0.17 in 1983-1990 and 0.26 in 1990-2000. For females, the gains for the corresponding periods are 0.53, 0.24 and 0.19 respectively. A fall over time is generally expected since the scope for improvement becomes less with increasing expectancy of life. The increase among males during 1990-2000 could be due to the significant improvement in mortality among male adults as seen in figure 4.3.

Table 4.15 - Expectation of life at birth by sex, Republic of Mauritius, 1972-2000

Year	Expectation of life at birth (years)		
	Male	Female	Difference
1972	61.0	65.9	4.9
1983	64.4	71.7	7.3
1990	65.6	73.4	7.8
2000	68.2	75.3	7.1

Also the gap between male and female life expectancy at birth which is in favour of females has been increasing over the years except for the intercensal period 1990-2000 when it decreased from 7.8 to 7.1 years.

Figure 4.3 - Evolution of the pattern of mortality by sex between 1990 and 2000
 Republic of Mauritius



4.12 Life expectancy at selected ages by sex

Table 4.16 gives the life expectancy at various ages for a series of census years starting 1972 while table 4.17 gives the percentage increase in life expectancy at each age during the intercensal years.

The tables show a general increase in life expectancy at all ages for both males and females especially during the last intercensal period. Table 4.17 however shows that in the intercensal period 1990-2000, the increase in life expectancy has been higher among males than among females when compared age for age. The figure 4.4 also shows that the gap between the 1990 and 2000 curve tend to widen in the age bracket 25-55 indicating relatively more improvement in mortality among males than among females at these ages.

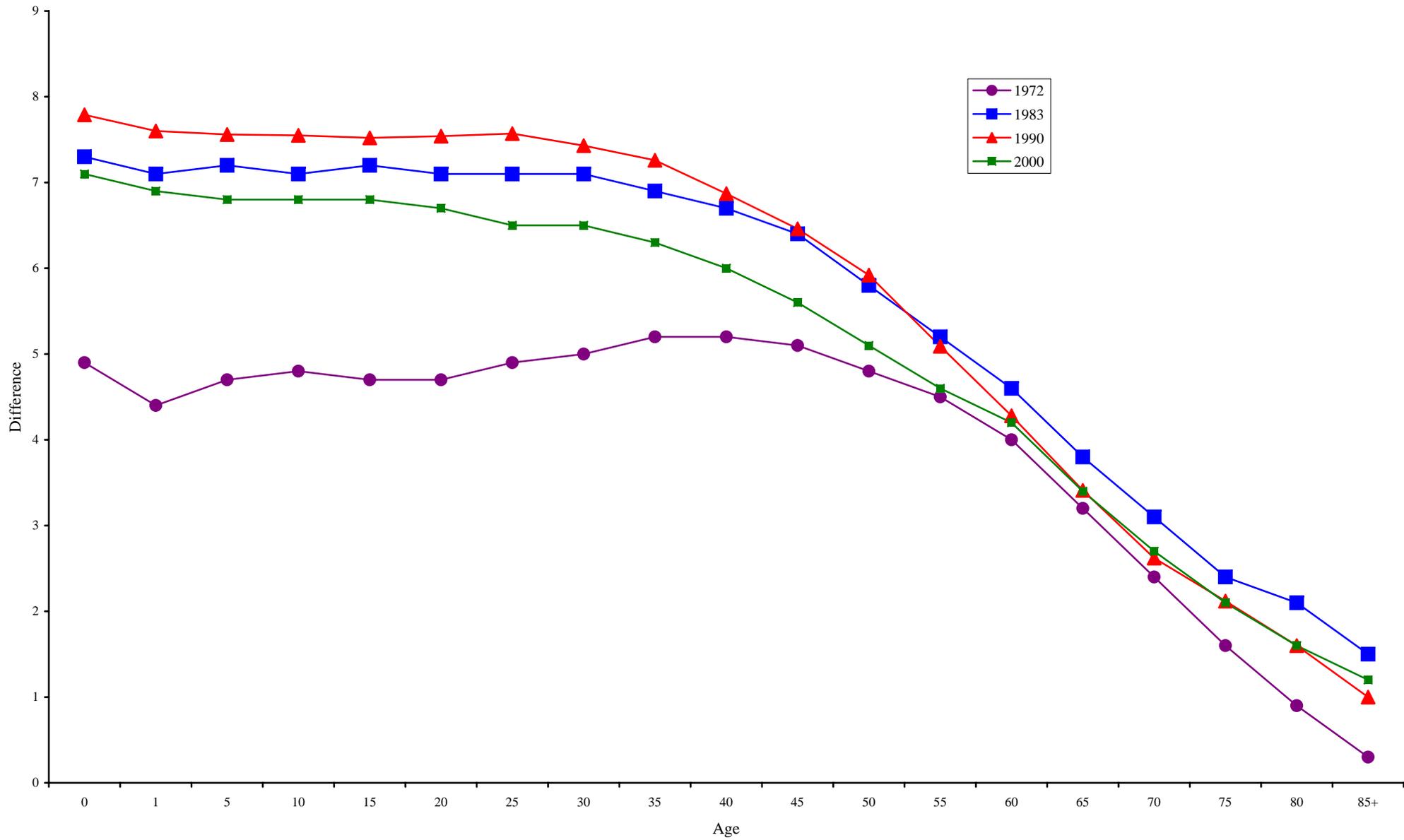
Table 4.16 - Life expectancy by age and sex at each census and sex differences in life expectancy
Republic of Mauritius, 1972 - 2000

Exact age (years)	Male				Female				Female - Male			
	1972	1983	1990	2000	1972	1983	1990	2000	1972	1983	1990	2000
0	61.0	64.4	65.6	68.2	65.9	71.7	73.4	75.3	4.9	7.3	7.8	7.1
1	64.0	65.3	66.1	68.4	68.4	72.4	73.7	75.3	4.4	7.1	7.6	6.9
5	61.4	61.6	62.4	64.6	66.1	68.8	69.9	71.4	4.7	7.2	7.6	6.8
10	56.7	56.8	57.5	59.7	61.5	63.9	65.0	66.5	4.8	7.1	7.6	6.8
15	52.0	51.9	52.6	54.8	56.7	59.1	60.1	61.6	4.7	7.2	7.5	6.8
20	47.3	47.2	47.8	50.0	52.0	54.3	55.3	56.7	4.7	7.1	7.5	6.7
25	42.5	42.5	43.0	45.3	47.4	49.6	50.6	51.8	4.9	7.1	7.6	6.5
30	37.9	37.8	38.3	40.6	42.9	44.9	45.8	47.1	5.0	7.1	7.4	6.5
35	33.3	33.2	33.8	36.0	38.5	40.1	41.0	42.3	5.2	6.9	7.3	6.3
40	28.8	28.8	29.4	31.5	34.0	35.5	36.3	37.5	5.2	6.7	6.9	6.0
45	24.5	24.6	25.3	27.3	29.6	31.0	31.7	32.9	5.1	6.4	6.5	5.6
50	20.5	20.7	21.4	23.3	25.3	26.5	27.3	28.4	4.8	5.8	5.9	5.1
55	16.8	17.1	18.0	19.6	21.3	22.3	23.1	24.2	4.5	5.2	5.1	4.6
60	13.5	13.8	14.8	16.1	17.5	18.4	19.1	20.3	4.0	4.6	4.3	4.2
65	10.8	11.0	12.0	13.2	14.0	14.8	15.4	16.6	3.2	3.8	3.4	3.4
70	8.5	8.5	9.6	10.6	10.9	11.6	12.3	13.3	2.4	3.1	2.6	2.7
75	6.8	6.6	7.5	8.4	8.4	9.0	9.7	10.5	1.6	2.4	2.1	2.1
80	5.7	4.8	5.8	6.5	6.6	6.9	7.4	8.1	0.9	2.1	1.6	1.6
85+	4.9	3.5	4.6	5.0	5.2	5.0	5.6	6.2	0.3	1.5	1.0	1.2

Table 4.17 - Percentage increase in expectation of life by age
Republic of Mauritius, 1972-2000

Exact age (years)	Male			Female		
	1972- 1983	1983- 1990	1990- 2000	1972- 1983	1983- 1990	1990- 2000
0	5.6	1.9	4.0	8.8	2.4	2.6
1	2.0	1.2	3.5	5.8	1.8	2.2
5	0.3	1.2	3.6	4.1	1.6	2.1
10	0.2	1.1	3.9	3.9	1.7	2.3
15	-0.2	1.3	4.2	4.2	1.7	2.5
20	-0.2	1.2	4.7	4.4	1.8	2.5
25	0.0	1.1	5.4	4.6	1.9	2.5
30	-0.3	1.4	5.9	4.7	1.9	3.0
35	-0.3	1.7	6.6	4.2	2.3	3.1
40	0.0	2.2	7.1	4.4	2.2	3.3
45	0.4	2.7	8.1	4.7	2.3	3.7
50	1.0	3.3	9.0	4.7	3.0	4.0
55	1.8	5.1	9.1	4.7	3.4	4.9
60	2.2	7.2	8.8	5.1	3.7	6.4
65	1.9	9.4	9.7	5.7	4.3	7.5
70	0.0	13.3	10.1	6.4	5.6	8.6
75	-2.9	14.1	11.6	7.1	7.2	8.8
80	-15.8	20.8	12.1	4.5	7.2	9.5
85+	-28.6	31.4	8.7	-3.8	12.0	10.7

Figure 4.4 - Difference between male and female life expectancy by age, Republic of Mauritius - census years 1972-2000



4.13 Mortality differentials by sex

As discussed in the previous chapters, there is evidence that mortality is more favourable to females than males resulting in a predominance of females in the population especially at the older ages.

4.14 Mortality differential by age

The J-shaped mortality curve definitely shows that mortality is lowest in the age bracket 5-14 years. Mortality is relatively higher at ages below five years especially among infants. At ages 15 years and above mortality level increases exponentially with age.

4.15 Mortality differentials by region

In order to study the mortality differentials among regions, a comparison of region-wise death rates should be made. The death rates have been standardised in order to eliminate differences due to age structure. In computing the adjusted death rates, the age distribution of the Republic has been used as standard.

Table 4.18 gives adjusted death rate by district and by island. The figures indicate that mortality is lowest in Rodrigues and this is confirmed by the fact that the Island of Rodrigues has a higher life expectancy at birth than the Island of Mauritius. The figures by district indicate that Plaines Wilhems has the lowest death rate (6.1) followed by Black River (6.4) while Port Louis has the highest rate (7.7).

Table 4.18 - Adjusted death rates by region, Republic of Mauritius - 2000

Region	Adjusted death rate
Port Louis	7.7
Pamplemousses	7.2
Riviere du Rempart	7.4
Flacq	7.2
Grand Port	6.8
Savanne	7.7
Plaines Wilhems	6.1
Moka	7.0
Black River	6.4
<i>Island of Mauritius</i>	6.8
Urban	6.4
Rural	7.1
<i>Island of Rodrigues</i>	5.5
Republic of Mauritius	6.8

Urban/rural mortality differential is also present with the urban regions having lower mortality.