

ANNUAL HEALTH BULLETIN

2007



MINISTRY OF HEALTH
SRI LANKA

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Contents

Preface	v
Acknowledgement	vii
List of Tables (Part I)	ix - x
List of Figures (Part I)	xi
List of Detailed Tables (Part II)	xiii - xiv
Key Health Related Indicators	xv - xvi
Map of Sri Lanka	xvii
Chapter One	
General Information	1
1.1 Basic Facts	1
1.2 Administrative Divisions	1
1.3 Population	1
1.3.1 Population Density	1
1.3.2 Age Composition	2
1.3.3 Sex Composition	2
1.4 Vital Statistics	3
1.4.1 Crude Birth Rate (CBR)	3
1.4.2 Crude Death Rate (CDR)	4
1.4.3 Maternal Mortality Rate (MMR)	5
1.4.4 Child Mortality Rate (CMR)	5
1.4.5 Infant Mortality Rate (IMR)	6
1.4.6 Neo-natal Mortality Rate (NNMR) and Perinatal Mortality Rate	6
1.4.7 Total Fertility Rate	7
1.4.8 Nutritional States of Children	8
1.4.9 Life Expectancy	9
1.5 Social Indicators	9
1.5.1 Literacy Rate	9
1.5.2 Level of Education	10
1.6 Water Supply and Sanitation	10
1.6.1 Source of Water Supply for Drinking	10
1.6.2 Toilet Facilities	10
Chapter Two	
Organization of the Health Services	11
2.1 National Health Policy	11
2.1.1 Vision	11
2.1.2 Mission	11
2.1.3 Strategic Areas	11
2.2 Health Administration	12
2.3 Health Facilities	12
2.3.1 The Proposed Hospital Re-Categorization	12
2.4 Health Manpower	16
2.5 National Institute of Health Sciences (NIHS)	17
2.6 Health Manpower Training	20
2.6.1 Basic Training	20
2.6.2 Postgraduate Training	20
2.6.3 Post Basic Training	20
2.6.4 In-service Training	20
2.7 Health Finance	20
2.8 Sri Lanka National Health Accounts System	20
2.8.1 Total National Health Expenditures	21
2.8.2 Funding of National Health Expenditure	21
2.8.3 Expenditures by Provider and by Functional Use	21
2.9 Foreign Aid Utilization	21
2.10 Medical Statistics Unit	21

Contents

Chapter Three	
Morbidity and Mortality	23
3.1 Hospital Morbidity and Mortality	23
3.1.1 Inpatient Morbidity	23
3.1.2 Out-patient Morbidity	26
3.1.3 Hospital Mortality	27
3.2 Mortality (Registered Deaths)	27
3.2.1 Trends in Mortality	27
3.2.2 Leading Causes of Mortality	27
3.2.3 Sex Differentials in Mortality	28
Chapter Four	
Patient Care Services	29
4.1 Hospital Services	29
4.2 Dental Health Services	32
Chapter Five	
Public Health Services	
5.1 Community Health Services	35
5.1.1 Family Health Services	35
5.1.2 Environmental Health	40
5.1.3 Epidemiology	43
5.1.4 Health Education and Publicity	50
5.1.5 Nutrition Coordination	53
5.2 Specialized Public Health Programmes	55
5.2.1 Malaria	55
5.2.2 National Programme for Tuberculosis Control and Chest Diseases	57
5.2.3 Leprosy	61
5.2.4 Anti Filariasis - Campaign	65
5.2.5 Public Health Veterinary Services	68
5.2.6 Unit of Youth, Elderly, Disabled and Displaced Persons	74
5.2.7 STD/AIDS Control	76
5.3 Medical Supplies and Logistic	79
5.3.1 Medical Supplies Division	79
5.3.2 Logistic	82
Chapter Six	
Education, Training and Research (E.T & R) Services	85
6.1 Education, Training & Research Unit	85
6.2 Medical Research Institute (MRI)	86
Detailed Tables	89 - 135

Preface

The Annual Health Bulletin, is the main comprehensive report which gives the overall up to date information of the health sector in Sri Lanka.

The Bulletin is mainly confined to the government health sector and presents information on four major areas, morbidity, mortality, resource availability and provision of services. The information has been revised and brought up to date to reflect, as far as possible the situation during 2007 and trends over the period as well.

I wish to place on record my appreciation and grateful thanks to all officials who gave generously their time and knowledge, providing data from their surveys and programmes. My thanks are also due to the valuable services rendered by the staff of Medical Statistics Unit that has planned and co-ordinated the preparation of Bulletin since 1985 and also the planning unit of the Ministry of Health for the great support extended in publishing the Annual Health Bulletin - 2007

Dr. U. Ajith Mendis

Director General of Health Services

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Annual Health Bulletin 2007, is the outcome of concerted effort on the several individuals of the Ministry of Health and staff of the Medical Statistics Unit of the Department of Census and Statistics. In this effort, special gratitude should be paid for the following officials for their continuous support until this exercise became a success.

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All the Head and other staff involved in providing necessary information for the Annual health Bulletin namely Public Health Services, Environment and Public Health, Planning Unit, Dental Health Services, Epidemiological unit, National Institute of Health Services, Family Health Services, Anti Filariasis Campaign, STD/AIDS Control Program, Medical Research Institute, Education Training and Research Unit, Health Education, Rabies Control Programme, Anti Leprosy Campaign, Anti Malaria Campaign, Tuberculosis Control Programme, Unit of youth, elderly, Disabled and Displaced Unit, Nutrition Coordination Division, Medical Suppliers and Logistic in Ministry of Health regarding, given the information related to the analyzed data by the MSU.

Mrs. I.R. Bandara, Deputy Director, Medical Statistics Unit and Mr. J. A. P. Balasuriya Former Deputy Director, Medical Statistics Unit for coordinating, monitoring and guiding staff of the Medical Statistics Unit.

Mrs. M.L.A.P. Gunasekara, Senior Statistician and Mr. E.M.M.K. Ekanayaka, Statistician for supervising and assisting in finalization of the report.

Mrs. Kishanthi Jayawardana, Statistical Officer for deriving all the statistical tables and other necessary data for the report and type-setting of the report.

Mrs. G.D. Priyangika, Mrs. H.M.D. Sepalika and Mr. Nishantha Perera Statistical Officers and Mr. M.R.M Rihan Raby and Mr. H.L.M Prasanna Stistical Assistants for maintaining quality controls checks of returns and supervising data entry activity.

Miss. L.W.R.K. Arunika, Mr. M.D.M. Fernando, Mrs. Ruwani Saparamadu, Mrs. T.R.K. Jayalath and Miss. W. Sujeewa, Data Entry Operators for entering data.

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LIST OF TABLES

Tables	Page	
General Information		
1.1	Sex Ratio of Population, 1871-2001	2
1.2	Age Specific Sex Ratio, 1981, 1994 and 2001	3
1.3	Vital Statistics, 1955-2007	4
1.4	Infant Mortality by Demographic Characteristics	6
1.5	Perinatal Mortality Rate	6
1.6	Comparisons of Age Specific Fertility Rates, 1963-2000	7
1.7	Demographic characteristics from selected surveys	7
1.8	Nutritional Status of Children, 1993, 2000 & 2006/07	9
1.9	Expectancy of Life at Birth, 1946-2001	9
1.10	Literacy Rate by Sex, 1881-2001	9
1.11	Percentage Distribution of Population (30 years and above) by Broad Education Groups, 2001	10
Organization of Health Services		
2.1	Number of Health Institutions and Hospital Beds, 1985-2007	15
2.2	Availability of Patients Beds by Type of Institution, 2006 & 2007	16
2.3.1	Health Manpower Training, 2006	18
2.3.2	Health Manpower Training, 2007	18
2.3.3	Staff position of the Food Laboratory	18
2.3.4	Samples analyzed for microbial contamination, 2006 - 2007	19
2.3.5	Chemical Analysis of Food Samples, 2006 - 2007	19
2.3.6	Staff of the Service Laboratory N.I.H.S.	20
Morbidity and Mortality		
3.1	Leading Causes of Outdoor Morbidity	26
Patient Care Services		
4.1	Trends in Inpatient and Out-patient Attendance and Rate per 1,000 Population, 1970-2007	29
4.2	Maternal Services by Type of Hospital, 2007	30
4.3	Distribution of dental specialists by speciality	32
4.4	Prevalence and severity of dental caries by National Oral Health Surveys	33
4.5	Prevalence of healthy gums in 12 and 35 - 44 years old	33
4.6	Percentage of children 5 years and 12 years with caries, active caries and Treat Caries	33
Public Health Services		
5.1.1	Important MCH indicators reported by MOOH, 2007	36
5.1.2	Family Planning New Acceptors by Method, 2001 - 2007	36
5.1.3	Causes of Maternal Deaths- 2006	37
5.1.4	Performance in Well Woman Clinics, 2007	38
5.1.5	Foreign funded projects carried out by the FHB	38
5.1.6	Cases, Deaths and Case Fatality Rate (CFR) of JE and DHF 1991 -2007	46
5.1.7	Distribution of cases and deaths due to JE and DHF by DPDHS Divisions, 2007	46
5.1.8	Cases and Deaths of JE and DHF by Months, 2007	47
5.1.9	Cases and Deaths of JE and DHF by Age Groups, 2007	47
5.1.10	Incidence of EPI Target Diseases, 1960 - 2007	48

LIST OF TABLES

Tables		Page
<i>Public Health Services</i>		
5.2.1	Results of Blood Film Examination (Malaria) in Sri Lanka, 1995 - 2007	55
5.2.2	Parasite formula, 2005 -2007	55
5.2.3	Microscopically confirmed malaria cases, 2007	56
5.2.4	New Tuberculosis cases detected, 1993 - 2007	58
5.2.5	Tuberculosis Incidence Rate by age groups, 2005 - 2007	60
5.2.6	DOTS coverage	61
5.2.7	Basic Indicators in Leprosy, 1991 - 2007	63
5.2.8	Epidemiological Profile of Leprosy by Provinces, 2007	64
5.2.9	Trends in Entomological Indicators	66
5.2.10	Human Rabies Deaths Distribution by districts	68
5.2.11	Trends in Rabies Control Activities and Human Deaths From Rabies, 1970 - 2007	69
5.2.12	Results of Dog Population survey, 2007	70
5.2.13	History of Human Rabies And Control Activities	71
5.2.14	Comparison of Rabies Control Activities by District	73
5.2.15	Rates of selected sexually transmitted infections per 100,000 population, 2000 - 2007	77
5.2.16	Result of Pap smears, 2006 - 2007	77
5.2.17	Percentage of gonorrhoea strains resistant to antibiotics, 2000 - 2007	78
5.2.18	Cumulative HIV Cases by Age and Sex as of end December 2007	78
5.2.19	Cumulative HIV Cases by mode of transmission as of end December 2007	78
<i>Medical Suppliers and Logistics</i>		
5.3.1	Total allocation and expenditure of medical suppliers, 2000 - 2007	81
5.3.2	Construction and Rehabilitation of buildings, 2007 (ON going projects)	83
<i>Education, Training & Research (E. T. & R.) Services</i>		
6.1	Health Man Power Training, 2004 - 2007	85

LIST OF FIGURES

Figures		Page
General Information		
1.1	Population Size and Average Annual Growth Rate, 1981 - 2007	1
1.2	Population of Sri Lanka by Age & Sex, 1981 & 2001	2
1.3	District Variation in Crude Birth and Death Rates, 2007	4
1.4	Crude Birth and Death Rates, 1940 - 2007	5
1.5	Trends in Maternal and Infant Mortality Rates, 1940 - 2005	7
1.6	Percentage Stunting Among Children	9
1.7	Percentage Underweight Among Children	9
Organization of Health Services		
2.1	Organization Chart - Ministry of Healthcare And Nutrition	13
2.2	Organization Chart for the Health Services Under Provincial Councils	14
2.3	Distribution of Hospital Beds by District, 2007	15
2.4	Number of beds and patient beds per 1,000 population, 2007	16
2.5	Distribution of Medical Officers by District, 2007	17
2.6	Distribution of Registered/Assistant Medical Officers by District, 2007	17
Morbidity And Mortality		
3.1	Trend in Hospitalization for Selected Diseases, 1972 - 2007	24
3.2	Leading causes of Hospitalization, 2007	25
3.3	Leading causes of Hospital Deaths, 2007	28
Patient Care Services		
4.1	Inpatient and Outpatient attendance in Government Medical Institutions, 1970-2007	29
4.2	Utilization of Medical Institutions by District, 2007	30
4.3	Registered Births VS Hospital Births, 1965 - 2007	31
4.4	Percentage of Live births and Deaths in Government Hospitals, 1970-2007	31
4.5	OPD Dental Patients and Number of Dental Surgeons, 1995 - 2007	34
4.6	OPD, Clinics and Dental Clinic visits by Type of hospitals, 2007	34
Public Health Services		
5.1.1	Maternal Mortality Ratios by RDHS area, 2005/2006	37
5.2.1	Microscopically confirmed malaria cases (District wise), 2007	57
5.2.2	Distribution of Tuberculosis new Cases by Health Region, 2007	58
5.2.3	Distribution of Tuberculosis New Smear - Positive Cases by Health Region, 2007	58
5.2.4	New tuberculosis cases detected, 1993 - 2007	59
5.2.5	Tuberculosis incidence rate by Age Groups, 2005 - 2007	60
5.2.6	Endemic Areas by District	66
5.2.7	Entomological Indicators, 1981 - 2007	67
5.2.8	First visits of Lymphodema Patients, 2000 - 2007	67
5.2.9	Deaths of Human Rabies, 2007	71
5.2.10	Trend of Human Rabies, 1969 - 2007	72
5.2.11	Dogs Rabies vaccination, 1969 - 2007	72
Medical Suppliers and Logistics		
5.3	Management Cycle	80
5.4	Allocation and Expenditure during, 2000 - 2007	81

LIST OF DETAILED TABLES

Tables	Page	
General Information		
1	Administrative Divisions and Local Government Bodies, 2003 & 2004	89
2	Population, Land Area and Density by Province and District	90
3	Population by Five Year Age Groups and Sex, 2001 and 2007	91
4	Vital Statistics by District	92
5	Percentage Distribution of Housing Units by Source of Drinking Water, 2001	92
6	Percentage Distribution of Housing Units by Type of Toilet, 2001	93
Organization of Health Services		
7a	Urine Tests, 2006 - 2007	94
7b	Pap Smear, 2006 - 2007	94
7c	Blood Culture, 2006	94
7d	V.D.R.L. 2006 - 2007	94
7e	Infection Control Swabs, 2006 - 2007	95
7f	CSF, SPUTUM, SWAB and Body fluids, 2006	95
7g	Stool Culture and ABST, 2006 - 2007	95
7h	Other tests from January to December, 2006 - 2007	95
7i	Bllood CSF, Body fluids, Sputum, Throat swabs, ous and wound swab, Eye swabs and ear swabs, 2007	96
7j	No. of samples, salamonella typhi and salamonella para typhi	96
8a	Health related Millennium Development Goals (MDGs) - Target & Indicators	97
8b	Health Indicators in the Millenium Development Goals (MDG) - Sri Lanka	98
8c	Health Development Targets to be Achieved by Year 2002	99
9	Distribution of Government Medical Institutions and Beds by District, December 2007	100
10	Beds by Speciality and District, December 2007	101
11	Key Health Personnel, 1982 - 2007	102
12	Distribution of Health Personnel by District , December 2007	103
13	Distribution of Specialists in Curative Care Services by District, December 2007	106
14	National Expenditure, Health Expenditure and GNP, 2002 - 2007	107
15	Summary of Health Expenditure and Source of Fund, 2002 - 2007	107
16	Summary of Health Expenditure by Programme, 2007	108
Morbidity and Mortality		
17	Indoor Morbidity Statistics by Broad Disease Groups, 2007	109
18	Trends in Hospital Morbidity and Mortality by Broad Disease Groups, 1990 - 2007	110
19	Trends in Hospitalization and Hospital Deaths of Selected Diseases, 1990 -2007	111
20	Leading Causes of Hospitalization, 2007	112
21	Leading Causes of Hospitalization by District, 2007	113
22	Leading Causes of Hospitalization, 1997 - 2007	114
23	Leading Causes of Hospital Deaths, 2007	115
24	Leading Causes of Hospital Deaths by District, 2007	116
25	Leading Causes of Hospital Deaths, 1998 - 2007	117
26	Cases and Deaths of Poisoning and Case Fatality Rate, 2007	118
27	Distribution of Mental Disorders by Region / Campaign, 2007	119
28	Age Specific Mortality Rates per 100,000 Population by Broad Disease Groups, 2001	120
29	Deaths and Rates for the Five Leading Causes of Deaths in Each Age Group, 2001	121
30	Age and Sex Specific Deaths Rates, 1945 - 2001	122
31	Age and Sex Specific Mortality Rate per 100,000 Population for Selected Diseases. 2001	123
32	Case Fatality Rate of Selected Diseases, 2003, 2004, 2005, 2006 & 2007	124

LIST OF DETAILED TABLES

Tables		Page
<i>Patient Care Services</i>		
33	Average Duration of Stay in Selected Types of Hospitals, 1990 - 2007	125
34	Registered Births and Hospital Births, 1965 - 2007	125
35	Inpatient Treated and Hospital Deaths by Type of Institution and Districts, 2007	126
36	Outpatient Attendance by District and Type of Institution, 2007	127
37	Outpatient Department (OPD) visits by DPDHS area, 2007	128
38	Outpatient Department (OPD) visits by Type of hospital, 2007	128
39	Clinic Visits by quarter by DPDHS division, 2007	129
40	Clinic Visits by quarter by Type of Hospitals, 2007	130
41	Trends in Inpatient and Outpatient Attendance and Rates per 1,000 Population, 1970 - 2007	131
42	Maternal Services by Type of Hospital, 2007	131
43	Utilization of Medical Institutions by District, 2007	132
44	Live Births, Maternal Deaths, Still Births and Low Birth Weight in Government Hospitals, 2007	133
45	Performance of Dental Surgeon by District, 2007	134
46	Performance of Dental Surgeon by Type of Institution, 2007	135

Indicator	Year	Data	Source	
Demographic Indicators				
Total population (in thousands)	2007*	20,010	Registrar General's Department	
Surface area (Sq. km)	1988	62,705	Survey General's Department	
Population density (persons per sq. km)	2007*	319.0	Department of Census & Statistics	
Population growth rate (%)	2007*	1.1		
Crude birth rate (per 1000 population)	2007*	18.99	Registrar General's Department	
Crude death rate (per 1000 population)	2007*	5.84		
Urban population (%)	2001	14.6	Department of Census & Statistics ¹	
Sex ratio (No of men per 100 femals)	2001	97.9		
Child population (under 5 years) %	2001	8.6	Population Census 2001	
Women in the reproductive age group (15-49 years) %	2001	54.78		
Average household size (Number of persons)	1994	4.7	Demographic Survey 1994	
Socio-economic Indicators				
GNP per capita at current prices (Rs)	2005	120,875	Department of Census & Statistics	
Human development index	2005	0.743	UNDP, Human Development Report	
Unemployment rate	Total	2007	6.0	Department of Census & Statistics
	Female		9.0	
	Male		4.3	
Dependency ratio	Total	2001	49.27	Population Census 2001
	Old-age	2006/07	10.9	Demographic and Health Survey 2006/07
	Young		39.4	
Adult literacy rate (%)	Total	2001	90.7	Population Census 2001
	Female		89.2	
	Male		92.2	
School going population (%)	Primary	1997	99.5	Ministry of Education (provisional)
	Junior secondary		87.2	
	Senior secondary		15.6	
Mean age at marriage (years.)	Female	2000	24.6	Demographic & Health Survey 2000
	Male	1981	27.9	Population Census 1981
Health and Nutrition Indicators				
Life expectancy at birth (years)	Female	2001 to	76.4	Department of Census and Statistics
	Male	2006	71.7	
Neonatal mortality rate (per 1,000 live births)		2002	8.4	Registrar General's Department
Infant mortality rate (per 1,000 live births)		2003	11.17	
Under-five mortality rate (per 1,000 live births)		2002	13.39	
Total fertility rate (per woman)		2000	1.9	
Maternal mortality rate (per 100,000 live births)		2002	14.3	
Low-birth-weight per 100 live births in government hospitals %		2007	17.3	Medical Statistics Unit
% of Children	Under weight (weight-for- age)	2006/07	21.6	Demographic and Health Survey 2006/07
	Acute undernutrition (weight-for-height)		15	
	Chronic malnutrition (height-for-age)		18	

Indicator	Year	Data	Source	
Primary Health Care Coverage Indicators				
Immunization coverage (%)	BCG A	2005	93.3	Epidemiological Unit
	BCG B	2005	92.9	
	DPT 1 / OPV 1	2005	94.6	
	DPT 3 / OPV 3 A	2005	92.9	
	DPT 3 / OPV 3 B	2005	92.5	
	Measles A	2005	95.8	
	Measles B	2005	95.4	
	DPT 4 / OPV 4 A	2005	92.2	
	DPT 4 / OPV 5 B	2005	91.8	
	MR A	2005	89.8	
	MR B	2005	89.5	
	DT 5 / OPV 5 A	2005	88	
	DT 5 / OPV 6 B	2005	93	
	Adult Tetanus Diphtheria A	2005	71.2	
	Adult Tetanus Diphtheria B	2005	70.9	
Percentage of pregnant women attended by trained personnel	2000	96	Demographic and Health Survey 2000	
Percentage of live births in government hospitals	2007	93.9	Medical Statistics Unit	
Women of childbearing age using contraceptives (%)	Modern Method	2006/07	52.7	Demographic and Health Survey 2006/07
	Traditional method		30.4	
Population with access to safe water (%)	1994	68.4		
Health Resources				
Government health expenditure as % of GNP	2007	1.22	Department of Health Services	
Government health expenditure as % of total government expenditure	2007	4.9		
Per capita health expenditure (Rs)	2007	2,151		
Medical Officers per 100,000 population	2007	55.1	Medical Statistics Unit	
Population per Medical Officer	2007	1,815		
Dental Surgeons per 100,000 population	2007	6.6		
Nurses per 100,000 population	2007	157.3		
Public Health Midwives per 100,000 population	2007	30.8		
Number of hospitals	2007	615		
Number of hospital beds	2007	68,694		
Hospital beds per 1,000 population	2007	3.43		
Number of central dispensaries	2007	441		
Number of MOH/DDHS Divisions	2007	324		

* Provisional

1. General Information

1.1 Basic Facts

Sri Lanka is a small island with a land area of approximately 62,705 square kilometers. The island stretches to a maximum length of 435 kilometers, and a width of 225 kilometers. It is situated in the Indian Ocean, close to the southern end of the Indian peninsula, on 5° to 9° northern latitudes and between 79° and 81° eastern longitudes. Sri Lanka has a central mountainous region with peaks as high as 2,524 meters, and is surrounded by a plain.

The mean temperature ranges from 26° C to 28° C (79° F to 82° F) in the low country, and from 14° C to 24° C (58° F to 75° F) in the hill country. The hill country as well as the South West region receives sufficient rain. The rest of the island, mainly the North, North Central and Eastern parts remain dry for a considerable period of the year.

Sri Lanka has a parliamentary democratic system of government in which, sovereignty of the people and legislative powers are vested in parliament. The executive authority is exercised by a Cabinet of Ministers, presided over by an Executive President. The President and Members of the Parliament are elected directly by the people.

1.2 Administrative Division

For purposes of administration, Sri Lanka is divided into 9 Provinces, 25 Districts (26 DPDHS Areas), and 324 Divisional Secretary areas.

The provincial administration is vested in the Provincial Councils, composed of elected representatives of the people, headed by a Governor who is nominated by the Central Government.

The number of Divisional Secretary areas, Grama Niladari areas, villages and Local Government bodies under each province and district during 2003/4, is given in Table 1 (Annexure).

1.3 Population

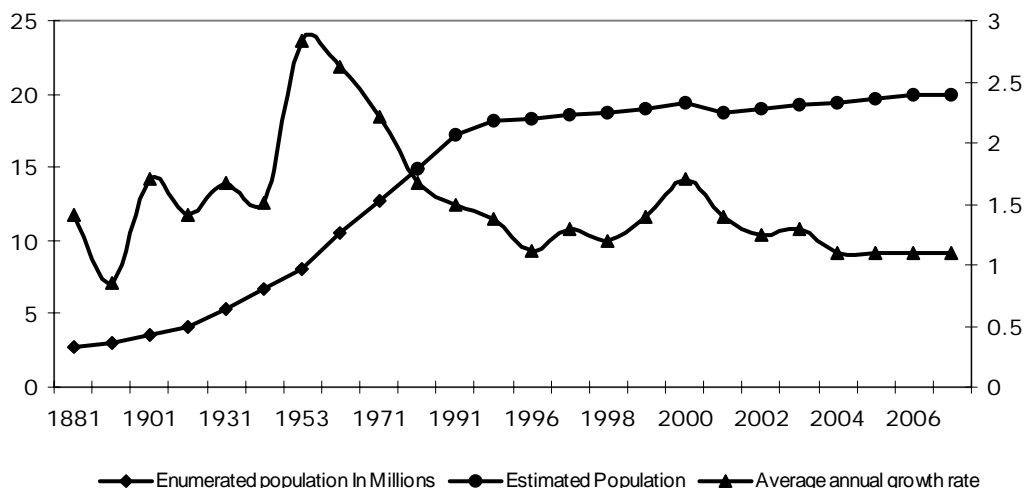
The population of Sri Lanka for the year 2007 is estimated to be 20.01 million. The average annual growth rate is recorded as 1.1 for the island. There is no significant spatial variation in the growth rate. Gampaha, Kalutara, Nuwara-Eliya, Hambantota, Jaffna, Vavunia, Kurunegala, Puttalam, Kegalle have growth rates below the average values.

1.3.1 Population Density

Little over half of the population is concentrated in the Western, Central and Southern provinces. These three provinces together make 23.2 per cent of the total land area of the country (Table 2 : Annexure). During 2007, Sri Lanka had approximately 319 persons per square kilometer.

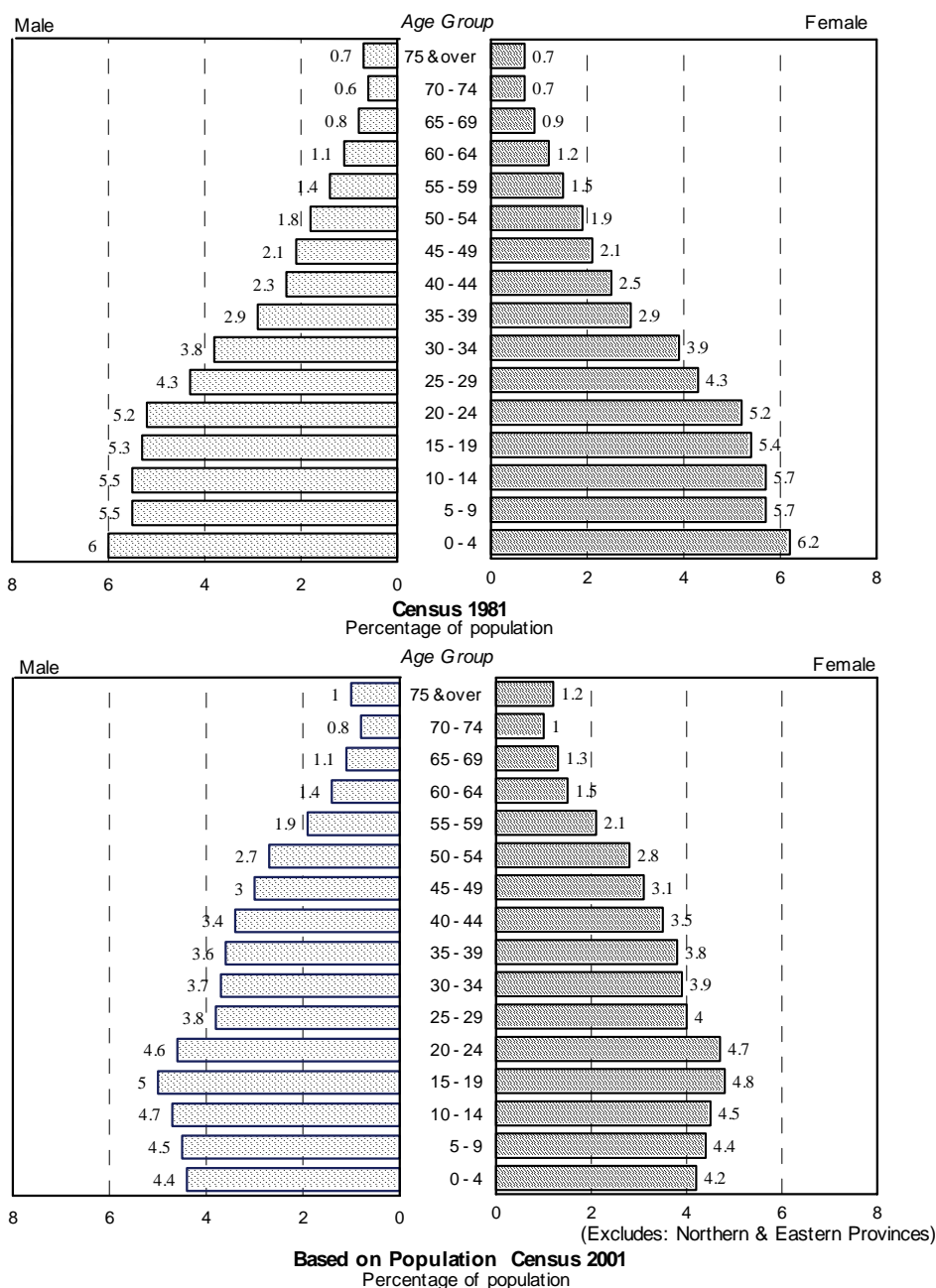
The district of Colombo has the highest density of 3,633 persons per square kilometer. The districts of Mannar, Vavuniya, Mullaitivu and Moneragala that are remote from the major urban centers have a density less than 100 persons per square kilometer.

Fig 1.1 - Population Size and Average Annual Growth Rate, 1881 - 2007



Source : Department of Census and Statistics & Registrar General's Department

Fig 1.2 - Population of Sri Lanka by Age & Sex, 1981 & 2001



Source: Department of Census and Statistics

1.3.2 Age Composition

One of the most clearly visible features in Sri Lanka's age composition is the increasing trend in the proportion of the older age groups. The median age which remained around 21.3 years until 1981, has increased to 25.6 by 1994, as reported in the demographic survey of 1994. It could also be observed that the proportion of the population below 30 years has decreased. On the other hand the proportion of the adult population has increased (fig. 1.2). A detailed age breakdown from the recent Census of Population and Housing, 2001 is given in Table 3 (Annexure)

1.3.3 Sex Composition (Male to Female)

Table 1.1 Sex Ratio of Population, 1871-2001

Year	Sex Ratio
1871	114.2
1901	113.5
1946	113
1981	103.9
1994*	97.4
2001*	97.9

* Excludes Northern and Eastern Provinces

Table 1.2 Age Specific Sex Ratio, 1981, 1994 and 2001

Age Group in years	Sex Ratio		
	1981 ¹	1994 ²	2001 ¹
All Ages	103.9	97.4	97.9
Under 1	104.1	100.9	104.5
1 – 4	103.8	102.7	
5 – 9	103.6	103.2	103.1
10 – 14	104.1	101.2	104.5
15 – 19	102.7	100.1	103.6
20 – 24	100.3	93.0	98.0
25 – 29	99.8	91.2	93.8
30 – 34	102.0	93.1	95.4
35 – 39	100.6	96.0	95.2
40 – 44	106.0	97.3	96.6
45 – 49	102.0	97.3	97.1
50 – 54	111.1	95.5	95.9
55 – 59	110.2	93.1	92.8
60 – 64	116.2	95.0	92.7
65 – 69	111.0	96.3	88.0
70 – 74	115.7	94.6	85.0
75 and over	107.3	101.9	84.6

Source ¹ Population Census
² Demographic Survey

The Census of Population & Housing 2001 records a sex ratio of 97.9 for Sri Lanka excluding North and Eastern provinces, which indicates an excess of females over males. A steady decline in the sex ratio is observed in all the previous censuses. The value of this ratio indicates the number of males per 100 females. The changes in the sex ratio from 1946 onwards could be attributed to the changes in sex difference in mortality and rise in the life expectancy.

1.4 Vital Statistics

Registration of vital events commenced in 1867 with the enactment of civil registration laws which conferred the legal sanction for the registration of events namely, live births, deaths, still births and marriages.

According to the law, every live birth has to be registered within 42 days and a death within 5 days from the date of occurrence. Still births are registered in areas where there is a Medical Registrar. The acts specify all the action necessary with regard to appointment of staff, creation of registration divisions, reporting, issuing of certificates, late registration, penalties etc.

With respect to the compilation of vital statistics, there is a well organized system for the flow of necessary information from registration officers to the statistical branch where compilation of vital statistics is taken place.

Although there is a well organized system for the registration and compilation of vital events, lot of improvements are needed to assure timely and more complete vital statistics.

The last survey conducted to assess the compilation of vital registration was taken place in 1980, which reported that about 98.8 per cent of births and 99 per cent of deaths are registered. Since then, no comprehensive evaluation is done for measuring the completeness of vital registration except for the study on maternal mortality in 2000.

1.4.1 Crude Birth Rate (CBR)

Trends in birth and death rates during the period 1955-2007 are presented in Table 1.3.

The Crude Birth rate in Sri Lanka between 1900 and 1951 was high, fluctuating between 33 in 1912 and 42 in 1926.

The first significant decline in CBR began in 1952 (Fig 1.4). However, the fertility decline gathered momentum in 1960s, recording a 16 percent drop in the CBR. In the 1970s, it remained more or less stable around 28. Subsequently, a drastic decline was recorded in fertility in the 1980s, where the CBR declined by about 27 per cent from 28.2 in 1981, to 20.7 in 1991. It continued to decline further in the next decade. This declining trend in fertility is evident in all the Demographic and Health Surveys conducted since 1987. Currently the crude birth rate is around 19.

The CBR of the districts for the year 2007 is presented in Table 4 in annex and in fig. 1.3 graphically. According to that data Kilinochchi district recorded the highest birth rate (29.4) in 2007. Ampara district recorded the second highest as 24.8. The lowest rate is recorded for Gampaha (13.5 in 2007). Some districts have higher rates than the national figure. District data for vital statistics needs careful reviewing. Since the events are registered according to the place of occurrence and not by place of usual residence the distribution given in the table 4 (Annexure) sometimes may be misleading. Concentration of vital events especially births is possible in the districts where there are more hospitals and health facilities.

Secondly the district population estimates which are used as the denominator in calculating the crude rates, may be not precise.

Table 1.3 Vital Statistics, 1955 - 2007

Year	Estimated Mid-year Population '000	Crude Birth Rate	Crude Death Rate	Maternal Mortality Rate Per 10,000 Live Births	Infant Mortality Rate	Neo-natal Mortality Rate
		Per 1,000 Population			Per 1,000 Live Births	
1955	8,723	37.3	11.0	40.5	72.4	45.3
1960	9,896	36.6	8.6	30.2	57.0	34.2
1965	11,164	33.1	8.2	23.9	53.2	33.3
1970	12,516	29.4	7.5	14.5	47.5	29.7
1975	13,496	27.8	8.5	10.2	45.1	27.0
1980	14,747	28.4	6.2	6.4	34.4	22.7
1985	15,842	24.6	6.2	5.1	24.2	16.2
1990	17,015	19.9	5.7	...	19.3	...
1991	17,267	20.7	5.5	4.2	17.7	12.8
1992	17,426	20.5	5.6	2.7	17.9	13.0
1993	17,646	19.9	5.5	2.5	16.3	12.0
1994	17,891	19.9	5.6	2.1	16.9	12.8
1995	18,136	18.9	5.8	2.4	16.5	12.5
1996	18,336	18.6	6.7	2.3	17.3	12.9
1997	18,568	17.9	6.2	3.5	16.3	12.8
1998	18,787	17.2	6.0	2.7	14.3	10.4
1999	19,056	17.3	6.1	1.9	13.8	10.6
2000*	19,359	17.6	5.8	2.0	13.3	...
2001*	18,732	18.9	5.9	1.5	12.2	9.5
2002*	18,955	19.1	5.8	1.4	11.2	...
2003*	19,252	18.9	5.9	...	11.2	...
2004*	19,462	18.5	5.8	...	...	...
2005*	19,668	18.8	6.6	...	...	...
2006*	19,886	18.7	5.8	...	...	...
2007*	20,010	18.9	5.8	...	...	...

1.4.2 Crude Death Rate (CDR)

The mortality level during 1900 - 1945 was generally high, fluctuating between 36.5 in 1935 and 18.5 in 1942. This was followed by a drastic fall of death rates in the immediate post-war years. Between 1946 and 1949, the crude death rate (CDR) fell from 19.8 to 12.4, mainly due to the eradication of malaria, extension of health services in the rural areas, and improved nutrition.

The mortality continued to decline during the last few decades, although the pace of decline has lowered. The provisional CDR for 2007 is 5.8 per 1,000 population (Table 1.3).

¹ Census 2001

Source: Registrar General's Department

* Provisional

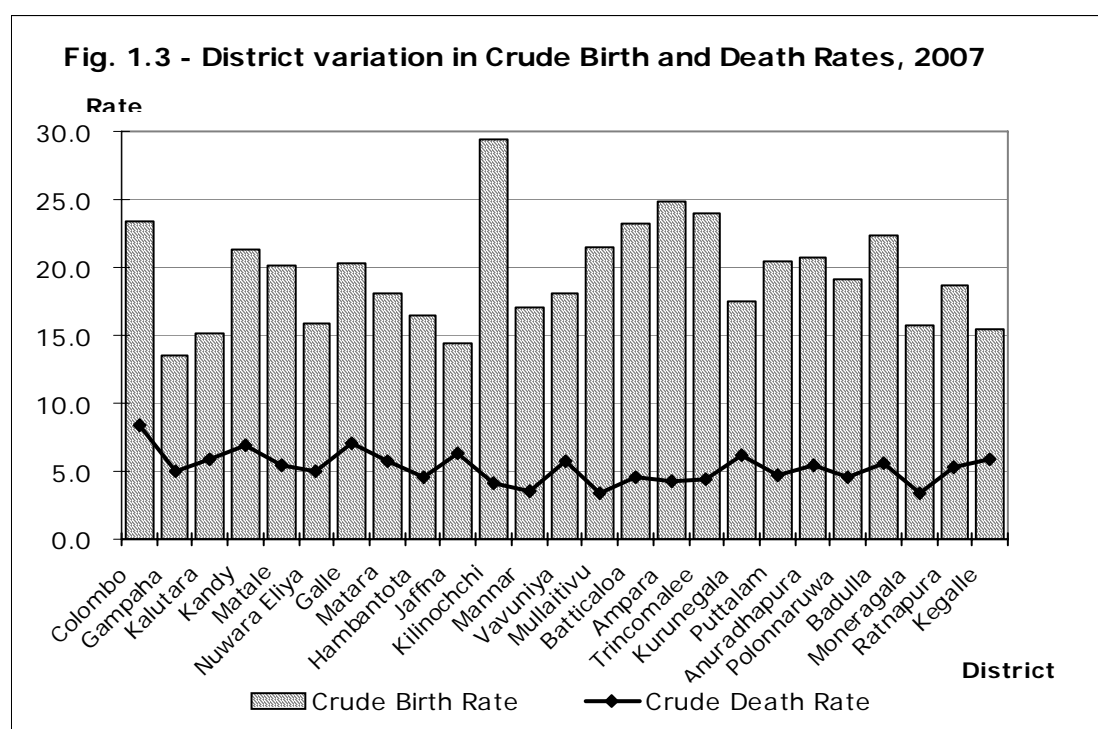
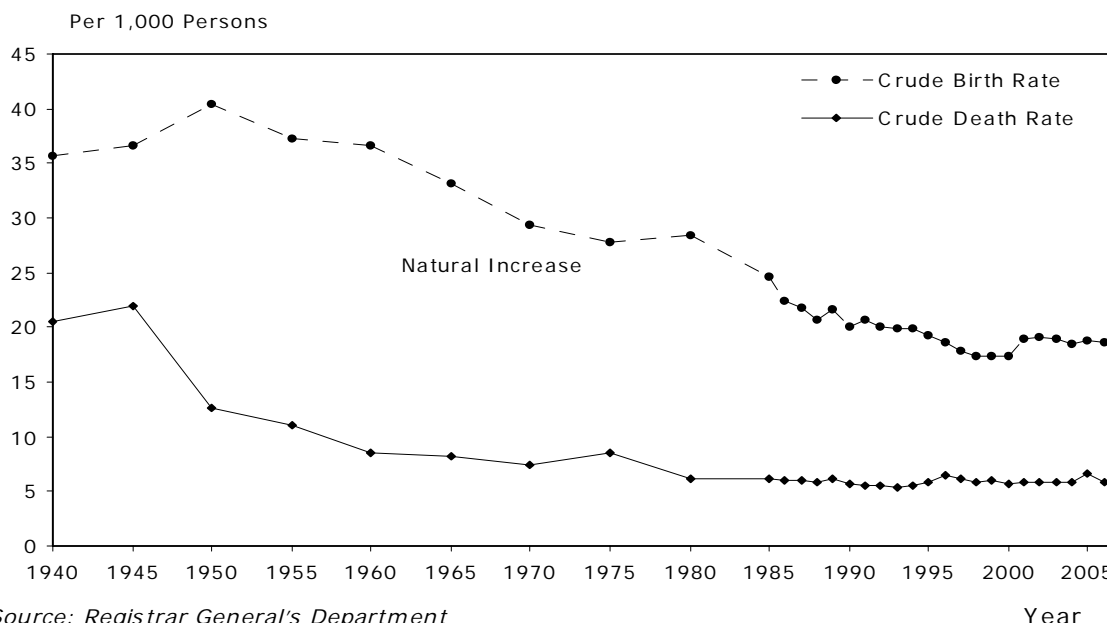


Fig 1.4 - Crude Birth and Crude Death Rates, 1940 - 2007



1.4.3 Maternal Mortality Rate (MMR)

The maternal mortality rate (MMR) has been very high in the past, fluctuating between 265 in 1935 and 155 in 1946 per 10,000 live births. A dramatic fall in the MMR in the post world war period is observed.

At present maternal deaths are reported to three different institutions by different reporting agents. These institutions are Registrar General's Department, Hospital Statistics System and Family Health Bureau.

1. The most recent MMR released by the Registrar General's Department is for 2002 and the figure is 1.4 per 10,000 live births (Table 1.3).
2. According to hospital statistics (government institutions only) the corresponding figure is 1.7 (Table 44 : Annexure) for the year 2007.
3. Maternal Mortality Ratio (MMR) given by F.H.B. is 3.9 per 10,000 live births.

It should be stated here that more than 90 per cent of registered live births occur in government institutions. Section 5.1.1.4 also gives details of maternal deaths reported to F.H.B. during 2007.

A comprehensive study carried out in 2000 primarily to obtain an accurate estimate of maternal deaths, disclosed that the actual number of maternal deaths is 3.9 times the number reported in the Civil Registration System.

It further states that non-identification of maternal death is due to non-registration, problems associated with reporting of causes of

death and coding, Moreover 72 per cent of deaths have occurred due to direct obstetric causes and 23 per cent from indirect causes.

1.4.4 Child Mortality Rate (CMR)

The child mortality rate is the number of deaths at the age of 1-4 years, per 1,000 children in that age group of the year concerned. Child mortality rate reflects the adverse environmental health hazards e.g. malnutrition, poor hygiene, infections and accidents. The child mortality rate has declined steadily, from 24.7 in 1950 to 2.8 in 1980 and 0.9 in 1996.

However, according to the Demographic and Health Survey (DHS) 2000, child mortality levels have dropped to half during the past decade from 3 deaths per 1,000 live births to single death per 1,000 live births.

According to the Demographic and Health survey 2006/7 child mortality level is 5 deaths per 1,000 children which is slightly higher figure than what it had been for the two preceding five year periods.

The survey further reveals that it is higher in the estate sector compared to the other two sectors.

In addition, it has been observed that there is an inverse relationship between mothers' educational attainment and the probability of dying of the children. Mother's age, birth order and birth interval are some of the key factors affecting child mortality.

1.4.5 Infant Mortality Rate (IMR)

The trend in infant mortality rate (IMR) is similar to the MMR. In 1935, a very high IMR (263) was recorded. A decline in the IMR is observed after 1946. It continued to decline during the past few decades (Table 1.3) The IMR for the year 2003 by districts are given in Table 4 (Annexure) under detailed tables. Fig. 1.5 illustrates the variation graphically.

According to DHS's in 1987, 1993 and 2000 infant mortality level has dropped during the past decade and according to DHS 2006/7 it was slightly increased. In 2000 it was 14 infant deaths per 1,000 live births and in 2006/7 DHS it is about 15 deaths per 1,000 live births. It is highest in the estate sector. It has a close relationship with mothers educational attainment, age of mother, birth order and birth interval.

Table 1.4 Infant Mortality (per 1,000 live births) by Demographic Characteristics

Demographic Characteristic	1993	2000	2006 /7
Infant Mortality Rate (per 1,000 live births)	25.3	14.0	15.0
Mother's Age at Birth			
< 20	32.9	21.5	23
20-29	26.4	20.0	19
30-34	22.5	15.0	-
35 +	23.4	20.7	-
30-39	-	-	17
40-49	-	-	(18)
Birth Order			
1	29.7	19.8	17
2-3	20.8	17.0	18
4-6	29.6	24.8	28
7+	*	*	*
Previous Birth Interval ⁽¹⁾			
<2 Yrs	26.7	34.5	34
2 years	-	-	21
2-3 Yrs	21.4	21.0	-
3 years	-	-	14
4 Years or more	15.8	13.4	17
Education Level of Mothers			
No Schooling	44.7	25.5	(33)
Primary	32.3	29.9	23
Secondary	22.7	17.6	19
G.C.E(O/L)	18.0	13.6	13
G.C.E(A/L) & Higher	18.0	13.8	17
Sector			
Urban	20.8	14.9	10
Rural	24.0	17.4	19
Estate	60.6	47.5	29

* Fewer than 100 exposed cases

Rates based on 250-499 exposed persons (unweighted) are in paranthesis.

(1) Based on birth order two and higher

Source : D.H.S Survey 1993,2000 & 2006/7

1.4.6 Neo-natal Mortality Rate (NNMR) and Perinatal Mortality Rate

A decreasing trend is observed in the neo-natal mortality rate (NNMR). The rate recorded for 2002 is 8.4 per 1,000 live births (Table 4 : Annexure). Anuradhapura and Polonnaruwa districts recorded highest NNMR of 14.2 (Table 4: Annexure). Lowest recorded for the district Moneragala (0.9) Kilinochchi, Trincomalee and Mulaitivu districts showed the same NNMR value of 1.4.

Neo-natal deaths are defined as deaths occurred during the first month of life. According to the observation of the DHS 2000 neo-natal deaths are most likely to occur at birth or during the first week after birth. In fact early neo-natal deaths account for one third of such deaths.

Perinatal mortality is an indicator measuring the mortality at the period of time surrounding birth i.e still births (Deaths after 28th week of pregnancy) and deaths in the first week of life. This indicator is not affected by definitional variation or carelessness in recording practices of what a still birth is.

This indicator could not be compiled due to the non availability of data on still births for the whole country. Instead, considering the importance of this indicator, perinatal mortality rate was estimated for births in government medical institutions.T

The estimated perinatal mortality rates for Sri Lanka are given below.

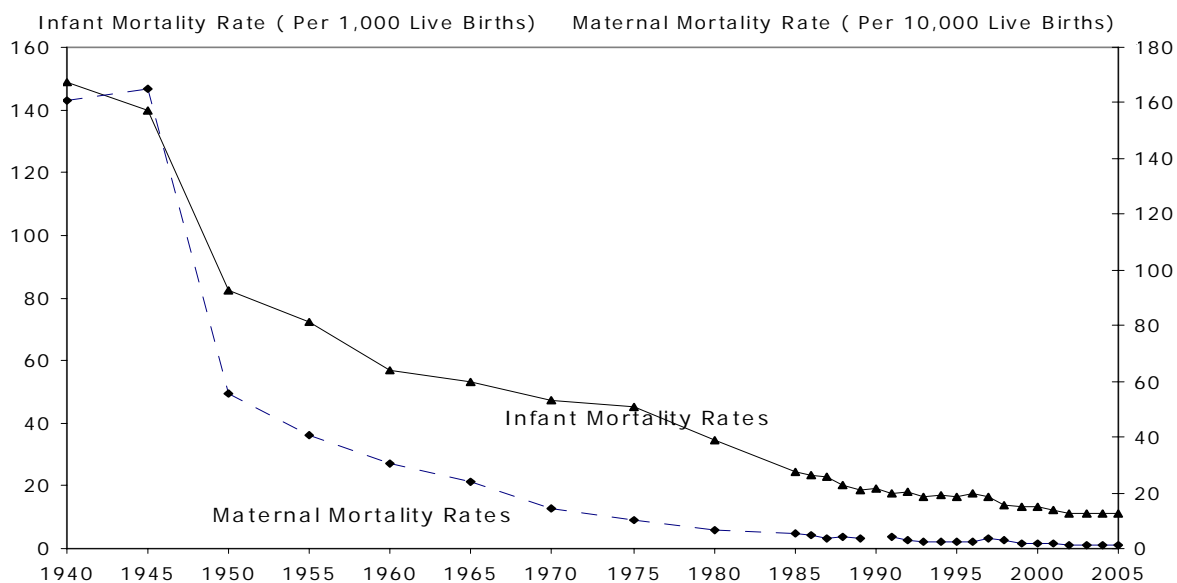
Table 1.5 Perinatal Mortality Rate

Perinatal Mortality Rate (Per 1000 birth)			
1998	8.6	2002	6.7
1999	8.6	2003	6.7
2000	7.8	2004	5.6
2001	7.5	2005	5.6

Source : Registra Generals Department

These rates show a sustained decline during the period. The district figures show that it is very high in the district of Badulla and Anuradhapura in the year 2001 (Table 4 : Annexure).

Fig 1.5 - Trends in Maternal and Infant Mortality Rates, 1940 - 2005



Source: Registrar General's Department

1.4.7 Total Fertility Rate **Table 1.6 Comparisons of Age-Specific Fertility Rates, 1963-2000**

Over the past decades, there had been a substantial decline in the TFR, from 5.0 in 1963 to 2.3 in the period 1988 to 1993 and 1.9 in the period 1995-2000. According to the DHS 2006/7, TFR is 2.3

It is also evident that for the first time, age-specific fertility rates have increased marginally in all age groups in 2006,07.

Age Group	2006/2007	1995-2000	1988-1993	1982-1987	1981	1974	1963
15 - 19	28	27	35	38	34	31	52
20 - 24	101	83	110	147	172	146	228
25 - 29	145	118	134	161	222	161	278
30 - 34	121	98	104	122	177	158	240
35 - 39	54	40	54	71	99	126	157
40 - 44	13	8	14	23	37	43	46
45 - 49	1	1	4	3	0	6	7
TFR	2.3	1.9	2.3	2.8	3.7	3.4	5

Source: Demographic and Health Survey 1993,2000 & 2006/7

Information in Table 1.7 shows that median age at first birth has increased recently from the years 2000 to 2006/7 from 23 years to 25 years respectively.

Figures also indicate that percentage of women exposed to teenage pregnancies have decreased over the period.

Table 1.7 Demographic characteristics from selected surveys

Characteristics	DHS 1987	DHS 1993	DHS 2000	DHS 2006/07
Median age at first birth for women 25 - 49 years	24.0	25.2	23.2	25.1
Percentage of women whose first birth occur before age 18	8.2	6.4	5.3	3.7
Mean ideal number of children for selected surveys	3.1	2.8	2.7	2.7

Source: Sri Lanka Demographic and Health Survey 1987, 1993, 2000 & 2006/7

1.4.8 Nutritional Status Of Children

The four consecutive Demographic and Health Surveys of 1987, 1993, 2000 and 2006/7 collected information on anthropometric measurement of height and weight of children in the age group 3-59 months.

The nutritional status of children has been evaluated in these studies by calculating the extent to which the anthropometric measurement deviates from the international reference population.

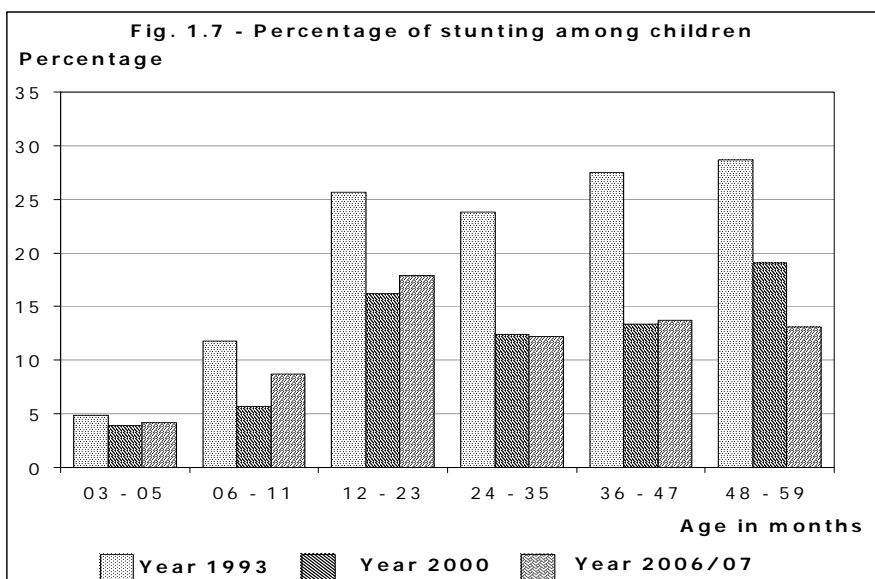
During the next seven year period i.e. from 1993-2000 a further improvement could be observed. The proportion stunted has dropped from 24 per cent to 14 per cent, wasted from 16 per cent to 14 per cent and under weight from 38 per cent to 30 per cent. Moreover in the stunted group, there are more females. In contrast more males in the wasted group. Percentage stunted is high in estate sector while underweight is prevalent in both rural and estate sectors.

Three standard indices of height-for-age, weight-for-height and weight-for-age have been used to assess the nutritional status. A child whose height-for-age is minus two standard deviations -2SD or below from the median of the reference population is considered stunted or chronically undernourished.

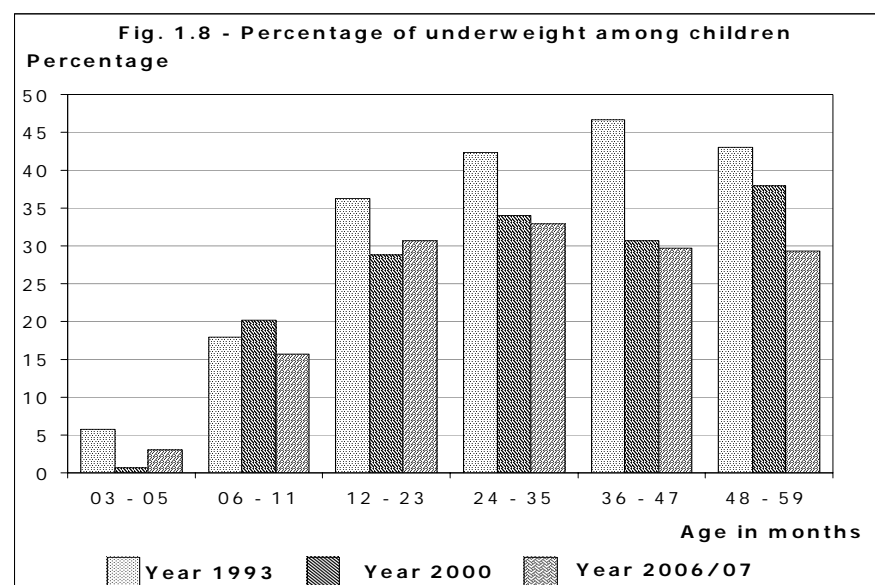
A child whose weight-for-height falls -2SD or below from the median of the reference population is classified as wasted or acutely undernourished.

The weight-for-age is a composite measure which, captures both acute and chronic under-nutrition. Children with a weight-for-age is -2SD or below the median of the reference population are considered underweight.

Three consecutive surveys revealed changes of 3 indices over the period from 1993 to 2006/7. For example wasted percentage of children remain static, percentage of children stunted and undernourished have decreased from 23.8 to 12.9 percent and 37.7 to 26.9 respectively from 1993 to 2006/7 period.



Note :
 Figures for 2006/7 were adjusted according to the age categories given in other years.



Note :
 Figures for 2006/7 were adjusted according to the age categories given in other years.

Table 1.8 Nutritional Status of Children, 1993, 2000 & 2006/07

Background Characteristics	Height for Age			Weight for Height			Weight for Age			Number of Children		
	1993	2000	2006/7	1993	2000	2006/7	1993	2000	2006/7	1993	2000	2006/7
Sex												
Male	22.7	11.9	12.9	15.6	15.1	14.4	34.8	29.0	26.5	1,610	1,321	3,389
Female	25.1	15.3	12.9	15.4	12.6	13.8	40.9	29.8	27.4	1,458	1,210	3,167
Child's age (in months)												
< 6	-	-	4.2	-	-	6.7	-	-	3.0	-	-	529
03 - 05	4.9	3.0	-	3.1	1.3	-	5.8	0.7	-	117	152	-
06 - 11												
06 - 08		5.7	5.5	6.8	10.3	4.2	17.9	20.2	8.9	375	282	307
09 - 11	11.8		11.9			8.6			22.5			394
12 - 23												
12 - 17	25.7	16.2	16.6	18.2	18.2	15.9	36.3	28.8	29.6	686	549	685
18 - 23			19.2			25.1			31.8			671
24 - 35	23.8	12.4	12.2	15.1	13.3	14.8	42.4	34.0	32.9	585	526	1,326
36 - 47	27.5	13.4	13.7	18.2	13.9	14.0	46.7	30.7	29.7	681	531	1,341
48 - 59	28.7	19.1	13.1	17.6	15.9	14.2	43.0	37.9	29.3	622	491	1,304
Sector												
Colombo metro	19.7	7.4	9.5	12.2	10.1	13.6	31.2	18.2	21.8	349	336	832
Other urban	16.8	8.6		16.8	6.3		29.9	21.3		223	221	
Rural	22.9	12.8	11.9	16.4	15.9	14.4	38.3	30.8	27.1	2,321	1,770	5,344
Estates	53.7	33.8	33.8	9.5	11.8	12.0	52.1	44.1	36.3	175	204	380
Total	23.8	13.5	12.9	15.5	14.0	14.1	37.7	29.4	26.9	3,067	2,531	6,555

Note :

- Percentage of children under five years classified as malnourished according to three anthropometric indicators of nutritional status ;
height for age (Stunted), weight for height (Wasted), and weight for age (Underweight)
For comparisons were used (NCHS/CDC/WHO Child Growth Standards
- Child's age and sector used categories for 2006/7 survey and previous survey are not the same.

Source: Sri Lanka Demographic and Health Survey 1993, 2000 & 2006/7

1.4.9. Life Expectancy

It is clearly shown that the life expectancy at birth increased for both males and females in past decades. It has increased from 40's in 1946 to at around 70's in 1996 (estimated) and 30 years increase can be seen for both sexes. Before 1963 the life expectancy for males was higher than females and after 1963 to at present female life expectancy is higher than that of males. The latest figure for male expectancy is 71 years while females live 5 more years than males (Table 1.9).

Table 1.9 Expectancy of Life at Birth 1946-2001

Year	Male	Female
1946	43.9	41.6
1953	58.8	57.5
1963	61.9	61.4
1967	64.8	66.9
1971	64.2	67.1
1981	67.8	71.7
1991-1996	69.5	74.2
1996-2001	70.7	75.4
2001-2006	71.7	76.4

Source: Department of Census & Statistics

Table 1.10 Literacy Rate by Sex, 1881 - 2001

Year	Literacy Rate			Gap Between Male and Female Rate
	Total	Male	Female	
1881	17.4	29.8	3.1	26.7
1891	21.7	36.1	5.3	30.8
1901	26.4	42.0	8.5	33.5
1911	31.0	47.2	12.5	34.7
1921	39.9	56.3	21.2	35.1
1946	57.8	70.1	43.8	26.3
1953	65.4	75.9	53.6	22.3
1963	77.1	85.8	67.5	18.3
1971	78.5	85.6	70.9	14.7
1981	87.2 (87.8)	91.1 (91.7)	83.2 (83.6)	7.9 (8.1)
1994	(90.1)	(92.5)	(87.9)	(4.6)
2001	(90.7)	(92.2)	(89.2)	(3.0)

Source: Department of Census and Statistics.

() Excluding Northern and Eastern Provinces

1.5 Social Indicators

1.5.1. Literacy Rate

The literacy rate is defined as the percentage of the population aged 10 years and over, who are able to read and write at least one language. The literacy rate has increased from 57.8 percent in 1946 to 87.2 percent in 1981. Males showed a higher rate of literacy than females at all ages (Table 1.10).

Female literacy has improved at a greater speed than the male literacy rate reducing the gap from 26.3 percent in 1946 to 7.9 percent in 1981. The literacy rate derived from the recent census of Population and Housing 2001 excluding the Northern and Eastern provinces, is 90.7.

The table 1.10 reveals that difference between the male and female literacy rate is very minimal (3.0) excluding Northern and Eastern provinces. Still the Nuwara Eliya district represents the lowest literacy rate of 77.7. Ampara, Badulla, Moneragala are the other districts with lower literacy rates. In 2001, Gampaha district recorded the highest literacy rate (95.3 per cent)

1.5.2. Level of Education

According to the recent Census of Population and Housing 2001, out of the population 3 years and over, approximately 6.0 percent had not been to school. Another 22 per cent had not completed the primary education (Table 1.11)

Table 1.11 Percentage Distribution of Population (30 Years and Above) by Broad Education Groups, 2001

Educational Group	Total	Male	Female
No schooling	6.1	7.6	4.6
Below primary	22.3	21.4	23.5
Grade 6 to 10	39.6	37.8	41.3
GCE (O/L) / NCGE / SSC	18.9	19.4	18.3
GCE (A/L) /HNCE/ HSC	9.2	10.1	8.2
Degree/Postgraduate	1.2	1.0	1.3
Not Stated	2.8	2.7	2.8

Based on Census of Population and Housing, 2001

According to the DHS 2006/7 98 percent of the urban sector households have access to improved source of drinking water, 17 percent of estate sector households, use as the unimproved sources of drinking water.

1.6.2 Toilet Facilities

In 1981, 33.5 per cent of the housing units or households at the national level did not have a toilet. The situation was much worse in some districts. The availability of toilets was extremely poor in Mullaitivu, Batticaloa, Vavuniya, Mannar, Ampara and Trincomalee districts, all of the Northern and Eastern Provinces. There is much improvement since then.

The Census of Population and Housing 2001 reveals that the percentage of households without toilet facilities (excluding Northern & Eastern Provinces) is 4.3 (Table 6 : Annexure).

DHS 2006/7 reveals that only 2.2 percent of households did not have toilet facilities (Excluding Northern Province)

Although the percentage is 4.3 the number of households not using toilet is 1,88,131. Hence, The number of persons should be much more. The situation is worse in districts such as, Ampara, Nuwara Eliya, Puttalam and Anuradhapura.

1.6 Water Supply and Sanitation

1.6.1. Source of Water Supply for Drinking

The well is the most common source of water for drinking. This can be observed in the past censuses (1971, 1981, 2001) and surveys (1994 DS, 2000 DHS and DHS 2006/7). Yet the percentage getting drinking water from a protected well is 50 percent.

The percentage getting water for drinking purposes from a main line is 27 per cent. Still around 29 percent get drinking water either from an unprotected well or from such sources as river, tank or stream (Table 5 : Annexure)

However an improvement could be seen from 1981 to 2006/7

2. Organization of Health Services

In Sri Lanka, both public and private sector provide health care. The public sector provides health care for nearly 60 percent of the population. The Department of health services and the provincial health sector encompass the entire range of preventive, curative and rehabilitative health care provision.

The private sector provides mainly curative care, which is estimated to be nearly 50 percent of the out patient care of the population and is largely concentrated in the urban and suburban areas. The one –day General practice morbidity survey in Sri Lanka, 1998 estimated that General practitioners in Sri Lanka handle at least 26.5 percent of primary care consultations per year.

Ninety Five percent of inpatient care is provided by the public sector. In addition to the Services provided by the Department of Health Services, provincial councils and the local authorities also provide health services to the public. There are Service provisions especially for armed forces and police personnel, and the estate population.

Western, Ayurvedic, Unani, Siddha and Homeopathy systems of medicine are practiced in Sri Lanka. Of these, Western Medicine is the main health system catering to the needs of a vast majority of people. The public sector comprises of Western and Ayurvedic systems, while the private sector consists of practitioners in all types of medicine. This provides the people an opportunity to seek medical care from various sources, under the different systems of medicine.

Sri Lanka possesses an extensive network of health care institutions. As such, the majority of the population has easy access to a reasonable level of health care facilities provided by both state and private sector through extension of services to every corner of the country. A Health care unit can be found on an average not further than 1.4 km from any home and free western type government Healthcare Services are available within 4.8 km of a patient's home.

2.1 National Health Policy

The broad aim of the health policy of Sri Lanka is to increase life expectancy and improve quality of life. This is to be achieved by controlling preventable diseases and by health promotion activities. However, the concern of the Sri Lankan Government is to address health problems like inequities in health services provision, care of elderly and disabled, non-communicable diseases, accidents and suicides, substance abuse mental problems and malnutrition.

Her excellency the President appointed a presidential Task Force in 1997 to formulate a health policy and to suggest strategies to

address health problems and issues as mentioned above. After reviewing the recommendations made by the Task Force, the following thrust areas have been identified for immediate implementation.

1. Improve one hospital in each district in a planned manner, to reduce inequities in the distribution of services and to provide high quality facilities to people living in remote areas.
2. Expand the services to areas of special needs (e.g. the elderly, disabled, victims of war and conflict, occupational health problems, mental health and estate health services).
3. Develop health promotional programmes with special emphasis on revitalizing the school health programme.
4. Reform of the organizational structure to improve efficiency and effectiveness, especially in the context of devolution.
5. Resource mobilization and management, including alternative financing mechanisms, resources sharing between public and private sector and rationalized human resources development.

Later in 2003, Health Master Plan development studies commenced based on the strategic directions of the health sector. Under this plan a vision and mission for the health sector were formulated.

2.1.1 Vision

A healthier nation that contributes to its economic, social, mental and spiritual development.

2.1.2 Mission

To achieve the highest attainable health states by responding to people needs, working in partnership, to ensure access to comprehensive, high quality, equitable, cost effective and sustainable health services.

Five main strategic areas were recognized for development of detailed plan under several projects and programmes.

2.1.3. Strategic Areas

- ◆ Ensuring delivery of comprehensive health services, which reduce the diseases burden and promote health.
- ◆ Empowering communities towards more active participation in maintaining their health.
- ◆ Strengthening the steward ship and management functions of the health system.
- ◆ Improving Human resources for health development and management, and
- ◆ Improving health financing, mobilization, allocation and utilization of resources.

The thrust areas will be addressed through Western, Ayurvedic and all other systems of medicine. The government will take every effort to maximize the financial allocations on health development. This will enable the government to provide an efficient health service throughout the country, accessible to the needy people.

2.2 Health Administration

The health services of the government function under a cabinet Minister, with the implementation of the Provincial Councils Act. In 1989, the health services were devolved, resulting in the Ministry of Health at the National level and separate Provincial Ministries of Health in the nine provinces.

The central Ministry of Health is primarily responsible for the protection and promotion of people's health. Its key functions are setting policy guidelines, medical and paramedical education, management of teaching and specialized medical institutions, and bulk purchase of medical requisites'. The nine Provincial Directors of Health Services (PDHS) are totally responsible for management and effective implementation of health Services in the respective provinces. The PDHS is responsible for the management of hospitals (Provincial, Base and District Hospitals, Peripheral Units, Rural Hospitals and Maternity Homes) and Out Patient Facilities such as Central Dispensaries and Visiting Stations.

During 2007 there were twenty six Regional Directors of Health Services (RDHS) to assist the nine Provincial Directors Services. RDHS are similar to administrative districts, except for Ampara district, which is sub divided to form two RDHS areas; Ampara and Kalmunai. Killinochchi and Mannar districts started functioning as two RDHS from 2002. Each RDHS area is sub divided into several Medical officers of Health areas(MOH).

The MOH is responsible for the preventive and promotional health care in a defined area and carry out the action through the trained field staff working at field level.

According to the size of the population MOH can be grouped under five categories. There are five MOH areas with population more than 250,000. Another one third has population below 50,000.

Size of Population	Number of MOH
More than 250,000	5
200,000 - 250,000	4
100,000 - 200,000	55
50,000 - 100,000	119
Less than 50,000	113

In January 1999, the Ministry of Health was restructured which resulted in the separation of the Department of Health Services from the Ministry of Health. The Director General of Health Services heads the Department and has immediate support from Deputy Director Generals (DDG), each in-charge of special programme area. They have, under their jurisdiction, a number of Directors responsible for different programmes and organizations. In mid 2001, there was a Cabinet decision to amalgamate the Ministry of Health and the Department of Health Services.

2.3 Health Facilities

The network of curative care institutions range from sophisticated Teaching Hospitals with specialized consultative services to small central Dispensaries, which provide only outpatient services. The distinction between hospitals is basically made on the size and the range of facilities provides. There are three levels of curative care institutions as shown below. However, patients can seek care in any Medical institution of their choice.

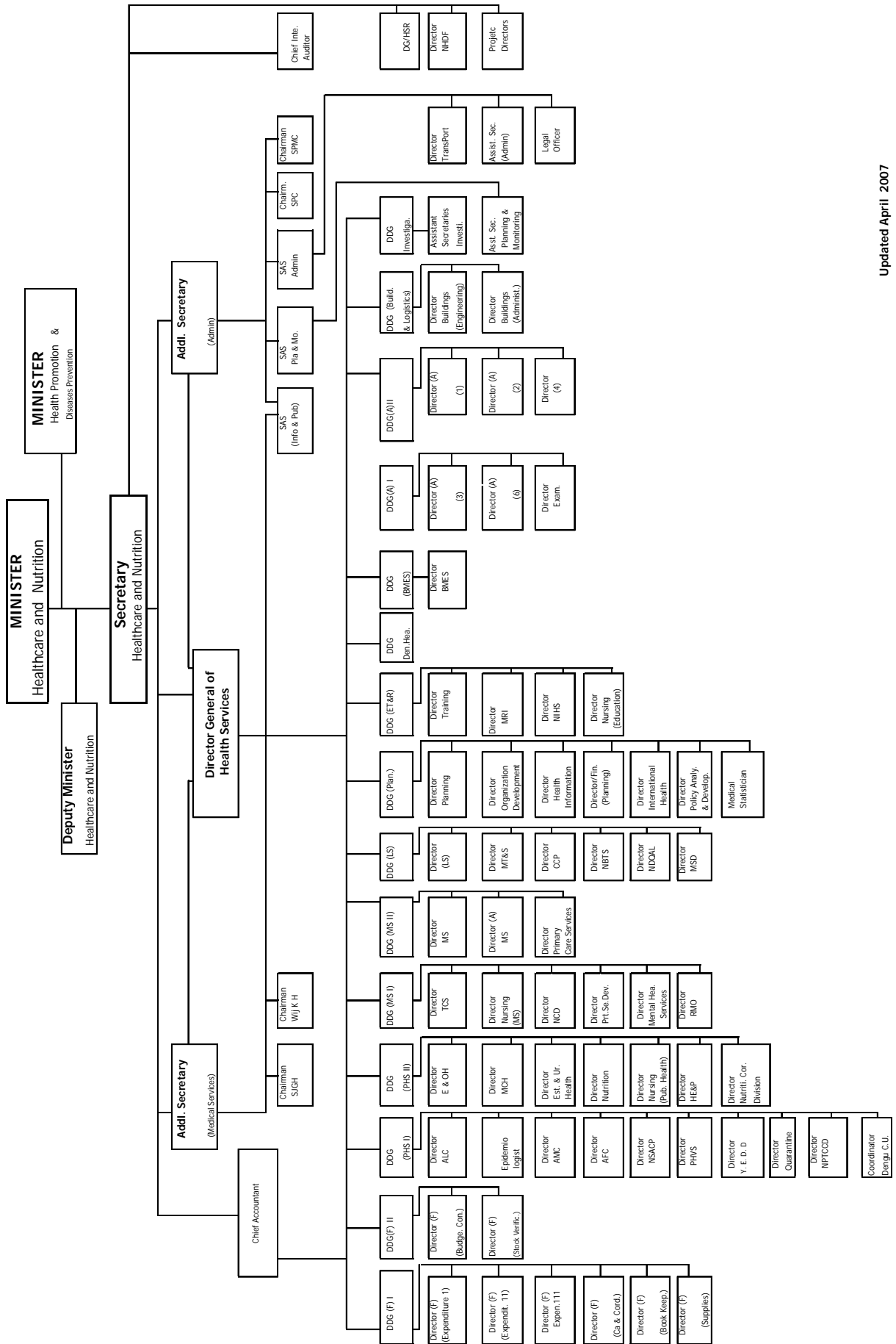
- * The Central Dispensaries, Maternity Homes, Rural Hospitals, Peripheral units and District Hospitals are primary health care institutions.
- * The Base and provincial Hospitals are secondary care institutions.
- * The Teaching and Special Hospitals are tertiary care institutions.

2.3.1 The Proposed Hospital Re-categorization

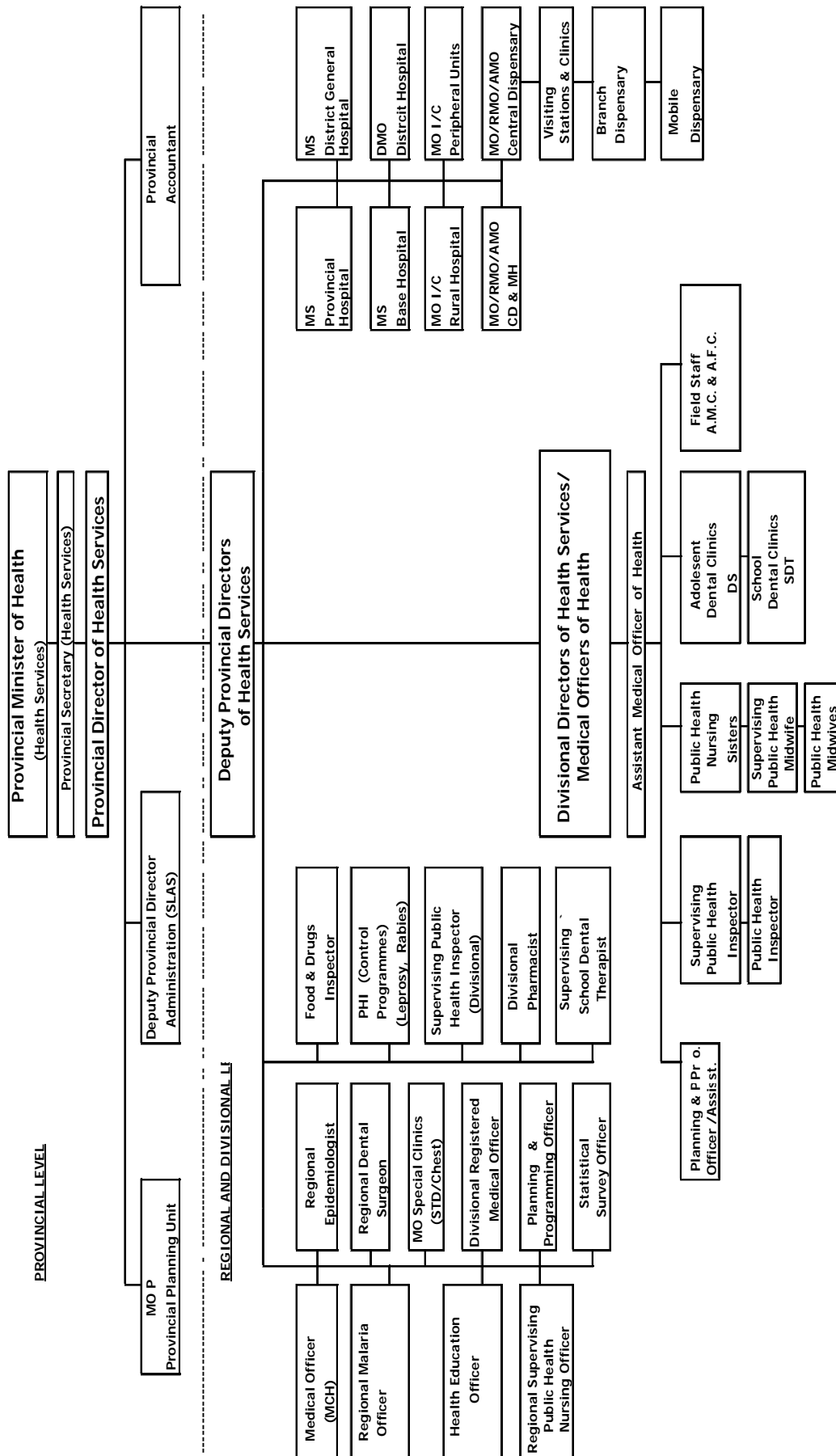
The network of Government Hospitals is primarily responsible for carrying out the curative health care delivery system and these facilities are provided from Teaching Hospitals to Maternity Homes and Central Dispensaries. Most of the Maternity Homes and Central Dispensaries are scattered in the rural areas. As well as Teaching Hospitals, District General Hospitals, Base Hospitals, District Hospitals, Peripheral Units, Rural Hospitals, Maternity homes provide in-patient care facilities for over 95 percent of the patients who seek admission. To provide equal curative health facilities for all citizens of the country, the Ministry of Healthcare and Nutrition has proposed a scheme for developing health institutions. Under the hospital re-categorization it is proposed to develop one Base Hospital in every District and upgrade as District General Hospital with additional facilities. The hospitals have been identified based on funds availability, opinion based; unorganized hospital development has caused problems such as unavailability of human resources and logistic problems leading to under utilization of these developed hospitals.

ORGANIZATION CHART - MINISTRY OF HEALTHCARE AND NUTRITION

Fig 2.1



ORGANIZATION CHART FOR THE HEALTH SERVICES UNDER PROVINCIAL COUNCILS



Updated on 2007

To establish successful user-friendly hospital system in the country all health institutions have grouped in to four major categories, such as Teaching/ Provincial hospitals, District General hospitals (Type A and B), District Base Hospitals (type A and B), Divisional Hospitals, including Primary Care Units and the Government of Sri Lanka approved the re-categorization scheme.

According to the Hospital re-categorization, the hospitals have already being identified for development with additional facilities including teaching and provincial hospitals at each and every district. There were 18 District General Hospitals, 21 District Base Hospitals (Type A) and 40 Type B District Base Hospitals and also several Divisional hospitals proposed in year 2005. Most of these hospitals were promoted with all facilities recommended for respective hospital category.

Based on the needs of the areas in Eastern and Uva and North Western Provincial Councils, District Hospital Kinniya and District Hospital Monaragala and Base Hospital Dambadeniya were selected to develop as District Base Hospital Type B in 2007.

As at December 2007, there were 608 medical institutions with inpatient facilities and it is same in 2006. When compared to 2006, there were 441 Central Dispensaries in Sri Lanka. The number of beds in the hospitals increased from 67,024 in 2006 to 68,694 during 2007, indicating a 2 per cent increase.

In total, there are 16 Teaching Hospitals with 18,451 patient beds (Table 9 : Annexure). There are few Specialized Hospitals for the treatment of chronic diseases like tuberculosis, leprosy, mental illnesses, cancer, chronic rheumatological diseases and infectious diseases.

Table 2.1 Number of Health Institutions and Hospital Beds, 1985 - 2007

Item	1985	1990 ¹	1995 ²	2000	2003	2004	2005	2006	2007
Hospitals ³	490	422	467	558	607	628	608	608	608
Patient Beds ³	44,861	42,079	47,665	57,027	59,262	57,404	61,594	67,024	68,694
Patient Beds per 1000 Population	2.8	2.9	2.9	2.9	3.1	2.9	3.2	3.4	3.4
Central Dispensaries	338	278	320	404	400	397	413	428	441
MOH Areas	111	110	213	252	280	273	286	288	291

Excludes:

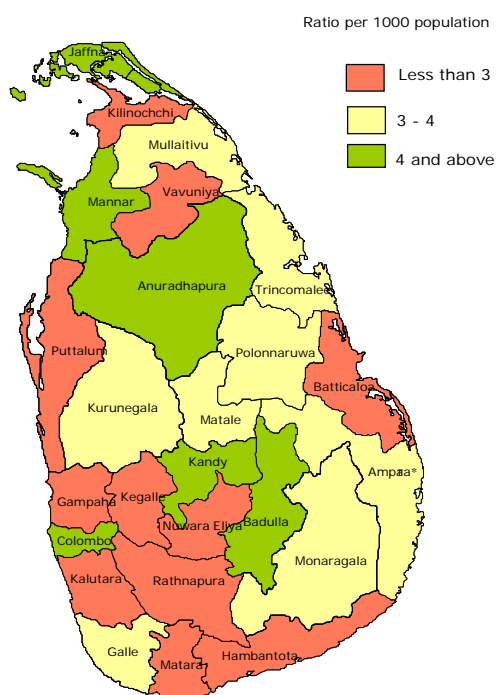
¹ Northern and Eastern provinces

² Jaffna, Kilinochchi, Mullaitivu and Ampara districts

³ Includes Maternity Homes and Central Dispensaries.

Source: Medical Statistics Unit

Fig. 2.3 - Distribution of Hospital Beds by District - December 2007



* Ampara includes Kalmunai RDHS division.

The National Hospital of Sri Lanka (NHSL), located in the city of Colombo is the largest hospital in the island. In 2007, it had more than 3000 patient beds. This hospital provides for a number of specialties, including subspecialties like neurology, cardio-thoracic surgery, but excluding paediatrics, obstetrics, ophthalmology and dental surgery. A renal transplant service is also provided by a collaborative project of the University Surgical and Medical Units of the Hospital. The NHSL has a well-equipped accident service and several intensive care units. The specialties not found in the National Hospital are provided by the two Maternity Hospitals, Children's Hospital, Eye Hospital and the Dental Institute located in close proximity.

The number of Provincial Hospitals remained to be 12 in 2007 (Table 9 : Annexure). There were 44 Base Hospitals with a total of 12,391 patient beds.

These institutions are situated in the large towns and are administered by the respective Provincial Ministries of Health, except for all the Provincial Hospitals and Base Hospital at Gampola, which are administratively under the Department of Health Services.

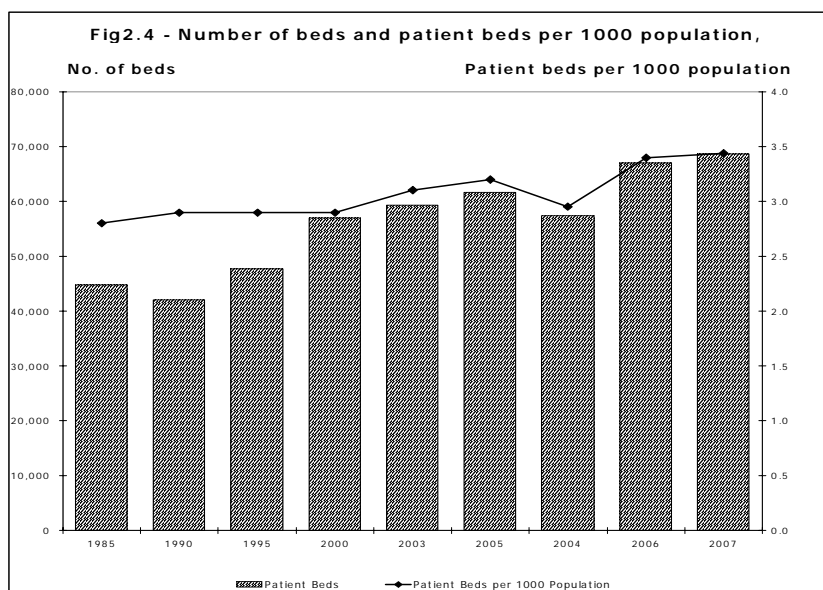
Table 2.2 Availability of Patient Beds by Type of Institution, 2006 & 2007

Type of Institution	Patient Beds (Range)		Average		Number of Hospitals	
	2006	2007	2006	2007	2006	2007
Teaching Hospitals	268 - 3,280	257 - 3,264	1157.9	1153.2	10	10
Provincial Hospitals	366 - 1,218	225 - 1,328	867.1	709.0	3	6
Base Hospitals	38 - 720	67 - 816	280.7	288.2	23	25
District Hospitals	30 - 484	16 - 484	92.8	92.4	87	90
Peripheral Unit	17 - 144	17 - 147	54.6	54.0	58	53
Rural Hospital	2 - 192	4 - 112	29.8	29.4	98	104
CD & MH	1 - 56	1 - 41	14.6	13.5	34	25
Others	13 - 1,068	11 - 1,325	233.1	249.1	16	14

Source : Medical Statistics Unit

The Provincial Hospitals have specialties like general medicine, surgery, obstetrics, gynaecology, ophthalmology, ENT and paediatrics and also have well-equipped pathological laboratories and other auxiliary services. Among the Base Hospitals, only a few institutions provide basic specialties.

The distinction between District Hospitals (DH), Peripheral Unit (PU) and Rural Hospitals (RH) is made on their size and the range of facilities available. The total care available in DHs and PUs, are far superior to RHs because of the availability of nursing personnel in these institutions.



Among the primary health care institutions, the DHs are the largest. District Hospital at Udugama, Chavakachcheri and Eheliyagoda have wards to treat TB patients, while DHs Unawatuna and Tellippalai have wards for psychiatric patients. District Hospitals Tangalle and Marawila provide few basic specialties.

During 2007 Sri Lanka had 95 PUs with a total of 5,127 patient beds and 182 RHs with a total of 5,180 patient beds. The average size of a RH in 2007 was with 29 beds. More than 50 per cent of RHs had beds less than the average amount.

These institutions very often do not have a separate maternity ward. In the past the RHs were manned by Assistant / Registered Medical Officers. During 2007, RHs were also in charge of Medical Officers. In order to improve the health conditions of the estate workers, by the end of year 2001, 15 Estate Hospitals were acquired by the government and manned with qualified medical personnel. But, most of these hospitals were not functioning fully due to the lack of adequate buildings and equipment. After these institutions are categorized as RHs.

The smallest type of institution with inpatient facilities is the Central Dispensary and, Maternity Homes (CD & MH). During 2007, Medical Officers were posted to some CD & MHs. Many of these institutions have been upgraded by providing better facilities. Hence, in 2007 there were only 59 CD & MHs compared with 67 in 2006. In 2007 there were two hundred and ninety one (291) Health Units (MOH offices) headed by Medical Officers of Health, carrying out preventive services in Sri Lanka.

2.4 Health Manpower

In the area of health manpower, numbers in most categories have increased. The government has made a decision to absorb all Medical Graduates passing out from the universities until 2009.

The total number of Medical Officers rose from 10,279 in 2006 to 11,023 in 2007. Accordingly, persons per doctor have also improved. In 2007 this figure was 1,815 as compared to 1,935 in 2006.

The number of Nurses per 100,000 population has increased from 125 in 2006 to 157 in 2007. A shortage of qualified paramedical staff, such as Pharmacists, Medical Laboratory Technicians, Radiographers, Physiotherapists and ECG Recordists still exists.

A wide disparity in the regional distribution of health personnel is evident. The Colombo district has a high concentration of most categories of health personnel except public health staff. In Colombo, the municipal staff supplements these categories. Kandy and Galle District, too, have comparatively higher numbers of health personnel. The Nuwara Eliya district had the lowest number of Medical Officers and Nurses except for some districts of the North East Province.

The distribution of specialists in curative services as in September 2007 is presented in Table 22. Of the specialists, 35 percent of the medical specialist in the curative sector are concentrated in the Colombo district. The districts of Kilinochchi, Mullaitivu and Mannar did not have a single Specialist, and again the absence of certain common specialties such as general medicine and surgery, obstetrics, and paediatrics in some district is also noteworthy.

Fig. 2.6: Distribution of Registered / Assistant Medical Officers - December 2007

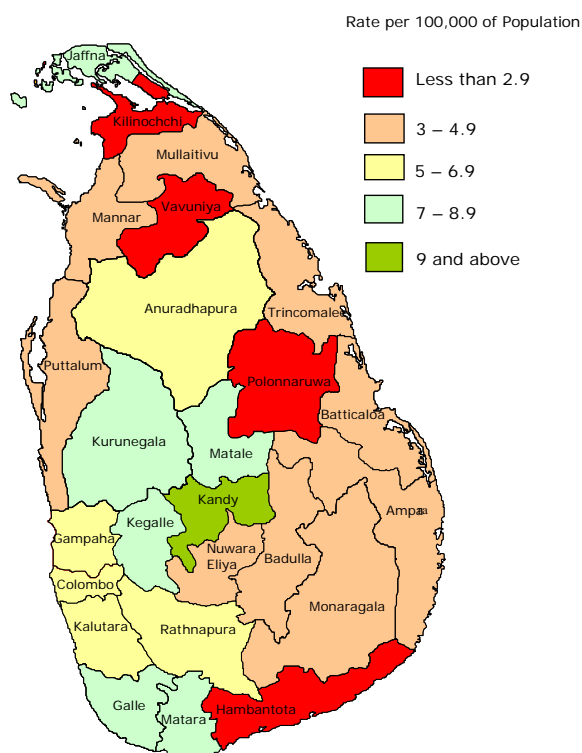
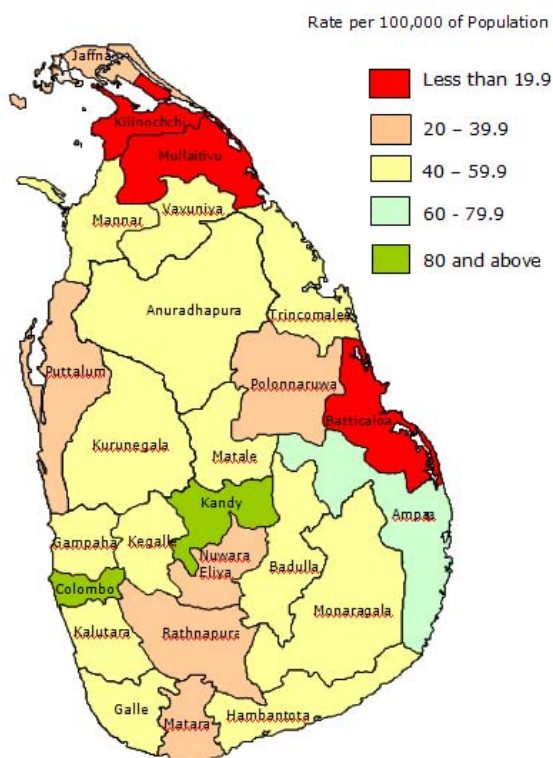


Fig 2.5: Distribution of Medical Officers December 2007



2.5 National Institute of Health Sciences (NIHS)

2.5.1 Mission

Train & Develop human resources need to deliver promotive, preventive Curative and rehabilitative health services

In keeping with the mission and objectives of the National Institute of Health Sciences (NIHS) steps were taken to develop selected health manpower for the provision of healthcare and to provide primary health care services to a population of about 277,000 living within the field practice area of NIHS.

Health manpower development for Primary Healthcare programme being the primary function of the NIHS several basic and continuing education programmes were conducted during the years 2006 & 2007.

Basic training programmes conducted by the NIHS were indicated below.

- Public Health Inspectors
- Public Health Midwives
- Medical Laboratory Technologists
- Pharmacists

2.5.2 Post Basic Training

Post basic training programme was not conducted during the period under review.

2.5.3 In-service training

Teacher training programmes, Management training for Middle Level Supervisors of Health workers, Community Health orientation for Medical Officers of Health and Students who were undergoing the Msc in Community Medicine course at PGIM Colombo, Health Systems Research Methodology & ICD 10 training for Medical Officers (MRO) and Medical Officers were some of the important training programmes conducted for local participants.

Other than the training programmes for the local participants one year community Health Worker programme for a group of community health workers from Maldives was conducted at NIHS. Two months externship training for PHC students of faculty of Health sciences of Maldives also was undertaken by NIHS.

Though the medical care institutions located in NIHS field practice area were taken off from the administration of the NIHS, still CD Police Training school and CD Prison administered by NIHS. Since the separation of curative care institutions, the RMO attached to NIHS continued to deliver, out reach services at Branch Dispensaries (BD) within NIHS field practice area since demand was very high from the community.

Service Laboratory of the institute continued to offer services to GH Kalutara BH's Panadura and Horana. The food control laboratory of the NIHS serves to most parts of the country by analyzing both food and water samples. The laboratory accept samples from PHII for both chemical and bacteriological analysis. This functioned as the focal point for food quality control activities of the Ministry of Health.

The library and documentation centre of NIHS is well equipped and is a member of the Hellis network. Other than reading and lending of books and other publications the library has Internet facility and facilities for on line search too.

As regards the provision of primary health care services special inputs were received from the donor agencies like UNICEF, UNFPA and WHO for human resource development and to improve physical facilities and health infrastructure.

Table 2.3.1 Health Manpower Training 2006

Category	Annual Intake 2006	Annual Output 2006
PHI (05/06)	-	56
Pharmacist (06/08 Batch) I	94	0
PHM	160	158

Source : National Institute of Health Sciences

Table 2.3.2 Health Manpower Training - 2007

Category	Annual Intake 2007	Annual Output 2007
MLT (05/07)	-	41
MLT (07/09)	140	-
Pharmacist (07/09) I	96	-
Pharmacist (07/09) I	62	-
PHM	78	78

Source : National Institute of Health Sciences

2.5.4 Food Control Laboratory, NIHS

The food control laboratory of the Ministry of Health was established in 1987 at NIHS under FAG/UNDP project. During the period under review the food control laboratory has continued analysis of food and water samples received from various parts of the country to detect agents of food borne diseases, food additives, common adulterants and proximate compositions. The laboratory provided the services to all administrative districts of the country except the Colombo city limits. This is the only food control laboratory of the Ministry of Health with facilities to analyze food and water for both chemical and bacteriological analysis.

Table 2.3.3 Staff Position of the Food Laboratory

Category	In Position		
	2005	2006	2007
Chemist	4	4	4
Microbiologist	1	1	1
M.L.TT	3	3	3
H.M.A.S	2	2	2
Lab Orderly	1	1	1
Total	11	11	11

Source : National Institute of Health Sciences

The laboratory had the services of four graduate chemists, three Medical Laboratory Technologists (MLTT) and one laboratory attendant. Since the post of microbiologist of the NIHS was vacant for the entire year the laboratory did not accept the samples of food and water for formal bacteriological analysis.

The food microbiology section of the laboratory accepted and analyzed only informal samples during this period due to the non availability of a qualified gazetted microbiologist. In addition to routine food analysis the laboratory has carried out investigation of food poisoning outbreaks and surveillance activities.

2.5.5 Food Sample Statistics

The samples were graded unsuitable due to the presence of coli form bacteria above the standard number in the sample. The water samples were received from range PHI, tourist restaurants as well as from small food handling establishments. The reports were handed over to the PHII and to the owners of the restaurants with advice.

Iodated salt samples were mostly lack in the expected minimal level iodine (<15microgram) and some of them had excess iodine (>50micrograms)

In addition the laboratory carried out compositional analysis of raw materials of Thriposha i.e Maize, Soya, milk powder and Thriposha factory.

Table 2.3.4 Samples analyzed for microbial contamination, 2006 - 2007

Items	2006			2007		
	No. of samples tested	No. unsuitable	% unsuitable	No. of samples tested	No. unsuitable	% unsuitable
Food	273	72	26.4	353	167	47.3
Water	201	98	48.8	451	237	52.5
Total	474	170	35.9	804	404	50.2

Source : National Institute of Health Sciences

2.5.6 Chemical Analysis

Table 2.6 & 2.7 gives the summary of food samples analysed during the period this review. The inspectorate submitted these samples, which were taken during their routine inspections to the food control laboratory. Common adulterants found in ground spices were rice, wheat or legume starches and the levels ranged from 5 to 15 per cent. Whole spices, cereals and pulses were graded as poor quality due to insect infestations and the presence of extraneous matter Bread samples were failed due to the presence of excess moisture (i.e more than 40% of moisture).

2.5.7 Service Laboratory N.I.H.S. Kalutara 2006 - 2007

Service Laboratory consists of four sections

1. Bacteriology section
2. Serology section
3. Public Health Lab /Cytology section, Hematology section
4. Receive samples for Laboratory investigations from General Hospital Kalutara, Base Hospital Panadura, Base Hospital Horana, Kethumathie Hospital Panadura, District Hospital Matugama, Aluthgama, Beruwala, Dargatown and all MOH areas of Kalutara district.

Table 2.3.5 Chemical Analysis of Food Samples, 2006 - 2007

Sample type	2006			2007		
	Number of samples received and analyzed	Number detected as Unsuitable	% detected as unsuitable	Number of samples received and analyzed	Number detected as unsuitable	% detected as unsuitable
Spices	476	26	5.5	681	64	9.4
Iodated Salt	345	90	26.1	113	113	33.7
Oils & Fat Total	77	34	0.4	163	55	33.7
Miscellaneous	197	25	0.1	326	27	8.3
Cereals	209	44	0.2	355	103	29.0
Pulses	120	23	0.2	203	72	35.5
Milk & Milk Products	53	3	0.1	113	17	15.0
Sugar & Sugar Products	74	2	0.0	134	7	5.2
Fruit Drink, Cordials & Fruit Product	55	0	0.0	110	5	4.6
Beverages	89	4	0.0	131	6	4.6
Fish Meat & Poultry Product	37	6	0.2	86	20	23.3
Bread	94	82	0.9	142	126	88.7
Water	77	4	0.1	137	11	8.0
Total	1903	343	0.2	2694	626	21.5

Source : National Institute of Health Sciences

Table 2.3.6 Staff of the Service Laboratory N.I.H.S.

Staff	2006	2007
Microbiologist	1	1
M.O.		1
MLTT	5	5
Lab Orderly	2	2
Lab Labourer	2	2

Source : National Institute of Health Sciences

2.6 Health Manpower Training

2.6.1 Basic Training

The Government of Sri Lanka has provided for the training of Medical Officers, Dental Surgeons, Assistant Medical Officers, nurses and other paramedical personnel. The Medical Officers and the Dental Surgeons are trained at the Universities. The Assistant Medical Officers, Pharmacists and Medical Laboratory Technologists are trained at the universities and in other training institutions.

All other paramedical personnel are trained at the training institutions coming directly under the purview of the Department of Health Services.

2.6.2 Postgraduate Training

Postgraduate Training is conducted both locally and abroad. The Postgraduate Institute of Medicine follows the practice of awarding academic degrees, following the successful completion of the academic courses and the final examination. However, a further condition requires that a Board Certificate be obtained to ensure satisfactory professional competence.

For this purpose, the trainees are granted fellowships, allowing them additional training abroad in recognized specialized institutions.

2.6.2.1. Postgraduate Training by the PGIM

The Postgraduate Institute of Medicine affiliated to the University of Colombo is the National Institute which trains Medical and Dental doctors leading to Specialist status. It trains doctors leading to the academic distinctions of Doctor of Medicine, Master of Science, Postgraduates Diplomas and Certificate of Competence. On successful completion of the degree of Doctor of Medicine and the prescribed Post MD training the trainees are Board Certified as specialists in the respective specialties. The Post MD training programmes leading to specialist status consists of 1 – 2 years of overseas training as a pre-requisite for Board Certification. For this purpose, the state sponsors trainees by awarding scholarships and granting them financial assistance, thus facilitating overseas training in recognized specialized institutions. PGIM board Certification is considered an indicator of high professional competence.

2.6.3 Post-Basic Training

The Post-Basic School of Nursing (PBS) and National Institute of Health Sciences (NIHS) conduct post-basic training programmes for nursing personnel and public health staff respectively.

2.6.4 In- service Training

In- service Training programmes are conducted for most categories of staff. Some of the courses are conducted on a regular basis. Some courses are conducted on an ad-hoc basis, through workshops and seminars, organized by the respective programmes and organizations.

2.7 Health Finance (2007)

The health expenditure for 2007 was Rs 63,464 million, which is an increase of 16.7 per cent over the previous year. This increase is lower compared with the increase of 2006 (24.7 per cent) over 2005. During 2007, the proportion of public expenditure on health services was 1.7 per cent of the GNP and 7.16 per cent of the national expenditure. The per capita health expenditure was Rs 3171 in 2007.

The recurrent expenditure accounted for 55 per cent of the total expenditure.

A major proportion of the health expenditure is utilized by the patient care services. In 2007 patient care services utilized 65.8 per cent of the health expenditure. Of the balance 7 per cent were for general administration.

2.8 Sri Lanka National Health Accounts System

During 2001, the Department of Health services of the Ministry of Health released the first estimates from the Sri Lanka National Health Accounts System (SLNHA). This system was developed to establish a permanent expenditure monitoring system for the country and also to meet international standards for reporting of health expenditure data. Its framework is based on the "System of Health Accounts" published by the Organization of Economic Development and Cooperation (OECD) in 2000.

SLNHA have identified the financial burden that falls upon the key players such as government, the private sector including households, the insurers and non-governmental bodies.

It provides information of the health spending over the years in the context of the political, economic, social structure of the country. In the framework these expenditures are classified in to three dimensions which according to ICHA such as source of funding, functional use of expenditure and provider entity.

The first release of SLNHA consists of final estimates for 1990-1997, and provisional estimates for 1998-1999. In future, updates will be issued on an annual basis. Currently 2003-2004 report was published and 2005-2006 report was drafted. Unlike previously published figures, the SLNHA estimates are comprehensive for the government sector, including expenditures by all ministries provincial councils and local governments.

2.8.1 Total National Health Expenditure

Total Expenditure on Health (THE) is defined to include all expenditure on personal health services, community (public health and preventive) health services and gross capital formation in health care providers. Total expenditure on health (THE) was estimated to be Rs 63 billions in 2007, with per capita spending equivalent to Rs 3,171. This was equivalent to US \$ 28 Per capita, or 1.7 per cent GDP.

2.8.2 Funding of National Health Expenditure

Public expenditure on health grew from Rs 5.6 billion in 1990, to Rs 60 billion in 2007. In 2007 the public health expenditure as a ratio of GDP is 1.79 per cent. Central government ministries and departments accounted for a growing share of total public sector expenditures during 2000-2007. As far as the share of public expenditure on health by institutional types concerned, the central government hospital share is 52 per cent and the provincial hospital share is 26 per cent.

2.8.3 Expenditures by Provider and by functional Use

Inpatient expenditures account for 50.6 per cent. Preventive and public health expenditures increased as a share of the national total from 9.6 Per cent in 2006 to 9.9 per cent in 2007. The bulk of preventive health expenditures and most inpatient expenditures are funded by the government sector. Most private expenditures are for outpatient primary care service, and purchase of medicines from pharmacies and shops.

2.9 Foreign Aid Utilization

Each year, the ministry of Health receives foreign aid in the form of money, materials, drugs, medical equipments and technical inputs. During 2007 foreign aid components of the health expenditure was Rs 2533 million. (National) This accounted for 3.99 per cent of the health expenditure. There is a marked decrease over the previous year. The foreign aid component during 2006 was 6.19 of the total health expenditure.

2.10 Medical Statistics Unit (MSU)

Medical Statistics Unit has been established in the Ministry of Healthcare and Nutrition around 1960s.

The vision of this Unit is to provide accurate unbiased, reliable and timely statistics related to Health Sector in Sri Lanka. These statistics will be used by health planners and many other researchers.

Medical Statistics Unit collects only government hospital statistics from statistical returns as mentioned below.

1. Maternal Statistics	<i>Monthly</i>
2. Dental Statistics	<i>Monthly</i>
3. Indoor Morbidity and Mortality Statistics (IMMR)	<i>Quarterly</i>
4. Out Patient Statistics (OPD)	<i>Quarterly</i>
5. Clinic Statistics	<i>Quarterly</i>
6. Bed Strength	<i>Quarterly & Annually</i>
7. Statistics on Specialists	<i>Annually</i>
8. Staff Statistics	<i>Annually</i>

After receiving Statistical returns to the Medical Statistical Unit statistical staff of the MSU commence data entry, editing and processing data in order to provide statistics for Annual Health Bulletin. In addition to this task, MSU is responsible for various activities such as arranging printing of returns, sending and receiving returns and providing data for various users.

Staff of the MSU consists of a Deputy Director, a Senior Statistician, Statistical Officers, Statistical Assistants and data entry operators provided by Department of Census & Statistics. Ministry of Healthcare and Nutrition has provided clerical staff.

MSU has many challenges. For instance it tries to update its data collection procedures to cater the needs of current demands of users jointly with Planning Unit of the Ministry of Healthcare and Nutrition.

3. Morbidity and Mortality

3.1 Hospital Morbidity and Mortality

In Sri Lanka, morbidity data is available only for patients seeking treatment as inpatients in government hospitals. Morbidity data of patients attending the outpatient departments of government hospitals, ayurvedic institutions and the private sector are not routinely collected. Other than the limited information collected through surveys, registers maintained by the special campaigns and programmes for control of diseases such as TB, Cancer and Leprosy and from notifications, the Indoor Morbidity and Mortality Return (IMMR) is on the whole source of morbidity data. This return is collected quarterly from all government hospitals except for Central Dispensaries and Maternity Homes. The IMMR used since 1996 is based on the 10th revision of the International Classification of Diseases (ICD).

The final diagnosis recorded in the patients' records is analyzed in order to complete this Return. In the Teaching Hospitals, Provincial and some Base Hospitals, the IMMR is prepared by Medical Record Officers and the Medical Record Assistants and at present Statistical Survey Officers, Planning and Programming Officers and Planning and Programming Assistants are also engaged in recording statistics. Registered / Assistant Medical Officers are still utilized to do the compilation of inpatient statistics in the hospitals and these officers are mainly employed to attend to patients care, and so, they perform the statistical activities as an additional duty. The absence of developed Medical Record Departments even in large hospitals has hindered the analysis of discharges for important epidemiological information such as age, sex, place of residence, etc.

During the year under review, 6.4 percent of the discharges, and 10.3 per cent of the deaths in government hospitals (that reported) had not been analysed. This was pronounced in the large hospitals. This lapse is mainly due to reasons such as incomplete patient records, shortage of statistical staff, lack of supervision at all levels, lack of facilities, patient records retained in wards for a long period and not sent in time to be analysed, etc. It is also attributed to poor commitment and data not being used for the management of the hospitals by those involved.

It should be noted that repeated visits, transfers and multiple admissions of the same patient for the same disease are reflected in morbidity data as additional cases. Therefore, morbidity data available in Sri Lanka should be interpreted with caution, considering the above limitations. However, data based on hospital morbidity gives an obvious indication of the morbidity pattern in the country.

However, data based on hospital morbidity gives an obvious indication of the morbidity pattern in the country.

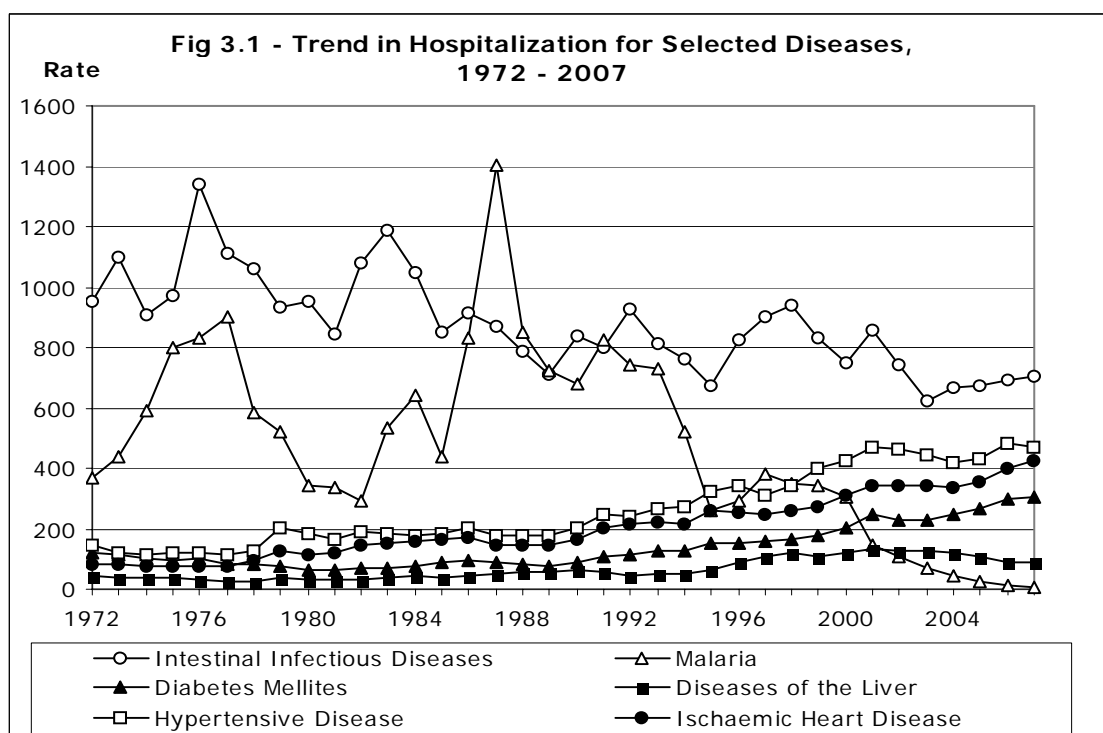
3.1.1 Inpatient Morbidity

Table 18 gives trends in hospital morbidity by broad disease groups of the ICD for the period 1990 – 2007.

A clear, decreasing trend is seen in hospitalization due to diseases of the blood and blood-forming organs and disorders involving the immune mechanism for the period 1980-2004. But it has slightly increased from 2005 to 2007. Non-communicable diseases that emerge with the transition in the demographic profile and increased life expectancy are on the increase. This is reflected by the increasing trend in hospitalization for diseases such as neoplasms, diseases of the circulatory system, diseases of the genitourinary system, diseases of the digestive system, diseases of the musculoskeletal system and diseases of the nervous system. The number of visits to hospitals to get treatment for the diseases of the digestive system, circulatory system and genitourinary system and eye and adnexa has almost doubled during the period 1990-2007. Another noteworthy feature is that the patients getting treatment for injury poisoning and other consequences of external causes has also doubled during the last seventeen years. A substantial increase is seen in hospitalization for injury and poisoning. It has increased from 1,800 cases per 100,000 population in 1990 to 4,090 in 2007.

An increasing trend in hospitalization is evident since 1990 for disorders in the perinatal period and also for diseases related to pregnancy, childbirth and the puerperium. In addition to that, congenital malformations deformations and chromosomal abnormalities have also doubled during the 17 years period. The prevalence of infectious and parasitic diseases has reduced compared with 1990's, but still fluctuates at a very high level and diseases of the respiratory system also shows the same. Since 1990, hospitalization for these both diseases has been fluctuated between 2000 to 2500 cases per 100,000 population. During 2007, there were 2,035 and 2,399 cases hospitalized for the diseases, certain infectious and parasitic diseases and respiratory system respectively.

The number of patients seeking treatment for mental disorders has increased over the years. But from 2005 it is in decreasing manner. During 1970, there had been 177 cases per 100,000 population taken treatment for mental disorders compared with 262 and 216 per 100,000 population in 1995 and 2005. But when compared with 2005, there had been 211 and 201 cases per 100,000 population taken treatment in 2006 and 2007.



This increase is mainly attributed to demographic changes. Other contributory factors for the increase of mental illnesses are migration, alcohol, war and other forms of violence and stress. It is estimated that about 18 per cent of mental illnesses are alcohol related disorders. The number of cases treated for mental disorders in government hospitals by districts during 2007 is given in Table 27 (Annexure).

The number of cases with no specific diagnosis that are grouped as symptoms signs and abnormal clinical & laboratory findings varied between 1,135 and 1,633 per 100,000 population during the period 1990 to 2007. In spite of the effort taken to improve the quality of the final diagnosis and cause of death given by the doctors in the patient records, morbidity and mortality attributed to symptoms and signs still remain as a leading cause of both hospitalization and hospital deaths. The admission criteria not being properly followed, poor commitment and lack of supervision of the persons involved and also the delay in writing the final diagnosis on discharge of patients have mainly contributed to this situation. During 2007, the proportion of discharges attributed to symptoms and signs accounted and abnormal clinical and laboratory findings for 8.7 per cent of the analysed discharges (Table 20 : Annexure).

Table 19 (Annexure) shows trends for a few important diseases. A steady decline in the prevalence of vaccine-preventable diseases is clearly visible except for measles. There was an outbreak of measles during 1999 and is discussed in detail in Chapter 5.1 section 5.1.5.2.2.

A dramatic increase in the number of cases hospitalized for diabetes mellitus is observed in the recent past. The main contributing factors to this situation are urbanization, changes in life style, and ageing of population.

Admission for diabetes has increased from 87.5 per 100,000 population in 1990 to 307 in 2007. There were 61,489 inpatients visit to get treatment for diabetes during the year 2007.

An increased number of asthma cases are admitted each year to the government hospitals. The rate per 100,000 population for asthma during 2007 was 893. During 2007, 178,777 asthma patients were treated.

The increase in the number of cases diagnosed as septicaemia, a condition with a high case fatality rate is noteworthy. (Table 32 : Annexure)

Hospitalization for the diseases of the liver shows a substantial increase till 2003 and then it fluctuates.

Malaria, an age-old disease, still dominates the disease pattern of Sri Lanka. Hospitalization for malaria has decreased from 800 cases per 100,000 population in 1975 to 262 in 1995. Although there was an increase in hospitalization for malaria since 1996 the situation has improved during the last five years and in 2007 it is in good condition.

3.1.1.1 Leading Causes of Hospitalization

Table 20 (Annexure) gives the leading causes of hospitalization of the country and Table 21 (Annexure) indicates the district profile of the same. Table 23 presents trends in leading causes of hospitalization during the period 1995-2007. There is no change in the ten leading causes of hospitalization selected for 2007, compared with 2006, except for the change in the rank position of few diseases.

Since 1995, traumatic injuries have remained the leading cause of hospitalization, with an increased proportionate morbidity each year. Diseases of the respiratory system ranked as the second leading cause. Symptoms signs and abnormal clinical and laboratory findings has become the third leading cause in last 4 years. Hospitalization due to viral diseases have remain as the fourth leading cause in 2007 but it was the fifth leading cause in 2006. Viral diseases ranked as the major hospitalization in all districts except Vavunia.

During 2007, diseases of the gastrointestinal tract remained as the fifth leading cause of hospitalization though it was the fourth leading cause in 2006. It was a major cause of hospitalization in all districts. Intestinal infectious diseases are still an important cause of hospitalization. It ranked as the nine leading cause of hospitalization and accounted for 3.7 per cent of the analyzed discharges in 2007.

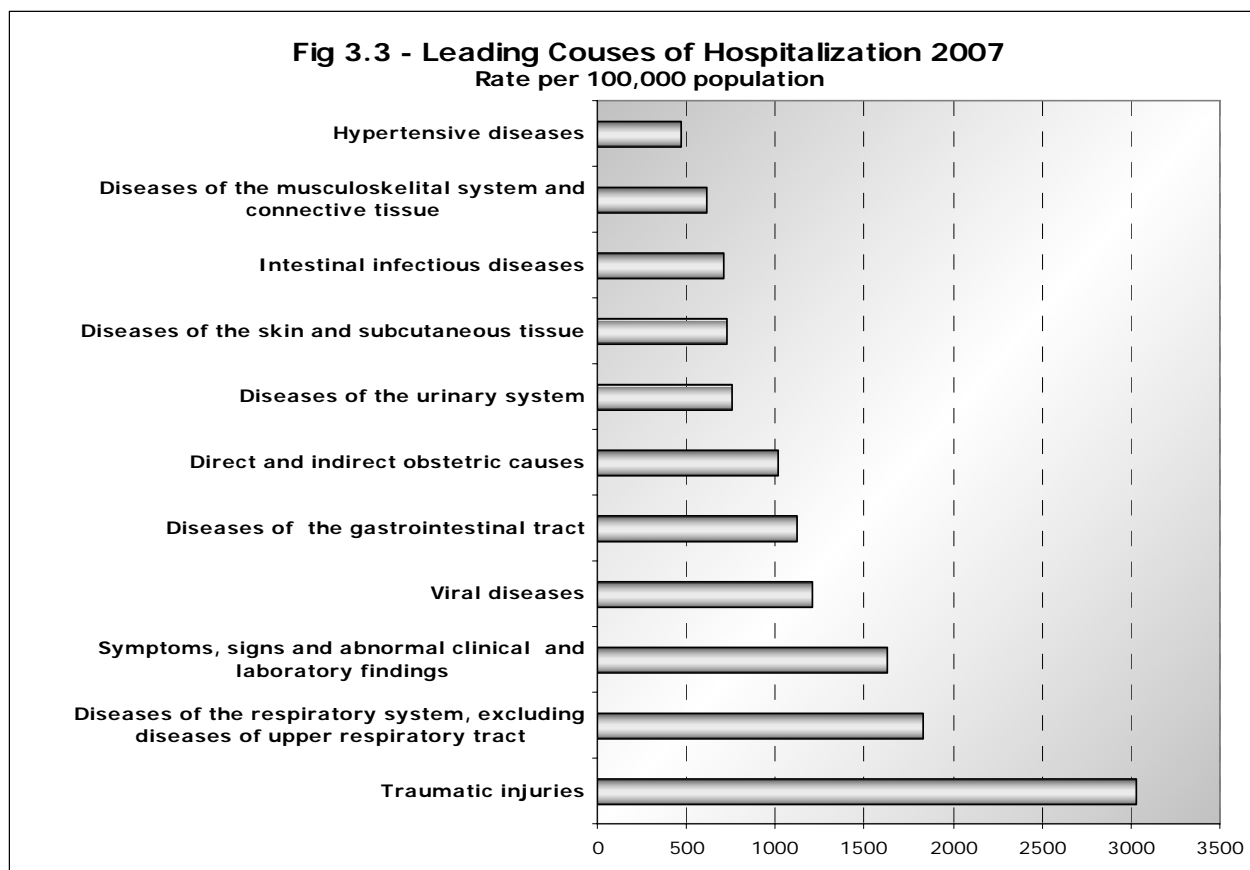
Intestinal infectious diseases are a major cause of hospitalization in all districts except Colombo, Kandy, Matara Jaffna, Vavunia and Mullativu.

Information on leading cause of hospitalization by district is given in Table 22 (Annexure).

Traumatic injuries is the main leading cause of hospitalization in all the districts except Batticaloa and Kilinochchi districts in 2007. Diseases of the respiratory system and symptoms signs and abnormal clinical and laboratory findings are ranked as second or third for most of the districts in 2007. In 2007 Symptoms signs and abnormal clinical and laboratory findings was a major cause of hospitalization in all districts except Mannar and Kilinochchi.

During 2007, Poisoning and toxic effects excluding toxic effects of pesticides, snake bites, mental and behavioral disorders and other diseases of the circulatory system have not ranked within the first ten leading causes in all districts.

Hypertensive diseases, diseases of the upper respiratory tract ranked within the first ten leading causes of hospitalization in few districts. Diseases of the female genitourinary system and neoplasms ranked as the ninth and the third leading cause of hospitalization respectively in the Colombo district, probably due to the presence of the two Maternity Hospitals, and the Cancer Institute in this district.



3.1.2 Outpatient Morbidity

Data on outpatient attendance analysed by diseases are not collected routinely. Out-patient morbidity data obtained from surveys carried out in the past compared with inpatient morbidity data, indicates that there is not much of a difference except in regard to:-

- Patients with complications of childbirth and puerperium are not channelled through the outpatient department.
- Diseases of the musculoskeletal system and connective tissue are more common among outpatients.
- Injury and poisoning are less important as a cause of outpatient morbidity.

Table 3.1 displays the findings of a survey carried out during 1995¹ to study the morbidity pattern of the outpatient department in Teaching Hospitals at Colombo South and Ragama, selecting 1000 patients in each hospital. In this study, the diseases were classified into 17 broad disease groups of the International Classification of Health Problems in Primary Health Care. Approximately, a third of the patients were below 15 years of age.

More females (61.6%), attended the outpatient department. There was no major gender difference seen in the disease pattern, except for a higher percentage of males reporting for injuries and wounds and more females for diseases of the musculoskeletal system. It was observed that approximately 91 per cent of the outpatients belong to six out of seventeen broad disease groups, a majority presenting with symptoms and signs related to diseases of the respiratory system and the musculoskeletal system.

The disease pattern reflected by this study is similar to the pattern of the outpatient morbidity studies carried out during 1971² and 1987³, except that injuries has become more important in the more recent study, having ranked as the fourth leading cause of outdoor morbidity.

The 'One-day General Practice Morbidity Survey in Sri Lanka'⁴ conducted during 1996 revealed the following information.

- The average daily workload of General Practitioners was 74 patients and the estimated total number of general practice consultations amount to 12.7 million per year.
- Children younger than 12 years accounted for 32.1 per cent of general practice consultations and the proportion of the elderly in the consulting population was also significantly higher.
- The distribution by age and sex showed that the proportion of males and females consulting in the different age groups other than that of children under 12 years, in which more male children had been taken to the doctor, and among adults 20-50 years, where the sex distribution was reversed.
- A majority of the consultations was for initial visits (72.5 per cent) rather than for follow-up visits, which indicates that the demand for care is mainly for acute illnesses.
- With regard to problems managed, respiratory diseases and general and unspecified preceded the others. Pregnancy, child bearing and family planning accounted for 3.9 per cent of all problems managed.
- Psychological problems accounted for only 1.9 per cent. Surveys on psychiatric morbidity worldwide have shown that psychological problems, which account for about a third of all general practice consultations, are often missed by family physicians. It has been shown that failure to detect psychological illnesses is due to such patients presenting to doctors with only physical symptoms.
- In addition to the acute illnesses, three chronic diseases asthma, hypertension and diabetes mellitus were within the top twelve

Table 3.1 Leading Causes of Outdoor Morbidity

Broad Disease Groups	Total		Male		Female	
	No.	%	No.	%	No.	%
Diseases of the respiratory system	899	45.0	358	46.6	541	43.9
Diseases of the musculoskeletal system	288	14.4	88	11.5	200	16.2
Infectious and parasitic diseases	207	10.4	67	8.7	140	11.4
Injury and wounds	165	8.3	97	12.6	68	5.5
Diseases of the digestive system	144	7.2	60	7.8	84	6.8
Diseases of skin and subcutaneous tissue	114	5.7	98	12.8	199	16.2
Others	183	9.2				
All causes	2000	100.0	768	100.0	1232	100.0

Source: 'Cost analysis of patients management in an out patient department' 1996

3.1.3 Hospital Mortality

It is estimated that only 30-40 per cent of registered deaths occur in government hospitals. This proportion is higher for deaths related to puerperal causes, heart diseases, respiratory diseases, etc. The leading causes of hospital mortality of the country, the districts and the trends are given in Tables 23, 24 and 25 (Annexure) respectively.

In 2007, ischaemic heart diseases, diseases of gastrointestinal tract, Pulmonary heart disease and diseases of the pulmonary circulation and cerebrovascular diseases, ranked as the first few leading causes of hospital deaths. These diseases accounted for about 40 per cent of analyzed deaths. Additionally these diseases together with the diseases of the respiratory system have become one of the ten leading causes for most of the districts.

Diseases of the ischemic heart has ranked as the first leading cause of death since 1995. In 2007, disease of gastrointestinal tract was also the leading cause of deaths in Sri Lanka.

Neoplasms ranked as the second leading cause of death in 2007. It also ranked within the first ten leading causes of death in eighteen district of Sri Lanka.

A higher death rate associated with neoplasm in Kandy and Galle districts is a result of cancer patients being transferred to the Teaching Hospitals in Kandy and Karapitiya, which have advanced facilities for the treatment of neoplasms.

Pesticide poisoning has remained as the fifth or the sixth leading cause of death during the period 1993-1998 and as the seventh leading cause of death until 2002. Considering the island wise during 2007, it has not recorded under 11 leading causes of deaths.

But considering the district wise pesticide poisoning was in the first ten leading cause of deaths in Mullativu. Deaths by Viral diseases was not much significant in 2007.

Excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition ranked as the 4th leading cause of mortality in Vavunia district.

3.2 Mortality (Registered Deaths)

Registration of births and deaths was made compulsory in 1897. In Sri Lanka, Non-Medical Registrars mainly perform registration of deaths. About 80 per cent of the Registrars are of this category. The cause of death given by the Non-Medical Registrars may not be accurate as desired. This is evident by the large number ascribed to symptoms, signs and ill-defined conditions. What is disturbing is the relatively large number of such causes of death among the urban deaths, which are predominantly medically confirmed or at least medically examined.

A study was done in 1986, on the accuracy of the cause of death recorded by the Medical Registrar in death certificates of the General Hospital Colombo¹. This study revealed that the cause of death was correctly recorded only in about 38 per cent of the death certificates. Symptoms, signs and ill-defined conditions were recorded in 49 per cent of the certificates and the use of abbreviations and writing the immediate cause and the antecedent cause in the wrong place was seen in the remaining certificates. It is noteworthy that due to the inaccuracies in recording the cause of death in the death certificates, some deaths related to pregnancy and deaths within 42 days of termination of pregnancy are not counted as maternal deaths.

3.2.1 Trends in Mortality

The mortality pattern in Sri Lanka is in a transitional stage. It appears to be changing from a pattern seen in developing countries to a pattern in developed countries. The trends in mortality indicate a decrease in deaths resulting from infectious and parasitic diseases, diseases of the nervous system and sense organs and of the respiratory system, whereas a substantial increase in the death rates associated with diseases of the circulatory system and injury and poisoning is evident.

3.2.2 Leading Causes of Mortality

Table 28 (Annexure) gives the age specific mortality rates by broad disease groups of the ICD (tenth revision) and Table 29 (Annexure) gives the five leading causes of death by age groups for the year 2001. The cause of death is only available up to 2001 in Registrar General's Department

Perinatal disorders were the leading cause of death during infancy. circulatory system ranked as the first five leading causes of death in all age groups.

It is significant that external causes of injury and poisoning are the leading cause of death in all ages except in infancy, and above 50 years of age.

3.2.3 Sex Differentials in Mortality

The mortality rates in the past have been higher for females than for males from 1900 till about 1960. The male and female death rates equalized and remained so until 1965, after which the male mortality rate became higher. This trend continues with the difference gradually increasing (Table 31 : Annexure).

The male and female death rates for 2001 were 7.6 and 4.5 per 1,000 population respectively. This shows that male death rate exceeded the female death rate by approximately 3.1 deaths per 1,000 population. In 2001, the male mortality rates of age groups 0-4, 20-24 and above show a comparatively high rate than females. The changes in the economy, much associated with social violence, weakening in occupational safety measures, growing psychological stress related to uncertainties and also the effects of the war, may have resulted in widening the gap between male and female death rates in these age groups.

The age and sex-specific mortality rates for selected diseases during 2001 are shown in Table 31 (Annexure). Gender difference is pronounced in causes such as ischaemic heart disease, disease of digestive system, transverse accident mental and behavioural disorders, Neoplasm and disease of respiratory system.

- 1 *Cost analysis of patient management in an outpatient department – Dr D.L de Lenarole*
- 2 *Health manpower study – 1971 (based on one day census of outpatient)*
- 3 *A survey on morbidity patterns and drug requirements at primary health care level (conducted in 3 regions for 6 months in 1987)*
- 4 *De Silva N and Mendis K. One-day general practice morbidity survey in Sri Lanka. Family Practice 1998; 15: 323-331*
- 5 *Medical certificates of cause of death in GH Colombo, 1987 – Dr.Ravindra Fernando*



4. Patient Care Services

4.1. Hospital Services

According to the Health Manpower Study of 1971- 1973, 'on an average an inhabitant of Sri Lanka makes 3 visits to government western type medical institutions annually. This includes visits to the outpatient departments and clinics as well'. During the past five years the government curative care institutions have been providing annually, services to around 4 million inpatients, 41 to 45 million out-patients and 1 million patients attending various clinics. The hierarchy of institutions providing patient care services is given in chapter 2, section 2.3.

In 2007 there were 43 million outpatients visits separately and 4 million inpatient admissions (Table 4.1). Between 2000 to 2005 inpatient admissions remained stable around 4 million while outpatient visits increased by 3.8% in year 2007 when comparing with 2006.

Anuradhapura district recorded the highest inpatients per 1000 population followed by Kandy, Colombo, Polonnaruwa Moneragalle. Kilinochchi district recorded the least inpatients per 1000 population.

These were the nine districts which recorded higher rates than the national figure of 230 inpatients per 1,000 population for the year 2007 (Table 35: Annexure).

Districts of Moneragala, Anuradhapura, Mannar, Ampara, Hambantota, Badulla and Vavuniya recorded a higher number of outpatients per 1000 population (Table 36: Annexure).

The average duration of stay varies with the type of hospital and is significantly longer in the specialized hospitals such as Mental, Chest, Cancer and Eye.

However, the long-term trend shows a decline in the duration of stay in all types of hospitals except the Mental and the Chest hospital (Table 43: Annexure).

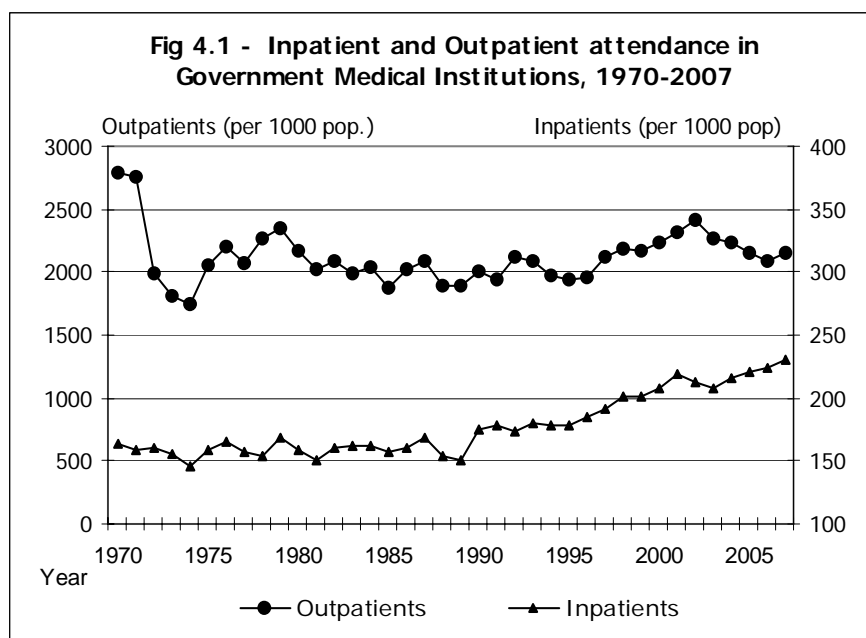
Table 4.1 Trends in Inpatient and Outpatient Attendance and Rates Per 1,000 Population, 1970 -2007

Year	Inpatients Treated		Outpatient Attendance ¹	
	Number '000	Rate	Number '000	Rate
1970	2,054	164.1	34,895	2,788.0
1975	2,146	159.0	27,654	2,049.1
1980	2,335	158.3	31,892	2,162.6
1985	2,494	157.4	29,570	1,867.1
1990 ²	2,533	174.6	28,401	2,000.5
1995 ³	2,953	179.3	32,084	1,947.7
1996 ⁴	3,339	184.5	35,348	1,953.2
1997 ⁵	3,454	191.7	38,078	2,114.0
1998	3,791	201.9	41,071	2,187.7
1999	3,825	200.9	41,323	2,170.1
2000	4,015	207.4	43,329	2,238.2
2001	4,092	218.6	43,350	2,315.6
2002	4,032	212.7	45,681	2,409.9
2003	3,993	207.4	43,765	2,273.3
2004	4,242	218.0	43,392	2,229.6
2005	4,345	220.9	42,482	2,160.0
2006	4,463	224.4	41,429	2,083.3
2007	4,609	230.3	43,073	2,152.6

Source: Medical Statistics Unit.

Excludes:

- ¹ Clinic Attendance
- ² Northern and Eastern Provinces
- ³ Jaffna, Kilinochchi, Mullaitivu and Ampara Districts
- ⁴ Kilinochchi and Mullaitivu Districts
- ⁵ Ampara District



Source : Medical Statistics Unit

Excludes :

- 1 : Northern & Eastern Province
- 2 : Jaffna, Kilinochchi, Mullaitivu & Ampara districts
- 3 : Kilinochchi and Mullaitivu Districts
- 4 : Ampara District

Table 4.2 Maternal Services By Type of Hospital, 2007

Type of Institution	Method of Deliveries			Total Deliveries	Outcome of Delivery		
	Single	Twin	Other		Normal	Forceps	Caesarean
Teaching Hospitals	116,978	1,204	24	118,206 (33%)	79,014	1,773	37,419
Provincial Hospitals	78,190	751	12	78,953 (22%)	56,493	566	21,894
Base Hospitals	115,468	850	8	116,326 (33%)	87,657	996	27,673
District Hospitals	30,124	85	2	30,211 (8%)	29,898	63	250
Peripheral Units	5,559	25	-	5,584 (2%)	5,539	23	22
Rural Hospitals	6,595	24	-	6,619 (2%)	6,532	0	87
Maternity Homes	1,088	8	-	1,096 (0%)	1,096	-	-
Sri Lanka	354,002	2,947	46	356,995 (100%)	266,229	3,421	87,345

Source: Medical Statistics Unit

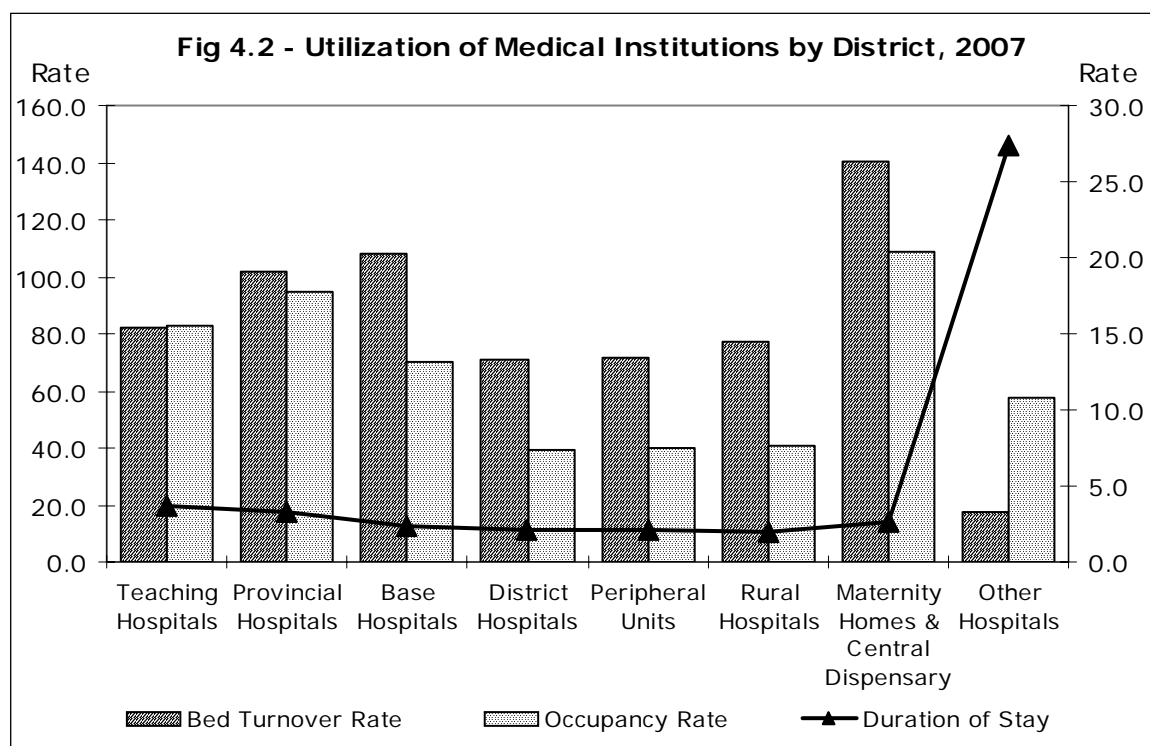
In Sri Lanka a referral system is not enforced. Hence, patients bypass small medical institutions, particularly those in the rural areas that have only minimal facilities for patient care. This leads to under-utilization of small institutions and overcrowding in the bigger institutions.

As shown in Table 43 (Annexure). Teaching hospitals, Provincial Hospitals and Base hospitals have a higher bed occupancy rates (83, 95, 70) while District hospitals, Peripheral Units and Rural hospitals have comparatively a low figure (39, 40, 41).

In all teaching hospitals bed occupancy takes higher rates and Galle and Kurunegala are the districts with high bed occupancy rates, that is above 100% in teaching hospitals. Kalutara, Vavunia and Anuradhapura are the districts with high bed occupancy rates in provincial hospitals and Nuwaraeliya is the district with high bed occupancy in base hospital which are above 100%. In Badulla and Rathnapura districts, both Provincial and Base hospitals indicate a fairly high bed occupancy rate.

For instance District hospitals of Mullaitivu has a fairly high Bed Occupancy Rate (98%) when compare with other District Hospitals. In Gampaha, Hambantota, Baticaloa and Moneragala Districts, Rural Hospitals show the higher bed occupancy which is above 100% while maternity homes and Central Dispensary of Baticaloa districts show a higher bed occupancy more than 100%. The most overcrowded institutions are the Cancer Hospital with a bed occupancy rate of 111.8, followed by Leprosy hospital (88.4) and Mental Hospital (81.3).

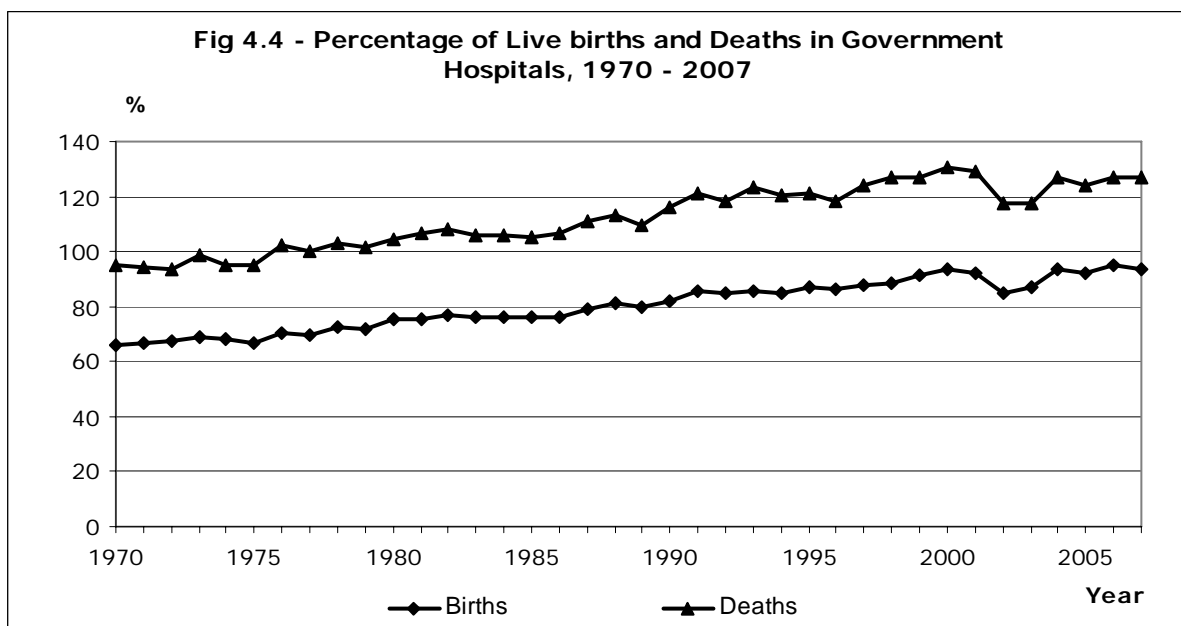
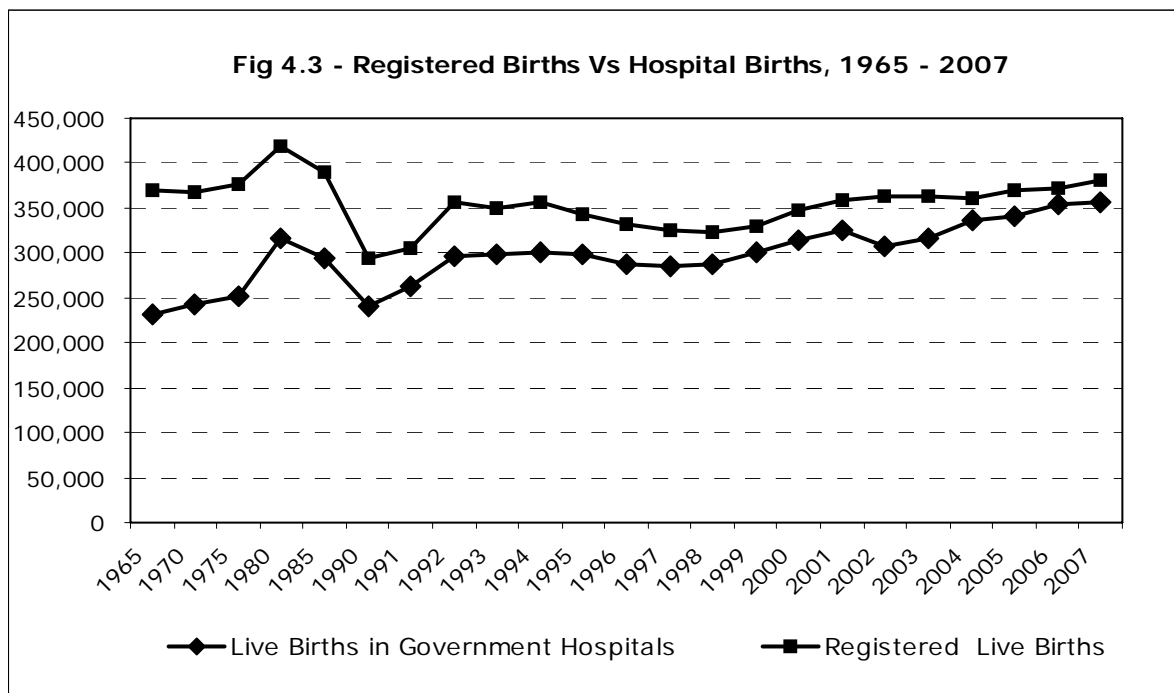
It is also noteworthy that utilization of hospitals varies from district to district, irrespective of the type of hospitals. Also, it could be observed that in some instances bed Occupancy Rates are higher in District hospitals and Peripheral units when there are no higher order hospitals in the districts.



During 2007, a total of 356,852 live births and 3,184 still births took place in government hospitals. In general the population of births occurring in government hospital is increasing. The still birth rate per 1,000 births in government hospitals for 2007 is 8.8. Table 4.2 illustrates the maternal services provided by type of hospital. It is evident that the Teaching Hospitals and the four Maternity Hospitals accounted only for 35 per cent of the deliveries.

An increase in the number of deliveries is observed in Provincial Hospitals when compared with 2006. Number of deliveries in 2007 for Teaching Hospitals is almost same as year 2006.

The caesarean section rate was highest in the Teaching Hospitals. Sri Jayawardenapura Teaching Hospital recorded comparatively a higher caesarean section rate of 46 per 100 deliveries. Over all, the caesarean section rate has increased in all types of institutions.



- 1 : Northern & Eastern Province
- 2 : Jaffna, Kilinochchi, Mullaitivu & Ampara Districts
- 3 : Kilinochchi and Mullaitivu Districts
- 4 : Ampara District

4.2 Dental Health Services

Dental Health services are provided by the government sector as well as the private sector. But the government sector is the predominant player in the provision of care both in urban and rural areas as it does 60- 65 % of the service provision. The majority of the doctors that provide service in the private sector are doing that as a part time while working in the government. Nearly 2% of the service is provided by universities, security forces and nongovernmental organizations. The service provided by the security forces are almost entirely for their personnel.

The Oral Health Services in the public sector provided by government consists of two components:

1. Curative care services-mainly provided through clinics located in Government Hospitals of different categories such as peripheral units, district hospitals, base hospitals, provincial hospitals and Teaching Hospitals.
2. Preventive care services-mainly provided through
 - School Dental Clinics
 - Adolescent Dental clinics
 - Community Dental Clinics

The oral health care for school children is provided by the School Dental Therapists (SDT) in School Dental Clinics (SDC) and Dental Surgeons working in the Adolescent Dental clinics (ADC) with a discernible preventive component.

The School Dental Clinics are located in the school premises providing oral health care to children between 3-13 years. During the year 2007, there were 379 School Dental Clinics in function rendered by 385 SDTs. The 62 ADCs were manned by Dental Surgeons catering to children above 13 years of age and complicated cases referred by SDTs. Community Dental Clinics are located in highly populated metropolitan areas and the Dental Surgeons working in these clinics concentrate on providing preventive care for all age groups in population.

The administration of the entire oral health care delivery system by Ministry of Health Sri Lanka and was brought under the authority of Deputy Director General of Dental Services (DDG/DS) which was created in the year 2002 thus upgrading the existed post of Director Dental Services.

100 new dental graduates were recruited during the year 2007 and at the end of the year 2007, a total of 1,038 Dental Surgeons worked in the public sector.

4.2.1 Specialist Services

There are four main specialties in oral health care service: Oral and Maxillo-facial Surgery (OMF), Orthodontics, Community Dentistry and restorative dentistry. At the year 2006, there were 40 Dental specialists belonging to these four specialties serving under the Ministry of Health. They were attached to Teaching, General and some base Hospitals and were distributed as follows:

Table 4.3 Distribution of dental specialists by speciality

Speciality	Number
Oral & Maxillo-facial Surgery	24
Orthodontics	9
Community Dentistry	2
Restorative Density	5
Total	40

Dental Institute, Colombo, Maharagama and the Dental Hospital (Teaching) Peradeniya are the premier institutions for oral health care in Sri Lanka. Both outpatient and inpatient treatment are provided by these institutions except at Dental Institute Maharagama.

4.2.2 Mobile Dental Services

In addition to different types of dental clinics located in hospitals, mobile oral health programmes cover the entire island. The Mobile Dental Unit at the Dental Institute, Colombo deploys to any destination of the country on request. During the year 2007 the unit has conducted more than 100 mobile dental clinics and provided dental care for about 14,000 individuals from different age groups. Treatment modalities carried out were deciduous and permanent extractions, fillings, scaling and oral hygiene instructions.

Moreover, several other health regions have their own mobile units catering to target groups such as school children, adolescents, ante natal mothers, adult groups (particularly in work places). In addition some programmes are being carried out to attend to underserved communities such as institutionalized elderly, differently abled people, children with special needs, and internally displaced people.

4.2.3 Special projects

During the year 2007, dental instruments worth Rs. 13 million were distributed to healthcare institutions island wide in view to improve the patient care services.

A pilot project was carried out on Ratnapura and Kegalle districts to identify early cancers and pre cancers using primary health workers mainly focusing on estate sector workers. An island wide programme would follow shortly.

4.2.4 Oral Disease Trends

Ministry of Health in collaboration with the World Health Organization has conducted three National Oral Health Surveys including the present survey in 1983/84, 1994/95 and 2002/2003. These surveys indicate overall declining trend in prevalence and severity of dental caries yet marking a substantial problem among all age groups.

Table 4.4 Prevalence and severity of dental caries by National Oral Health surveys

Age group	Prevalence & severity	1983/ 84	1994/ 95	2002/2003
6 yrs	Prevalence(%)	78	76.4	65.5 (5-yrs)
	DMFT	4.4	4.1	3.6 (5-yrs)
12 yrs	Prevalence (%)	67	53.1	40
	DMFT	1.9	1.4	0.9
35-44 yrs	Prevalence (%)	92	91.1	91.5
	DMFT	9.2	10.1	8.4

It is very important to note the DMFT of 12 year olds which have gone below 1.

Similarly, subsequent surveys revealed an improvement in periodontal health among children and adults. However, still a considerable percentage of population is affected by some form of periodontal disease.

Table 4.5 Prevalence of healthy gums in 12 and 35-44 year-olds

Age group	Percentage		
	1983/84	1994/95	2002/2003
12 years	12.0	13.3	27.2
35 - 44 years	65.0	2.1	10.1

Perceived awareness about presence of oral disease

In overall perceived awareness on presence of oral diseases was low among all age groups except among the adults: 74.09% of 5-year-olds, 79.44% of 12 year-olds, 73.91% of 15 year olds, 44.39% of adults and 71.15% of elderly were unaware of presence of any oral disease.

Oral health related behaviours

Use of fluoridated tooth paste and toothbrush was high among all age groups except among elderly: 73.93%, 76.64% and 79.81% of children aged 5, 12 and 15 years respectively reported to be using tooth brush and fluoride tooth paste. This percentage was 71.52% among adults but only 30.82% among elderly. Moreover, the highest prevalence of betel chewing was reported (49.15%) among elderly.

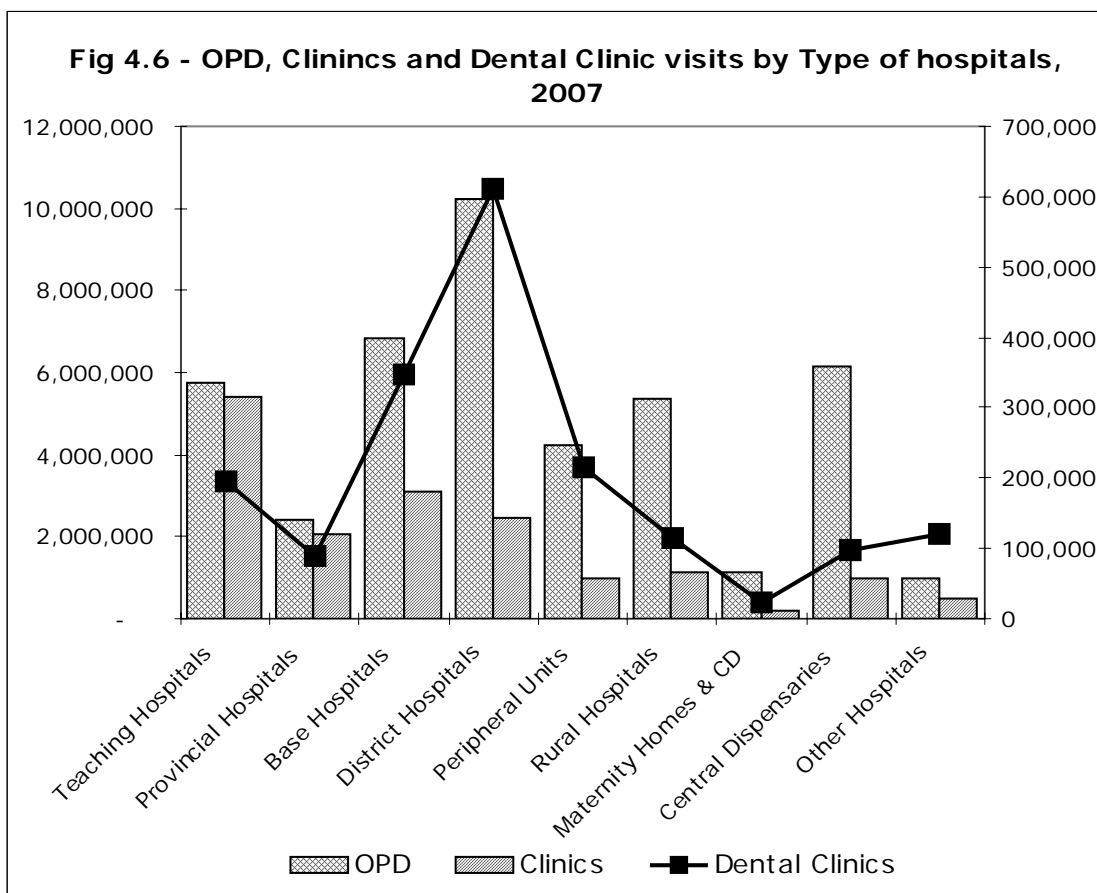
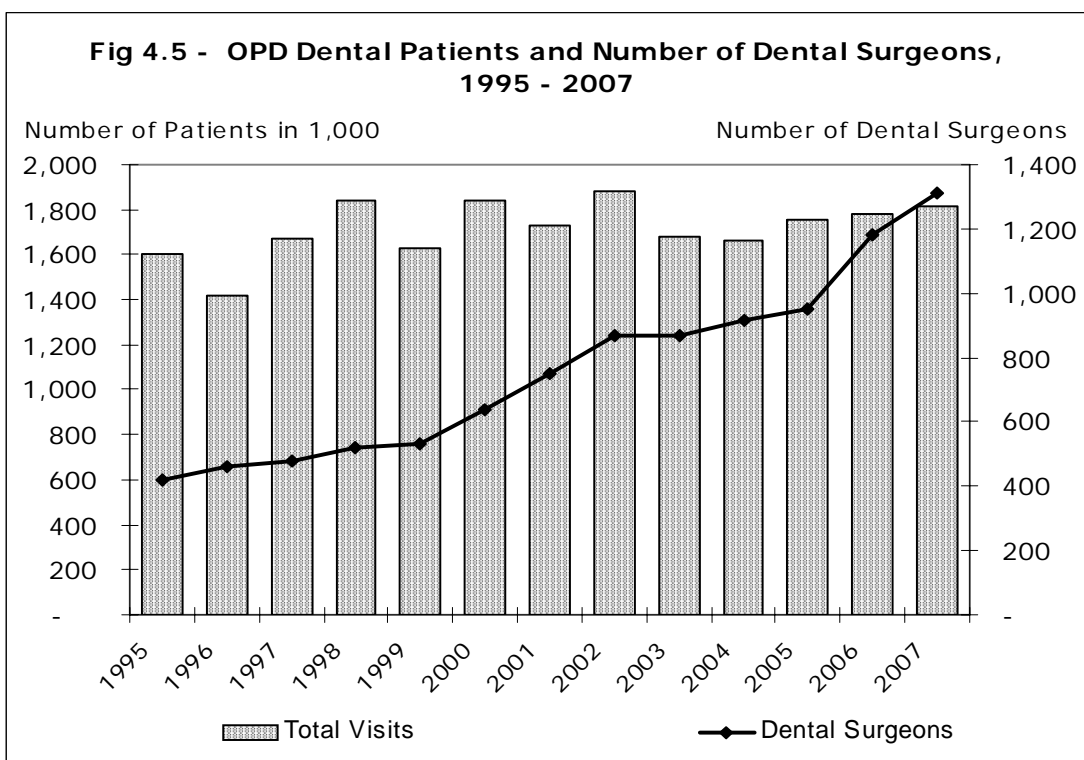
Teeth present, Tooth loss and Prosthetic Treatment Nee

- The mean number of deciduous teeth present among 5-year-old children was 19.5.
- The mean number of permanent teeth present among 12-year-olds and it was 24.96, 27.80 among 15 year-olds. Among adults and elderly the mean number of teeth present was 26.36 and 12.15 respectively.
- Prevalence of edentulousness was very low: 0.10% among adults. However, this percentage was 21.8 among elderly.

Table 4.6 Percentage of children 5 years with caries, active caries and treat caries

Age	No	Percentage		
		with Caries	Active Caries	Treat Caries
05 decid.	1995	65.31	63.51	1.8
05 perm.	1995	2.21	1.95	0.26
12	1999	39.17	34.32	4.85

These data from National Oral Health Survey 2002/2003 reveals that treatment alone cannot reduce the disease burden as shown above in the table 4.6. It shows that only 1.8, 0.26, and 4.85% of caries have been treated in various age groups. Hence the Ministry of Health has decided to launch a new profile for oral health care service delivery system using a strategic plan based on three major components which lean toward more in the prevention of common oral disease. It will be implemented from year 2008 as a 10 year plan.



5. Public Health Services

The main functions of the Public Health Services are promotion of health and prevention of diseases. Health Units headed by Medical Officers of Health (MOH) carry out these services in Sri Lanka. Supervisory Public Health Inspectors, Public Health Inspectors, Public Health Nursing Sisters, Supervisory Public Health Midwives and Public Health Midwives assist the Medical Officers of Health.

The Public Health Midwife (PHM) / Family Health Worker is the health worker for family health care at the grass-roots level and provides domiciliary service, mainly to mothers and infants and maintains the link between the clinic and the community. The Public Health Nursing Sisters and the Supervisory Public Health Midwives supervise the work of the PHMs and also see to the care of the preschool and school children. The Public Health Inspector is primarily responsible for environmental sanitation, food sanitation, school health work and the control of communicable diseases.

The programme for preventive work provides for the control of communicable diseases, sanitation, school health work, epidemiological surveillance, family health, health education and the enforcement of the Food Act. These services are delivered to the community through both, the general Community Health Services, as well as through the Specialized Services executed by separate agencies in liaison with the MOH.

Following the devolution of power, the local staff involved in the control of certain special diseases like malaria and filariasis come under the direct administration of the MOH/DDHS, while those involved in the control of diseases like rabies, tuberculosis, sexually transmitted diseases and leprosy, come under the Provincial Directors of Health Services. The Directorate of the special control programmes at the central level, functions mainly in an advisory and supportive capacity.

5.1 Community Health Services

5.1.1 Family Health Services

The Family Health Bureau (FHB) is the central organization responsible for the planning coordination, direction, monitoring and evaluation of Family Health Programme in the country.

The Family Health covers a wide spectrum of services comprising of:

1. Maternal and newborn care
2. Infant and child care
3. School and Adolescent health
4. Family planning.
5. Women's health
6. Counselling and education

5.1.1.1 Roles and responsibilities of the FHB:

- Plan and organize family health programme and activities in accordance with the government policy.
- Provide necessary direction and support to peripheral programme managers for implementation of the national programme.
- Provide technical support to other organizations (governmental and non-governmental) in implementing maternal and child health and family planning (MCH/FP - Reproductive health) programme.
- Conduct in-service training both at the centre and at the periphery to update the knowledge and technical skills of relevant health staff.
- Monitor and evaluate national MCH/FP programme at the central level.
- Provide feedback reports to the ministry of health, donor agencies and implementing authorities regarding the progress of implementation.
- Conduct relevant health services research to support and strengthen service delivery.
- Procure and distribute contraceptives and some of the essential equipment and supplies needed for family planning and maternal and child health activities.
- Implement donor funded projects on MCH/FP (UNFPA, UNICEF, WHO projects).

In performing these roles, it works in close collaboration with the Epidemiological Unit, Health Education Bureau, Population Division of the Ministry of Health, Provincial health authorities and other related organizations.

5.1.1.2 Performance of Maternal and Child Health activities in 2007

A summary of MCH activities performed by the public health staff at periphery during 2007 is given in Table 1 (Annexure). These data are reported by all medical Officers of Health through their Maternal and Child Health return quarterly.

5.1.1.3 Performance in Family Planning - 2007

A total of, 222,355 and 248,897 new acceptors were recruited by the national programme during 2006 and 2007 respectively. This includes those clients recruited by non-governmental organizations.

Table 5.1.1 Important MCH indicators reported by MOOH, 2007

Indicator	2007	
	Number	%
Eligible families under care	3,257,377	96.9
Pregnant mothers Registered by PHMs	404,138	97.0
Pregnant Mothers Registered at		
< 8 weeks	221,652	55.0
8- 12 weeks	138,456	34.1
> 12 weeks	44,030	10.9
Teenage pregnant mothers	31,207	7.7
Primi mothers	151,228	37.4
Pregnant mothers protected with Rubella	369,327	91.4
Pregnant mothers tested for VDRL (at the time of delivery)	295,038	92.0
Pregnant mothers blood group tested (at the time of delivery)	317,502	99.0
All deliveries reported by PHMM (Institutional & field)	320,273	84.2
Post natal care by PHM at least one visit during 1 st 10 days (of the estimated deliveries)	285,125	75.0
Infants Registered by PHMM	347,404	91.6
Infant Deaths Reported by PHMM	3,500	82.2
Infants receiving care at clinics		
At least once (first visits)	335,788	97.0
Pre school children receiving clinic		
Care at least once (first visits)	268,612	78.0
Infants underweight (<-2SD)	26,160	10.5
	70,550	
	(1-2 years)	29.0
	101,800	
Preschoolers with underweight (<-2SD)	(2-5 years)	24.0

Source: H 509- R & E Unit- Family Health Bureau

Table 5.1.2 Family Planning new acceptors by method 2001-2007

Method	2001	2002	2003	2004	2005	2006	2007
Permanent methods							
Vasectomy	154	120	116	97	99	78	115
Tubectomy	15,063	14,949	10,940	10,879	10,228	11,535	15119
Temporary methods							
IUD	32,498	39,385	38,608	34,785	39,109	41,018	55941
Contraceptive pills	47,627	49,972	44,961	44,094	46,688	47,403	54725
Injectables	136,711	145,202	127,380	119,714	123,101	121,544	120,679
Implant	1,269	1,476	1,673	1,985	1,791	777	2318
Total	233,322	251,104	223,678	211,554	221,016	222,355	248,897

Source: H 1200 - R & E Unit - Family Health Bureau

5.1.1.4 Maternal Mortality Statistics, 2006

The latest report data available on maternal deaths is for the year of 2006. Maternal death statistics reported to the FHB through the maternal death surveillance system is published only after conducting the maternal death reviews with the participation of national level officers. All these deaths are investigated and reviewed at National Maternal Death Reviews to ascertain the cause of death and to plan preventive action. The total number of maternal deaths reported from all districts to the FHB in 2006 was 246. Of which only 146 deaths were confirmed at the national reviews as maternal deaths computing a maternal mortality ratio (MMR) of 39.3 per 100,000 live births.

Post partum haemorrhage is the main cause of maternal deaths in 2006 (13%). It is alarming to note that septic abortions (11%) had taken the second place in 2006 compared to its 4th place in 2005. This was closely followed by heart disease complicating pregnancy (8.9%) and PIH (7.5%).

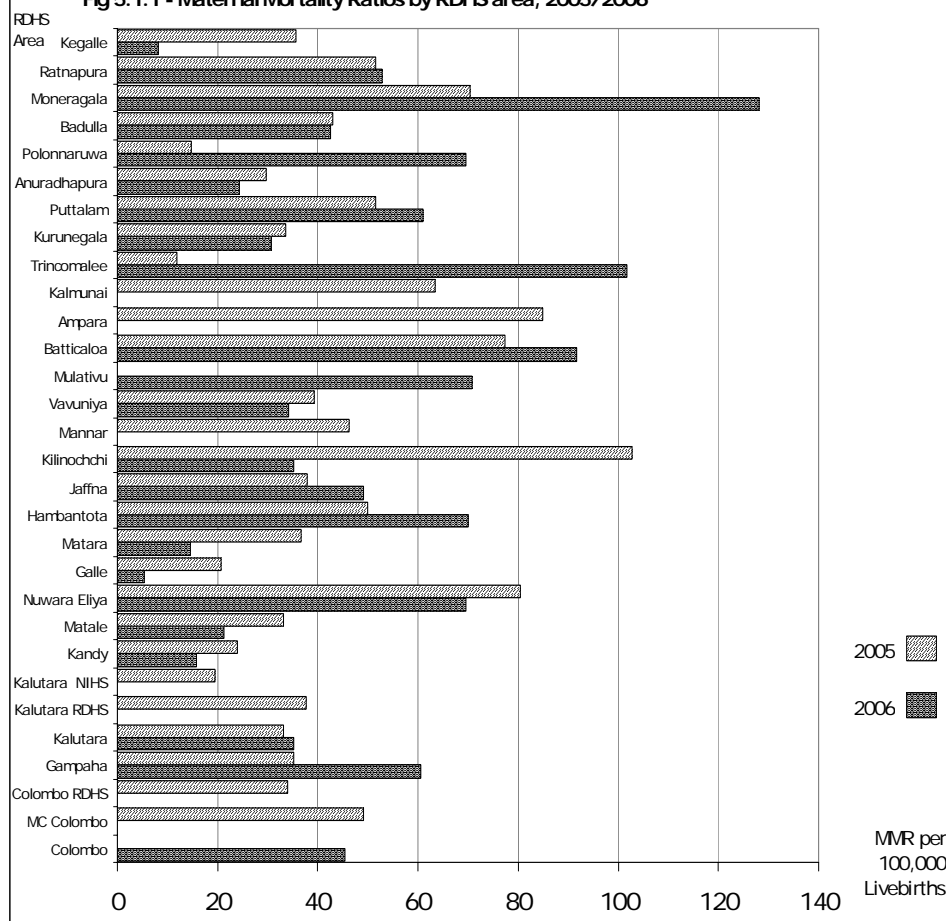
The highest MMR for 2006 was experienced in Kilinochchi district while Ampara and Nuwara Eliya ranking next. A significant reduction of mortality was seen in 2006 compared to 2005 in the districts of Polonnaruwa, Anuradhapura, Moneragala, Hambantota and Gampaha. In the event of achieving Millennium Development Goal 5 in 2015, all programme managers and administrators at national, provincial, district and institutional levels should pay a greater attention to high mortality districts by setting area specific objectives and targets with appropriate interventions.

Table 5.1.3 Causes of Maternal Deaths -2006

Cause of Death	2006	
	No.	%
Post Partum Haemorrhage	19	13
Septic abortion	17	11.6
Heart Disease Complicating Pregnancy	13	8.9
Pregnancy induced hypertension	11	7.5
Septicemia	12	8.2
Embolism	10	6.8
Ruptured ectopic pregnancy	6	4.1
APH	6	4.1
Respiratory Tract Infection	6	4.1
Complications of Caesarean sections	5	3.4
Liver Diseases	4	2.7
Ruptured Uterus	3	2.1
Urinary tract infections	3	2.1
CNS Infections	3	2.1
Malignancy	3	2.1
Deep Vein Thrombosis	2	1.4
Deaths Associated With Anesthesia	2	1.4
Cerebro-vascular Disease	2	1.4
Myocarditis	2	1.4
Postpartum Psychosis	1	0.7
GDM complicating pregnancy	1	0.7
Bronchial Asthma	1	0.7
Other	7	4.8
Cause Inconclusive	7	4.8
Total	146	100

Source: H 1200 - R & E Unit - Family Health Bureau

Fig 5.1.1 - Maternal Mortality Ratios by RDHS area, 2005/2006



5.1.1.5 School Health Programme

School Health is a shared responsibility of the Ministries of Health and Education and is implemented by the Provincial Health and Education authorities as a collaborative programme. The FHB is the focal point for the school health programme and the services are delivered through primary health care infrastructure. The National Working Group which was established in year 2001 meets regularly and attends to issues related to the programme. The National Steering Committee was formed in 2004 which addresses the major issues related to School Health Programme in order to take policy decisions.

The goals of the programme is to ensure that children are healthy, capable of promoting their own health and health of the family and community, and are able to optimally benefit from educational opportunities provided. Establishment of Health Promoting Schools has been identified as the strategy to achieve the goal of the programme. The following major areas are identified as components of this programme.

1. Healthy School Policies
2. School Medical Inspection (S.M.I) and counseling.
3. Health Education and development of life skills for reduction of risk behaviour
4. Healthy School Environment
5. School Community Participation

The school population in Sri Lanka is about 3.84 million distributed in 9,714 schools (school census 2006) island wide. About 65 % of them are in the adolescent age group (10-19 years). In 2007, School Medical Inspections (SMI) were conducted in 7,976 schools giving a total coverage of 87 percent.

5.1.1.6 Well Woman Clinic Services

Well woman clinics (WWC) were incorporated into the Family Health Services with the introduction of the concept of Reproductive Health from 1996. At the end of year 2007, 611 well women clinics were functioning in the country, mostly based at MOH offices. These clinics provide screening services for women over 35 years of age against common non-communicable diseases. The diseases screened in the clinics are diabetes mellitus, hypertension, breast and cervical cancers.

A total of 113,712 women attended Well Woman Clinic island wide during 2007. The performance in well woman clinics during 2007 is indicated in Table 5.1.4.

Table 5.1.4 Performance in Well Woman Clinics in 2007

Activity	2007	
	Number	Percent
Total attending clinics	113,712	-
1 st visits to clinics	104,759	92.1
Under 35 years	20,320	19.1
35 years	18,774	18.0
35 years +	65,665	63.0
No. of women subjected to breast	108,150	95.1
Breast abnormalities detected	1,830	1.7
No. of women subjected to cervical	95,379	83.9
Number of pap smears taken	83,480	87.5
Number of reports received	48,266	57.8
Cervical smears reported as CIN and low grade lesions	173	0.4
No. of cases reported as malignant	19	0.0
Diabetes mellitus detected	2,338	2.2
Hypertension detected	5,425	5.2

Source: H 1200 - R & E Unit - Family Health Bureau

5.1.1.7 Foreign Funded Projects Undertaken by the FHB in 2007

The foreign funded projects undertaken by the FHB during 2007 are given in Table 5.1.5.

Table 5.1.5 Foreign funded projects carried out by the FHB

Project	Funding Agency
Reproductive Health Services	UNFPA
Reproductive Health Services in Conflict Affected areas	UNFPA
Development of Family Health Programme	WHO
Safe Motherhood	UNICEF
Women's Right to life and Health	UNICEF
Early Childhood care and Development	UNICEF
Expanded Programme on Immunization	UNICEF
Health Sector Development Project	WB

5.1.1.8 In-Service Training Programmes

The following in-service training programmes were conducted for health personnel (Field and Institution) by the FHB during 2007.

- 1 Training of trainers on Infant and Young Child Feeding for 70 trainers from 10 districts
- 2 Training of 150 trainers on Early Child Care and Development.
- 3 Two annual work shops for Medical Officers of Maternal and Child Health, one workshop for Regional Supervising Public Health Nursing Officers and a review workshop for Statistical Survey Officers.
- 4 One training workshop for 20 Medical Laboratory Technologists on cervical cytology screening
- 5 Use of condoms for dual protection – one day (TOT) training programmes to service providers and supervisory staff including Medical Officers, RSPHNOs, HEOs & SPHIDs.
- 6 Five day training on contraceptive technology – conducted at the centre for Medical Officers providing FP services.
- 7 One day training programme on Implanon technology conducted for medical officers providing FP services.
- 8 Training programs for Labour Room staff on Labour Room Management.
- 9 Developed capacity of health workers on essential neonatal care
- 10 Develop capacity of health workers on neonatal resuscitation/ventilation
- 11 Training Programmes for improving psycho-social wellbeing of school children in tsunami affected districts
7. Conducted Maternal morbidity review meetings and development of a field guide on maternal morbidity reporting in Sinhala and Tamil
8. Introduction on screening tool to assess Post natal mental wellbeing among post natal mothers
9. National Maternal Mortality Reviews conducted at district level (16 NMMR Reviews)
10. Conducted special programs for the MIDWIFE'S Day
11. Establishment of cervical cytology screening laboratories in 3 districts
12. A reports on Family Health Survey for 2007 was compiled in each district and reports published.
13. Strengthened lactation management centres in selected institutions
14. Launching of School canteen policy
15. Field surveys was conducted in Gampaha & Galle districts to evaluate the MCH service delivery at district level.

5.1.1.9 Special activities implemented by Family Health Bureau in 2007

1. Development of Draft national policy on Maternal and Child Health
2. Declaration of one whole month as the Nutrition month to accelerate and strengthen Nutrition of Pregnant mothers, lactating mothers, infants and preschool children and school children.
3. Developed and disseminated guidelines on Infant and young child feeding and management of children with Nutritional problems
4. Development of Family planning counseling manual for PHM
5. Developed a guide on Labour room management in Sinhala and Tamil language
6. Adaptation & translation WHO recommended PCNP guide.

5.1.2 Environmental Health.

5.1.2.1 Water Supply and Sanitation Programme.

The ministry of Health is not directly responsible for the provision of water to the country. However, through its field health personnel health education is carried out to people to consume water that is safe to drink, usually boiled water.

Public Health Inspectors (PHII) conduct routine tests for adequate chlorine of sources of drinking water and also during epidemics of diarrhoeal diseases and other disaster situation like floods tsunami etc.

Inadequate latrine facilities are still a problem. Use of sanitary latrines by the community is promoted through health education as well as by enforcing the provision of relevant legislation related to housing. All new houses have to possess toilet facilities in order to obtain approval by local authorities, assistance is provided by many organizations, both state and private to the poor for constitution of sanitary latrines. Water quality testing of water samples are carried out for biological contamination. Capacities were strengthened among health staff in relation to water supply and sanitation. Public awareness programmes were conducted to improve proper hygienic practices.

International Year of Sanitation was launched in the view of improving sanitary conditions of the country in collaboration of other relevant stake holders. In addition it was noted that water quality of most of the community water supply schemes were not up to the standard. Therefore a National Steering Committee on water quality Surveillance was established in order to improve the water quality of the country including community water supply schemes.

5.1.2.2 Healthcare Waste Management

Although the disposal of solid waste is the responsibility of the local authority disposal of healthcare waste is being given serious attention by Ministry of health. There is a Steering Committee on Healthcare Waste Management with representation from all the relevant stake holders. Disinfection of waste by autoclaving is identified by the Ministry for the Colombo CMC area, which is in progress.

National Colour Code on healthcare waste has been established for waste separation. Technical guidance and financial assistance had been provided to selected provinces as an initial step to improve existing waste management practices which will be extended to the whole island based on the National Policy. Methods of final disposal of clinical waste are explored for implementation. Budgetary allocation are provided for hospitals for healthcare waste management under the regular budget. Training programmes are conducted for base, district and teaching hospitals.

A Cleaner Production Policy for Health Sector was developed in order to improve the environmental healthy practices in the health sector.

5.1.2.3 Training on Air Pollution Prevention

A draft national action plan on indoor air pollution was developed with the relevant stake holders.

Training of trainers programme (TOT) was carried out for regional public health staff on prevention of indoor and out door air pollution.

5.1.2.4 Inter Agency Co-ordination

Technical guidance and awareness is provided to other Ministries, relevant agencies, and general public on environmental health in the areas of solid and hazardous waste management, bio safety, waste supply and sanitation, climate change, environment and health toxicology air and water pollution, International conventions on Basel, Stockholm, Rotterdam etc in relation to environment and carry out inter-ministerial and inter agency collaborative activities in order to strengthen the environmental condition in this country.

5.1.2.5 Elimination of Iodine Deficiency Disorders (IDD)

Training of trainers programme (TOT) was carried out for health staff on IDD in order to re orientate health staff on preventive activities.

5.1.2.6 Food Safety and Hygiene

The Food Control Administration Unit of the Ministry of Healthcare and Nutrition is the entity charged with the administration aspect of the Food Safety activities of the country. The main tasks entrusted are mostly relating to policy matters.

1. Food Safety & Hygiene activities through the Food control Administration Unit (FCAU) are aimed at ensuring the availability of safe and wholesome food to the consumers. While the Health Sector playing the major role, the contributions from other government and non-government sectors are of immense value.
 - a) Five Days Training Programmes on Food Safety & Hygiene to PHII = 05
 - b) Three Days Training Programmes on Food Safety & Hygiene to MOOH = 02
 - c) Awareness Programmes for Food Handlers = 12
 - d) Review Meetings for Food & Drugs Inspectors = 06
2. The main Food Law is the Food Act No. 26 of 1980 with its related regulations published in terms of section 32 of the Food Act. The Act was once amended by Food (Amendment) Act No. 20 of 1991. The Act is currently being further amended.
3. The Food Advisory Committee established in terms of the Act advises the Hon. Minister on Policy matters relating to food safety. Several Food regulations were reviewed / framed and drafted during the period under review. Review of all the current regulations has been completed and the following regulations were drafted, reviewed and prepared for publication.
 - * Food (Bottled or Packaged Water) Amendment Regulations;
 - * Food (Coloring Substances) Regulations;
 - * Food (Control of Import, Labelling and Sale of Genetically Modified Foods) Regulations;
 - * Food (Vinegar) regulation.
4. The following regulations have been reviewed under a special (WHO) programme for publication. The Legal draftsman is being consulted for finalization of these regulations
 - a) Food (Meat & Meat Products) Regulations;
 - b) Food (Fish & Fish Products) Regulations;
 - c) Food (Sugar & Sugar Products) Regulations;
 - d) Food (Additives – Emulsifying Agents) Regulations;
 - e) Food (Milk & Milk Products) Regulations;
 - f) Food (Hygiene Regulations)
 - g) Food (Additives – General) Regulations;
 - h) Food (Tea, Coffee, Cocoa and their products) Regulations;
5. The FCAU also conducts Training Programmes on Food Safety to Health personnel as part of the routine activities. The following training programmes were conducted during the period in review
 - a) Five Days Training Programmes on Food Safety & Hygiene to PHII = 05
 - b) Three Days Training Programmes on Food Safety & Hygiene to MOOH = 02
 - c) Awareness Programmes for Food Handlers = 12
 - d) Review Meetings for Food & Drugs Inspectors = 06
6. The FCAU also publishes educational materials promoting the understanding of proper food handling and food hygiene. In this series a Training Manual for Food Handlers was prepared for publication with the assistance of the WHO. Another manual for Training of Trainers in Food Safety is currently under preparation under the WHO Programme.
7. The FCAU being the administrative arm of the Chief Food Authority, facilitates conducting of the Food Advisory Committee (FAC) meetings, and expedites decisions taken at the FAC meetings.
 - a) No. of FAC meetings held during the period = 13
 - b) No. of FAC Sub Committee Meetings held during the period = 12
 - c) No. of Special Meetings held = 04
8. The FCAU is directly involved in the Import / Export inspection and certification of food and also in registration of bottled or packaged water manufacturing premises in addition to the administrative work. Under these programmes the following activities were carried out :
 - I – Imports.
 - a) No. of consignments of imported food items inspected = 3545
 - b) No. samples drawn from inspected consignments = 324
 - c) No. of consignments detected as not conforming to requirements = 12
 - d) No. rejected = 12
 - II – Imports.
 - a) No. of application received for Export certification = 4604
 - b) No. of inspections carried out = 275
 - c) No. of certificates issued = 46040
 - d) Total amount credited to consolidated fund collected as fees = Rs.46,040,000.00

- III – Registration of bottled or packaged Water manufacturing Premises –
- No. of applications received = 22
 - No. of assessments carried out = 21
 - No. of premises registered = 20
 - Total amount credited to consolidated as fees = 22,000.00

IV – Issue of Permits for Edible Common Salt for industries :- 85

As per the provisions of the Food (Iodization of Salt) Regulations, Import, Sale, Manufacture etc of edible common salt is prohibited to implement the Universal Iodization of salt. It is therefore necessary that appropriate authorization should be issued for obtaining required quantities of salt for various industries including iodization of salt.

- No. of applications received = 07 + Renewals 78
- No. of inspections carried out = 125
- No. of permits issued = 85
- Quantity of salt for which permits issued = 28,818 MT

9. under the assistance of the WHO funds following programmes were conducted successfully by the FCAU.

- Training of Staff
- (Three Months Training Course on Food & Drug Inspection)
- Consultative Workshop on Food Safety Regulations
- Technical Support to Food Safety Regulations
- Monitoring and evaluation of food safety Programmes
- Develop Manual for risk food sampling protocol
- Printing & Distribution of Revised Regulations
- Review and Develop Food Safety Surveillance Systems
- Training staff on food safety surveillance
- Developing advocacy Programme Including Materials

5.1.2.7 Occupational Health

Occupational Health and Safety is a multidisciplinary area involving many stakeholders. The main government stakeholders are the Ministry of Health and the Department of Labour. Occupational health is a rapidly developing discipline worldwide and much attention is being given to prevent diseases and accidents due to a persons occupation.

The Ministry of Health has embarked on a programme to develop occupational health in Sri Lanka. It is planned to setup occupational health units in each district and the first unit has been set up at Gampaha district. The main objectives of the occupational health programme are

- Prevent occupational disease and accidents
- Create awareness on occupational health among the workers, employers and general public
- Promote creation and maintenance of healthy work settings

The implementation of occupational health activities in the public health sector are done mainly through the MOH Offices. The Medical Officers of Health (MOOH) and the Public Health Inspectors (PHII) are the two main categories of staff who implement occupational health activities at the grass root level. The MOOH and PHII are expected to visit the workplaces, identify occupational health issues, advice on basic remedial measures and carry out health promotive activities targeting the workforce and the management. In addition to these, many special health promotion/health education programmes are being carried out for workers on important health issues such as nutrition, mental health at workplace, reproductive health etc.

Currently there is no separate specialty for occupational health in the curative sector. Treatment of diseases and injuries related to occupation is integrated in to the existing curative health system. For example; injuries are taken care by the surgical unit, medical problems such as occupational asthma by the medical units and rehabilitation by the physiotherapy and rehabilitation units.

The Occupational Health Unit of the Directorate of Environmental & Occupational Health has embarked on a programme to provide training for MOOH and PHII. National Training Programme on Occupational health is carried out at district level to provide training on occupational health uniformly to all Range PHI at district level. The training provided has greatly facilitated the implementation of occupational health activities by the public health staff.

5.1.3 Epidemiology

Epidemiology Unit is disease surveillance unit in the Ministry of Health Sri Lanka. The goal of our Unit is to improve the health of the Sri Lankan population by collection, analysis, interpretation and dissemination of best possible information on diseases prevalent in the country. This is achieved mainly through surveillance, epidemiological investigation, research and training.

5.1.3.1 Activities conducted by Epidemiology Unit in 2006

As routine activity, four surveillance reviews were carried out in Anuradhapura, Nuwara Eliya, Badulla and Matara. The findings were shared with district teams to improve surveillance activities in the districts. Consultative meetings, district-level reviews and experts meetings were held to strengthen surveillance of Acute Flaccid Paralysis (AFP), Measles, Rubella, Dengue Fever/ Dengue Haemorrhagic Fever (DF/DHF) and other endemic diseases. The surveillance project for Pneumococcal, Rota virus and Hib infections were continued with the assistance of the South Asian Pneumococcal Network (SAPNA), International Vaccine Institute (IVI) and World Health Organization (WHO). Pneumococcal surveillance was expanded to the Colombo South Teaching Hospital.

A meeting of global Pneumococcal investigators was held in February 2006 to share the surveillance information.

The list of notifiable diseases was reviewed, and Chickenpox, Mumps and Meningitis were included in the list. Three outbreaks of hepatitis A were successfully controlled in Aranayake, Kalmunai and Thirukkivil. A project proposal was developed to obtain support from AFRIM Laboratory, Bangkok, Thailand for laboratory confirmation of diseases of unknown aetiology including confirmation of Avian Influenza and other influenza-like illnesses.

Action has been taken to revise the surveillance forms and print them as separate booklets allowing the Medical Officer of Health (MOH) and Regional Epidemiologist (RE) to keep copies. A two-week training programme on Epidemiology and Disease Surveillance was also conducted in August 2006 for senior MOOH.

EPI programme was reviewed quarterly with REE. Joint reviews with the Family Health Bureau (FHB) were conducted in 15 districts. An oral polio coverage assessment survey was carried out in the vacant Public Health Midwife (PHM) areas in the Badulla district. EPI survey was conducted in the Colombo Municipality area.

The form used to report adverse events following immunization (AEFI) was revised, and a 5 year action plan was developed. A clinic AEFI register and a monthly Consolidated Return for REE were introduced. A central cold room complex was built with machinery provided by the WHO at the Unit. Fifteen new cold rooms were set up at Regional Medical Supplies Divisions (RMSDs) with UNICEF assistance. Electronic temperature recording devices (Data Loggers) were introduced to monitor temperature of cold rooms and refrigerators up to MOH level. Training of REE, Medical Officers for Maternal and Child Health (MOOMCH) and Officers-in-Charge of RMSDs was done on vaccine management. A comprehensive multi year plan for the national immunization programme was developed.

Dengue task force meetings were held, and alerts were sent periodically regarding possible outbreaks. Two workshops were conducted with 48 selected MOOH to develop action plans for DF/DHF control in 2006. A dengue brigade for control of dengue was established in Polgahawela as a model. A set of guidelines for Management of DF/DHF was prepared and distributed among all stake holders. Dengue mortality reviews in hospitals were commenced.

Training of Infection Control Nursing Officers on special dengue surveillance activities was done. "Dengue control weeks" were declared in April and September to initiate the seasonal dengue control activities. A team from the Unit visited Kalmunai at the outset to launch an epidemiological investigation, and to provide technical support on Chikungunya to the district health staff. The epidemic was confirmed within 3 weeks with the support of local and international laboratories.

Thereafter, guidelines for control and prevention were issued by the Unit, periodically.

Japanese Encephalitis immunization was carried out in selected high risk areas during May-September 2006. Infection control staff in hospitals were trained on Avian Influenza. IEC material were produced and distributed. Rapid response teams were formed in each district to investigate a potential outbreak. Personal protective equipment and antivirals were procured, and distributed to selected sentinel hospitals. Project proposals were developed to obtain financial assistance from the WB & JICA.

Action was taken to review and develop plans for selected endemic areas where incidence of diarrhoeal diseases continued to be high. Alerts of possible outbreaks of dysentery were sent during periods of heavy rains. Guidelines were prepared and distributed among internally displaced people in the Kantale area, and a mechanism to prevent the occurrence of diseases and to maintain surveillance was established.

Health Sector Development Project (HSDP): the focal point and necessary infrastructure at central level were established. The national level consultative meeting for all REE and MOOMCH on immunization sub-component of the HSDP and the Immunization Quality Assessment Survey was held. The Unit, and the offices of the REE were equipped with photocopy machines, fax machines, desk top computers & printers with HSDP funding. A profile of the Epidemiology Unit elaborating on its past, present and future has also been printed.

The Advisory Committee on Communicable Diseases, National Committee for Certification of Polio Eradication, Expert Committee on Polio Eradication and Laboratory subcommittee on poliomyelitis were conducted as scheduled in 2006.

5.1.3.2 Activities conducted by Epidemiology Unit in 2007

Two surveillance reviews were carried out in Moneragala and Kandy. The findings were shared with district teams to improve surveillance activities in the districts. Consultative meetings, district-level reviews and experts meetings were held to strengthen surveillance of Acute Flaccid Paralysis (AFP), Measles, Rubella, Dengue Fever/ Dengue haemorrhagic Fever (DF/DHF) and other endemic diseases.

Draft National guidelines for strengthening sentinel surveillance of communicable diseases were published as a booklet and disseminated among all the stakeholders. Forecasting of possible outbreaks was made and preventive action taken. Outbreaks of hepatitis A and fever turned out to be Chikungunya were successfully controlled in Gampola and Galnewa areas respectively.

In response to the few reported sporadic cases of poliomyelitis in Bihar state in India [where Buddhagaya is situated] steps were taken to immunize all pilgrims going to India on pilgrimage with OPV. In year 2007 too Sri Lanka was able to maintain near 100% coverage for all EPI vaccines. District level immunization coverage and wastage were reviewed quarterly with REE. Joint detailed EPI reviews were conducted with the Family Health Bureau.

The Epidemiology Unit of Sri Lanka had organized an EPI Summit with the participation of all stakeholders of the programme in January 2007. The main objectives of this forum were to initiate a national dialogue on current and future strategies for the national immunization programme, agree on appropriate immunization schedules and time frames for the introduction of new vaccines after taking into consideration the priorities, cost, safety and programmatic feasibility and to reach a consensus on the national immunization policy for the next 5 to 10 years.

Epidemiology Unit has been able to solicit support of Global Alliance for Vaccine & Immunization [GAVI] to introduce combined Hib vaccine [Pentavelent] into the National Immunization Programme in Sri Lanka. During this year the Unit was able to successfully accomplish all the ground work including procurement of Pentavelent vaccine, distribution of vaccine to the service provider level and training of staff with a view to introducing new vaccine to the National Immunization programme. with effect from January 2008.

With the acquisition of the new crew cab vaccine distribution vehicle and completion of construction of central vaccine store our vaccine distribution and vaccine storing capacity were greatly enhanced.

Provincial level dengue review meetings were held in all the high risk provinces with the collaboration of the National dengue control Unit to help them to assess their dengue control activities. In addition dengue surveillance review meetings were held in high risk MOH areas in the western province.

Avian influenza [AI] : Training of hospital staff of the 20 hospitals identified as sentinel sites for AI preparedness was completed. A national workshop on Table Top Exercises on AI was conducted with all key stakeholders to evaluate the existing National Avian/Pandemic Influenza Preparedness Plan [NIPP]. Monthly meetings of the National Technical Committee on AI preparedness were held to review progress of preparedness activities in the country. Provincial Technical committees were formed in Western, Eastern, Central and North Western Provinces.

The behavioral research study on community behavior regarding AI was completed and the final report was prepared. This was one of the key activities under the communication strategy on AI preparedness. Routine Human influenza surveillance was established in the hospitals identified as sentinel sites for AI preparedness.

Two district reviews on diarrhoeal diseases and Hepatitis were carried out in Kandy and Nuwera-Eliya districts with the participation of the relevant central, provincial, district and divisional level stakeholders.

Health Sector Development Project [HSDP] – Immunization Sub component : training programmes were completed to enhance the quality of immunization services in 21 out of 26 health administrative districts in the country. Subsequently, the baseline Immunization Quality Assessment Survey also was completed in Field MCH Clinics in all MOH areas except for those in the Northern Province.

Our unit functions as the main national research centre on epidemiology and a training centre for postgraduate research students and fellows involved in epidemiological studies. Following were some of the research activities carried out in 2007. Apart from these, national surveys on immunization coverage and cold chain maintenance are routinely carried out by the unit.

1. Study on safety and immunogenicity of SA 14-14-2 live JE vaccine to facilitate evidence-based decision on introducing the same in the National Programme.
2. Cardiovascular risk assessment study to determine the percentage of population in each cardiovascular risk category based on the WHO/ISH risk prediction charts. (multi-centre)
3. Study on the transmission pattern of tuberculosis infection among household contacts to identify the potential risk factors by DNA fingerprinting of mycobacterium.
4. Determining the sero-prevalence of Chikungunya among adults in the age group of 20-50 years in the Colombo Municipality area.
5. Development and testing a programme for opportunistic screening and management of high blood pressure in hospital setting using the total risk approach .
6. Determining the prevalence of carcinogenic Human Papilloma Infection [HPV] and burden of cervical cancer attributable to HPV infection.

Table 5.1.6 Cases, Deaths and Case Fatality Rate (CFR) of Japanese Encephalitis and Dengue Haemorrhagic Fever, 1991 - 2007

Year	Japanese Encephalitis				Dengue Haemorrhagic Fever			
	Cases		Deaths	C.F.R.	Cases		Deaths	C.F.R.
	No.	Rate			No.	Rate		
1991	325	1.9	25	7.7	1,048	6.1	31	3.0
1992	291	1.7	27	9.3	656	3.8	15	2.3
1993	289	1.6	52	18.0	756	4.3	7	0.9
1994	230	1.3	41	17.6	582	3.3	7	1.2
1995	173	1.0	32	18.5	440	2.4	11	2.5
1996	307	1.7	44	14.4	1,294	7.1	54	4.2
1997	164	0.9	19	11.9	980	5.3	17	1.7
1998	122	0.7	3	2.5	1,275	6.9	8	0.6
1999	102	0.5	3	2.9	1,688	6.8	14	0.8
2000	83	0.5	2	2.4	3,333	19.8	37	1.1
2001	66	0.4	9	13.6	3,771	19.9	47	1.3
2002	113	0.6	15	13.2	2,977	15.6	64	2.2
2003	133	0.7	20	15.0	1,605	8.3	32	2.0
2004	129	0.7	9	6.9	4,001	20.5	88	2.2
2005	65	0.3	6	9.2	2,039	10.4	34	1.6
2006	26	0.1	1	3.8	5,646	28.4	48	0.2
2007	49	0.3	6	12.2	3,250	16.3	24	0.7

Based on Special surveillance

Source : Epidemiological Unit

Incidence rate per 100,000 population

Table 5.1.7 Distribution of Cases and Deaths due to Japanese Encephalitis and Dengue Haemorrhagic Fever by DPDHS Divisions, 2007

Division	Japanese Encephalitis			Dengue Haemorrhagic Fever		
	Cases	Positives*	Deaths	*Suspected cases	**Confirmed cases	Deaths
Colombo	0	0	0	1,198	565	10
Gampaha	10	1	1	618	305	1
Kalutara	4	1	1	267	309	-
Kandy	1	0	1	35	92	1
Matale	1	0	0	24	30	-
Nuwara Eliya	0	0	0	5	10	-
Galle	3	1	0	40	25	-
Matara	3	1	0	64	31	-
Hambantota	1	0	0	47	61	-
Jaffna	0	0	0	192	55	1
Kilinochchi	0	0	0	-	-	-
Mannar	0	0	0	-	4	-
Vavuniya	2	0	1	9	-	1
Mullativu	3	1	0	-	-	-
Batticaloa	4	1	1	21	50	-
Ampara	0	0	0	2	-	-
Kalmunai	0	0	0	-	1	-
Trincomalee	1	0	0	27	52	2
Kurunegala	2	1	0	72	227	1
Puttalam	1	0	1	106	101	1
Anuradhapura	3	0	0	263	33	1
Polonnaruwa	1	0	0	40	25	-
Badulla	0	0	0	26	13	2
Moneragala	0	0	0	15	34	-
Ratnapura	6	1	0	39	162	1
Kegalle	3	1	0	83	232	2
Unknown	0	0	0	57	-	-
Total	49	9	6	3,250	2,417	24

Based on Special surveillance

Source: Epidemiological Unit

* Data received from the Medical Research Institute

Table 5.1.8 Cases and deaths of Japanese Encephalitis and Dengue Haemorrhagic Fever by Months, 2007

Month	Japanese Encephalitis			Dengue Haemorrhagic Fever		
	Suspected Cases	Positives*	Deaths	*Suspected cases	** confirmed cases	Deaths
January	12	1	1	263	207	1
February	5	1	1	140	101	
March	3	1	0	31	80	
April	4	0	0	62	70	
May	5	0	1	152	115	
June	6	2	0	238	162	2
July	4	1	0	323	236	
August	4	0	2	293	261	3
September	1	0	0	318	248	5
October	1	1	0	527	264	3
November	1	0	0	502	316	7
December	3	2	1	398	357	2
Unknown	0	0	0	3	0	1
Total	49	9	6	3250	2417	24

Based on Special Surveillance

Source : Epidemiological Unit.

* Data received from the Medical Research Institute

Table 5.1.9 Cases and Deaths of Japanese Encephalitis and Dengue Haemorrhagic Fever by Age Groups, 2007

Age Group	Japanese Encephalitis				Dengue Haemorrhagic Fever			
	Cases		Deaths		Cases		Deaths	
	No	%	No	%	No	%	No	%
under 1	3	6.1	0	-	15	0.5	1	4.2
1 - 4	4	8.2	1	16.7	253	7.8	2	8.3
5 - 9	8	16.3	0	0.0	409	12.6	1	4.2
10 - 14	9	18.4	1	16.7	279	8.6	1	4.2
15 - 19	3	6.1	0	0.0	308	9.5	1	4.2
20 - 24	5	10.2	0	-	401	12.3	6	25.0
25 - 29	2	4.1	0	-	380	11.7	2	8.3
30 - 34	3	6.1	1	16.7	294	9.0	2	8.3
35 - 39	2	4.1	0	-	234	7.2	1	4.2
40 - 44	0	0.0	0	0.0	171	5.3	2	8.3
45 - 49	1	2.0	0	0.0	139	4.3	1	4.2
50 - 54	3	6.1	0	0.0	122	3.8	1	4.2
55 - 59	1	2.0	0	-	65	2.0	0	0.0
> 60	5	10.2	3	50.0	129	4.0	1	4.2
Unknown		0.0	0	-	51	1.6	2	8.3
Total	49	100.0	6	100.0	3,250	100.0	24	100.0

Based on Special Surveillance

Source : Epidemiological Unit

Table 5.1.10 Incidence of EPI Target Diseases, 1960-2007

Year	Polio-myelitis		Diphtheria		Whooping Cough		Tetanus		Tetanus Neo-natorum		Tuberculosis		Measles	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate ¹	Cases	Rate	Cases	Rate
1960	303	3.1	1,042	10.5	1,786	18.0	1,435	14.5	-	-	10,519	106.3	3,060	30.9
1965	494	4.4	1,232	11.0	2,109	18.9	1,812	16.2	-	-	6,927	62.0	2,037	18.2
1970	405	3.2	986	7.9	1,651	13.2	1,441	11.5	847	230.2	5,762	46.0	4,086	32.6
1975	396	2.9	310	2.3	1,341	9.9	1,186	8.8	812	216.0	7,324	54.3	5,000	37.0
1980	262	1.8	37	0.3	542	3.7	892	6.0	351	83.9	6,212	42.1	5,032	34.1
1985	40	0.3	10	0.1	536	3.4	405	2.6	76	19.5	5,889	37.2	9,398	59.3
1986	34	0.2	3	0.0	161	1.0	453	2.8	49	13.6	6,596	40.9	6,235	38.7
1987	149	0.9	-	-	31	0.2	258	1.6	37	10.3	6,411	39.2	3,508	21.4
1988	25	0.2	-	-	25	0.2	273	1.6	39	12.8	6,092	36.7	2,650	16.0
1989	16	0.1	-	-	61	0.4	295	1.8	19	5.3	6,429	38.2	780	4.6
1990	9	0.1	-	-	271	1.9	183	1.1	5	4.7	6,666	39.2	4,004	27.6
1991	1	0.0	1	0.0	25	0.2	188	1.3	10	3.7	6,174	35.7	1,896	12.8
1992	12	0.1	-	-	6	0.0	231	1.3	14	2.6	6,802	39.0	701	4.0
1993	15	0.1	1	0.0	18	0.1	196	1.1	11	3.7	6,885	39.0	558	3.2
1994	-	-	-	-	34	0.3	156	1.1	11	2.0	6,121	34.3	390	2.2
1995	-	-	-	-	171	1.0	167	1.0	2	3.0	5,869	31.5	465	2.6
1996	-	-	1	0.0	33	0.2	97	0.7	6	4.8	5,366	29.3	158	0.9
1997	-	-	-	-	205	1.8	23	0.5	4	3.5	6,547	35.6	66	0.4
1998	-	-	-	-	94	0.5	24	0.1	4	4.5	6,925	36.9	23	0.1
1999	-	-	-	-	61	0.3	23	0.1	3	4.0	7,157	37.6	2,341	12.5
2000	-	-	-	-	88	0.5	38	0.2	1	0.3	8,129	42.9	4,096	21.2
2001	-	-	-	-	52	0.3	75	0.4	3	0.8	8,418	45.0	309	1.7
2002	-	-	-	-	16	0.1	34	0.2	2	0.6	8,884	46.9	139	0.7
2003	-	-	-	-	-	-	30	0.2	2	0.6	9,312	48.4	65	0.4
2004	-	-	-	-	-	-	32	0.2	1	0.6	8,639	48.4	35	0.4
2005	-	-	-	-	-	-	25	0.1	1	0.6	9,448	48.4	24	0.4
2006	-	-	-	-	48	0.1	38	0.2	1	0.6	-	-	21	0.2
2007	-	-	-	-	21	0.1	16	0.1	16	0.1	-	-	37	0.2

Rate per 100,000 population

Data from year 1990 to 2002, are based on hospital admissions and conformed with special surveillance

¹ Rate per 100,000 live births

Source : Epidemiological Unit

Table 5.1.12 Morbidity and Mortality of Shigellosis and Case Fatality Rates, 1980 - 2006

Year	Morbidity		Mortality		Case Fatality Rate
	Number	Rate	Number	Rate	
1980	7,710	52.3	126	0.9	1.6
1985	12,667	80.0	126	0.8	1.0
1990 ¹	28,284	195.0	180	1.7	0.6
1995 ²	18,488	112.2	54	0.3	0.3
1996 ³	19,267	106.5	57	0.3	0.3
1997 ⁴	21,890	121.5	69	0.4	0.3
1998	20,340	108.3	43	0.2	0.2
1999	16,167	84.9	31	0.2	0.2
2000	10,342	53.4	11	0.1	0.1
2001	10,663	57.0	19	0.1	0.2
2002	11,353	59.8	18	0.1	0.2
2003	8,662	45.0	20	0.1	0.2
2004	9,773	50.2	25	0.1	0.3
2005	7,099	36.1	127	0.6	1.8
2006	6,375	32.1	7	0.0	0.1

Rate per 100,000 population. Source: Epidemiological Unit

Excludes :

- ¹ Northern and Eastern provinces
- ² Jaffna, Kilinochchi, Mullaitivu and Ampara districts.
- ³ Kilinochchi and Mullaitivu districts.
- ⁴ Ampara district

Table 5.1.11 Morbidity and Mortality of Diarrhoeal Diseases and Case Fatality Rates, 1980-2006

Year	Morbidity		Mortality		Case Fatality Rate
	Number	Rate	Number	Rate	
1980	149,889	961.3	1,520	10.4	1.0
1985	134,474	848.8	1,158	7.3	0.9
1990 ¹	121,464	837.5	437	3.0	0.4
1991 ¹	118,122	802.3	442	3.0	0.4
1992	160,892	924.4	493	2.8	0.3
1993	143,204	812.8	359	2.0	0.3
1994 ²	133,283	760.4	310	1.8	0.2
1995 ³	111,378	676.1	165	1.0	0.2
1996 ⁴	148,848	822.5	231	1.3	0.2
1997 ⁵	162,214	900.7	375	2.1	0.2
1998	176,685	941.1	356	1.9	0.2
1999	158,379	831.7	233	1.2	0.1
2000	144,682	747.4	185	1.0	0.1
2001	160,516	857.4	180	1.0	0.1
2002	141,214	743.6	128	0.7	0.1
2003	119,835	622.5	113	0.6	0.1
2004	103,487	531.7	79	0.4	0.1
2005	108,280	550.5	143	0.7	0.1
2006	137,716	693.2	78	0.4	0.1

Rate per 100,000 population Source : Epidemiological Unit

Excludes :

- ¹ Northern and Eastern provinces.
- ² Polonnaruwa district.
- ³ Jaffna, Kilinochchi, Mullaitivu and Ampara districts.
- ⁴ Kilinochchi and Mullaitivu district
- ⁵ Ampara district

5.1.4 Health Education and Publicity

The main role of the Health Education Bureau (HEB) is building the capacities of personnel, both in the government and the non government sectors who are engaged in health development of people. In addition, the HEB contributes to policy development on communication and mass media, conduct behavioural research and publish materials on health related issues.

5.1.4.1 Vision of the Health Education Bureau

Foster a healthier nation that contributes to its economic, social, mental and spiritual well-being.

5.1.4.2 Mission of the Health Education Bureau

Building the capacities of health and health related sectors to promote the health of the people through advocacy, behavior change communication, social marketing and community mobilization and intersectoral coordination.

5.1.4.3 Objectives of the Health Education Bureau

To be the center of excellence in promoting health of the people through capacity building of health and health related sectors on advocacy, behavior changes communication, social marketing and community mobilization and intersectoral coordination.

5.1.4.4 Specific Objectives

1. To provide technical advice on policy formulation, planning and programming on promotion of health through advocacy, behavior change communication, social marketing counselling and community mobilization and intersectoral coordination.
2. To support various health programmes conducted by the Department of Health services and other health related sectors through advocacy, behavior changes communication, counselling and community mobilization for health action and intersectoral coordination.
3. To promote, support and undertake planning, implementing, monitoring and evaluation of health promotion programmes in different settings.

4. To promote health care consciousness among the general public through mass media.
5. To assist in production of communication materials and develop communication materials required for health promotion and behavior change communication.
6. To develop the capacities of manpower, both within and outside the Department of Health Service as health promoters and change agents through advocacy, behavior change communication and intersectoral coordination.
7. To educate and empower the public on health issues, to enable a greater control over their health and to promote community health.
8. To coordinate with governmental, non governmental and international agencies in promoting the health of the people.
9. To develop managerial capacities of health and health related sectors to manage health promotive programmes.
10. To monitor and evaluate health primitive programmes and facilitate monitoring and evaluation of the health promotive programmes at different levels.
11. To support and undertake research on behavior change of the community and on social mobilization.

5.1.4.5 Units

1. Health Promotion Unit
2. Training, Monitoring, Evaluation Unit
3. Behavioural Change Communication Unit
4. Life Skill Development Unit
5. Oral Health Promotion Unit
6. Publication and Communication Material Development Unit
7. Mass Communication and Publicity Unit
8. Audio Visual Unit

5.1.4.6 Activities on year 2007**5.1.2.6.1 Advocacy, behaviour change communication, counselling and social mobilization for health action - 2007**

<u>Activity</u>	<u>No of meetings</u>	<u>No. of Participants</u>
• Consultative project steering committee	4	51
• National media forum meeting	2	52
• Development of National Health Promotion Policy	4	51
• Workshop on support mechanism for effective collaboration for stakeholders of health promotion	2	104
• Advocacy seminar for provincial consultant Community Physicians, Regional Epidemiologists and Health Education Officers on planning activities	1	92
• Advocacy seminar on HIV/AIDS for religious leaders	1	300
• Advocacy seminar on Bangkok charter	4	99
• Consultative meeting on production of video documentary on dissemination of best practices	3	45
• Avian/Pandemic influenza preparedness and response activities advised on behaviour survey and focal point for the communication component		

5.1.4.6.2 Planning, implementation, monitoring and evaluation of health promotion programmes in different settings - 2007

- Field evaluation of existing Reproductive Health materials in four districts, Monaragala, Anuradapura, Nuwara Eliya and Puttalam - report completed
- Best Practices and care competency of health promotion diseases prevention for Health Education Officers - 30 participants
- Developments of strategic plan to prevent and control early childhood common oral diseases
- Infrastructure development of the Anuradapura resource center - Photocopy machine

5.1.4.6.3 Media Seminars - 2007

<u>Subject area</u>	<u>No of seminars</u>	<u>No of participants</u>
World Population Day	1	66
Gender based violence in Sri Lanka	1	62
World Health Day	1	100
National Dengue Control Week	2	167
Epilepsy	1	95
World Breast Feeding Day	1	90
Prevention of Domestic Violence	1	87
Oral Health	1	80
Launching of International Year of Sanitation	1	100
Prevention of Injuries	1	90
• Media award ceremony for the best population journalist		63
• Site visit for the journalists at General Hospital Kurunegala		40
• Consultative meeting for the selection of the best population journalist - 5 meetings		
• Mass media activities (30 TV and 104 radio programmes) on health education and promotion		

5.1.4.6.4 Develop the capacities of personal -2007

<u>Activity</u>	<u>No. of programmes</u>	<u>No. of participants</u>
Consultative workshop for district coordination on Behaviour Change Communication	4	110
Consultative workshop for monitoring and evaluation of Behaviour Change Communication	1	30
Training of trainers to develop a resource pool in 2 provinces and 1 other district	4	120
Training of tutors of training centers	1	40
Training of Youth Service Officers	1	35
Training of staff of the Nation Institute of Labour Studies	1	40
Training of teachers on Reproductive health and Skills development	5	225
Strengthening school health clubs programme in tsunami affected districts	29	7,910
Training of trainers on health education and counseling	4	
Hygiene promotion for district level program managers in health and other sectors in tsunami affected districts	12	600
Training of trainers on health communication skills/Early Childhood Care Development	1	30
Consultative workshop fo district level trainers on Behaviour Change Communication /Early Childhood Care and Development	3	90
Consultative workshop on qualitative research and Participatory approaches	1	35
Consultative workshop on qualitative research and	1	35
Consultative workshop on gender sensitization	1	35
Consultative workshop for health workers on Development of evaluation tool and report on Mobile hospital health education unit	2	16
Workshops on health promotion to prevent Non Communicable Diseases for hospital health education Unit staff-Anuradapura, Badulla and Western province	3	88
Training programmers for MOHH, M.S.C. and M.D. (Com. Medicine./Denistry), Social pediatrics and M.S.C.(Medical Administration), ward sisters on Health Education and Health Promotion		

5.1.4.6.5 Production of communication material -2007

- Development of 8 flashcards on Reproductive Health for adolescents
- Development of 5 wall charts on Reproductive Health for adolescents
- Development of posters on alcohol and smoking prevention as exhibits
- Development of comic book on nutrition for adolescents
- Development of 4 posters on various topics on nutrition
- Development of 3 leaflets on various topics on nutrition
- Development of IEC materials on rabies
- Development of leaflet and poster on Sprinkles
- Production of Video documentary on dissemination of best practices
- Development of Suwa Udana health education panels
- Development of a flip chart on hygiene promotion for health staff in tsunami affected districts
- Development of Health Education materials flip chart and flashcard for the Integrated Nutrition project for the reduction of maternal and child under nutrition in Sri Lanka
- Development of IEC materials for the intergraded nutrition project of the FHB

5.1.4.6.6 Educate and empower the public - 2007

<u>Activity</u>	<u>No. of pogrammes</u>
Awareness programmers on life skills development in	
Universities	5
NIE for teachers	4
Schools	20
Petroleum co-operation	6
Garment factories	4
Security forces	10
For elders at village settings	3
Life skills and life style programmers at the exhibition	
Suwa Udana	12
Dayata Kirula	1
Exhibitions at temples, Villages	10

5.1.4.6.7 Monitor and evaluate - 2007

- Consultative meeting at district level to monitoring progress of projects at district level

5.1.4.6.8 Research - 2007

- The research on childhood diabetes/ prediabetes-Prevelence survey of the Nations Diabetics Center

5.1.4.6.9 Technical Advice - 2007

- Contribution to the development of PHI manual
- Contribution to the development of PHM manual

5.1.5 Nutrition Coordination

Nutrition coordination division, which was handled by the Ministry of Plan Implementation earlier, has been transferred to the Ministry of Healthcare and Nutrition under the Extra Ordinary Gazette of the Democratic Socialist Republic of Sri Lanka, number 1.215/14 and dated 20th December 2001.

The Nutrition Coordination Division is located at 7th floor of Anti Malaria Campaign Building at Public Health Complex in Narahenpita.

Planning, monitoring, coordination and facilitation of nutrition related activities implemented by various agencies are the main function of this division. It has already been identified that improvement of nutritional status is a coordinated effort of all stakeholders. There fore, Nutrition Coordination Division is mandated to coordinate all nutrition and related activities withh in the institutions in the Ministry of Health (FHB, HEB, MRI, Non Communicable Disease Unit, Food Control Unit, Nutrition Unit, Young Elderly & Disabled) & Provincial Authori

Presently two main programmes are implemented by the Nutrition Coordination Division namely Government Assisted "Thriposha Programme" and World Bank Health Sector Development Project (Nutrition Component) 2005 - 2009.

5.1.5.1 Government assisted National supplementary feeding programme "Thriposha Programme"

Thriposha programme is the first comprehensive island wide supplementary programeme started in 1973 by the government and the help of CARE. Thriposha is distributed to antenatal and lactating mothers, infants, pre-school children, throughout the island. It caters only for about 580,000 beneficiaries against the target population of approximately 1.1 milion.

Activities done by the Nutrition Coordination Division for the smooth production & distribution of Thriposha are

1. Monitoring the raw material position at Thriposha Plant at Ja-Ela.
2. Coordination with the Thriposha Plant & Procurement branch of the Ministry of health to supply raw materials.
3. Supervision of Thriposha production quality and make allocation to beneficiaries.
4. Coordinate the activities to improve the Thriposha plant and procurement procedures.

5.1.5.2 Health Sector Development Project (HSDP) 2005 - 2009

5.1.5.2.1 Nutrition Education Programme

1. Completed the revision of Basic Nutrition Curriculum & the lesson plans for Public Health Midwives

2. With the Ministry of Education and National Institute of Education conducting a pilot study to reduce over weight and obesity among primary school children in 8 urban schools. In these study modules, health education materials were developed to make life style changes among urban school children. Skills of the staff in Nutrition Coordination Division and the school teachers were improved and updated during this exercise. Ministry of Education is waiting to absorb methods we used into primary school curriculum in order to improve the nutritional status of children.

3. With the Ministry of Child Development & women's Empowerment, Open University, Ministry of Education and Ministry of Agriculture prepared nutrition manuals for preschool teachers and implementing in western province to create awareness among pre school teachers on nutrition. Through them it is expected to educate children and parents

4. With Family Health Bureau, Health Education Bureau, Ministry of Education and Ministry of Agriculture conducting nutrition oriented home gardening programme in schools in Homagama and Gampaha Educational zones raised awareness among school teachers, children & parents about the importance of nutrition on child development & measures that we have undertaken.

5.1.5.2.2 Declared the month of June as Nutrition Month

Under the theme of "Let's unite for better Nutrition" we coordinated with FHB, HEB, MRI as well as development partners - WHO, UNICEF, WFP, & HSDP and Ministry of Education to raise awareness on nutrition among general public and school children.

5.1.5.2.3 Drafting the National Nutrition Policy & Action Plan

Finalized the National Nutrition Policy and submitted for Cabinet Approval. Preparation of Action Plan is in progress.

5.1.5.2.4 Establishment of National Nutrition Surveillance System

Completed the development of surveillance system. Website installed. Surveillance system is operationalized in two MOH areas as a pilot. National Nutrition surveillance System was launched in October 2008.

Initially it will operate in 30 Divisional Secretaries areas. Planners at divisional, district, provincial and central level will get timely data from this and nutrition activities could be planned depend on the data.

5.2 Specialised Public Health Programmes

5.2.1 Malaria

5.2.1.1 Epidemiology

A total no of 1,044,403 blood smears were examined by the anti malaria campaign during the year 2007. There were 196 confirmed malaria cases out of which 189 were P.vivax infections and the rest had P falciparum or mixed infections (6-pf and 1- mixed infection). Out of 7 P.falciparum .or mixed infections, 4 infections were imported from other countries. In fact the number of confirmed malaria patients recorded during the year 2007 is lowest for 40 years since 1967. The highest recorded number of malaria infections was reported from Trincomalie district(45 percentage) in the 2007 the prevailed civil unrest in Trincomalie Contributed to this situation.

Table 5.2.1 Results of Blood Film Examination (Malaria) in Sri Lanka, 1995 – 2007

Year	# Blood Films	#Positives	P.v.	P.f.
1995	1,098,105	142,294	119,056	23,238
1996	1,288,990	184,319	139,362	44,957
1997	1,330,659	218,550	163,856	54,694
1998	1,338,146	211,691	169,295	42,396
1999	1,582,111	264,549	200,671	63,878
2000	1,781,372	210,039	150,389	59,650
2001	1,353,386	66,522	55,922	10,600
2002	1,387,953	41,411	36,535	4,876
2003	1,192,259	10,510	9,237	1,273
2004	1,198,181	3,720	3,171	549
2005	974,672	1,640	1,506	134
2006	1,076,121	591	564	27
2007	1,044,403	196	189	6

Source : Malaria Control Unit

P.v. – Plasmodium vivax cases

P.f. – Plasmodium falciparum cases

Table 5.2.2 Parasite formula, 2005-2007

year	Percentage	
	p.v.	p.f.
2005	92	8
2006	95	5
2007	97	3

The districts of Vavuniya, Anuradhapura and Ampara contributed 21 percent to the total country morbidity in the year 2007. The proportion of indigenous falciparum cases reported continue to decline 5 percent in year 2006 to 3 percent in year 2007. When compared with other South-East Asian countries mortality due to malaria in Sri Lanka is extremely low. There was one death reported in the year 2007.

5.2.1.2 Epidemics/outbreaks

There were no major epidemics / outbreaks reported in the year 2007.

5.2.1.3 Malaria control methods

- (a) Enhanced case detection and treatment
- By field surveys
 - malaria mobile clinics
 - At medical institutions

Early diagnosis and prompt treatment is a major component of the New Global Strategy for malaria control recommended by the WHO. Case detection can be clinical or parasitological by microscopy or by rapid Diagnostic Test kits. Persons detected positive are treated with appropriate drug regimen. It is recommended that all fever patients in malaria endemic areas be screened for malaria by blood smear examination.

However, when facilities are not available for malaria microscopy, treatment should not be withheld or delayed if clinically suggest having malaria .

(b) Vector Control Activities

- Chemical larviciding
- Indoor Residual Spraying of insecticides.
- Health education programmes.

(c) Measures to prevent man- vector contact

In Sri Lanka, malaria vectors are mainly controlled by rational use of insecticides in rotation for indoor residual spraying (IRS) and distributing long lasting insecticide- treated nets(LLINs).In addition, introduction of larvivorous fish, environmental modulation and modification , impregnation of bed nets with permethrin and space spraying for special occasions ,are carrying out as other vector control measures. Larvivorous fish were introduced into abandoned wells and gempits as biological method and environmental modulation and modifications was done for non-flowing water Pools. Space spraying was done in special circumstances like where there are displaced populations are gathered and during festival seasons.

(d) Measures to prevent reduce vector breeding sites whenever possible

This strategy has a very limited use in malaria control. However in the following instances this may have beneficial results : closure of abundant gem pits, introduction of larvivorous fish to burrow pits and agricultural wells.

- To reassess regularly the country's malaria situation, in particular the ecological, social and economic determinants of the disease and evaluation of malaria control activities.
- Enhance community participation and partnership building for effective and sustainable malaria control
- Promotion of human resource development and capacity building
- Promotion of operational research

Table 5.2.3 Microscopically confirmed malaria cases, 2007

District	Blood Films	+ves	pv	pf	mixed
Colombo	60,943	0	0		
Kalutara	10,389	2	2		
Gampaha	36,425	9	8	1	
Kurunegala	77,770	6	6		
Maho	34,371	6	4	1	1
Puttalam	36,675	8	7	1	
Anuradhapura	115,684	18	17	1	
Polonnaruwa	61,816	2	2		
Hambantota	38,016	2	2		
Badulla	20,767	2	2		
Moneragala	48,784	6	6		
Kandy	26,442	4	4		
N.eliya	379	0	0		
Matale	11,917	0	0		
Embilipitiya	17,754	7	6	1	
Kegalle	5,523	2	2		
Ampara	32,371	11	10	1	
Kalmunai	46,996	2	2		
Jaffna	112,548	0	0		
Trincomalie	74,249	89	89		
Vavuniya	38,942	13	13		
Kilinochchi	24,105	1	1		
Mannar	12,286	0	0		
Galle	728	0	0		
Matara	15,424	1	1		
Batticaloa	63,490	4	4		
Mullativu	19,609	1	1		
Total	1,044,403	196	189	6	1

5.2.1.4 Foreign funded projects received in the year of 2007

International organizations continue to extend their assistance to malaria control programme in Sri Lanka in several ways. During the year 2007 WHO and GFATM has given assistance to the Malaria Control Programme in Sri Lanka.

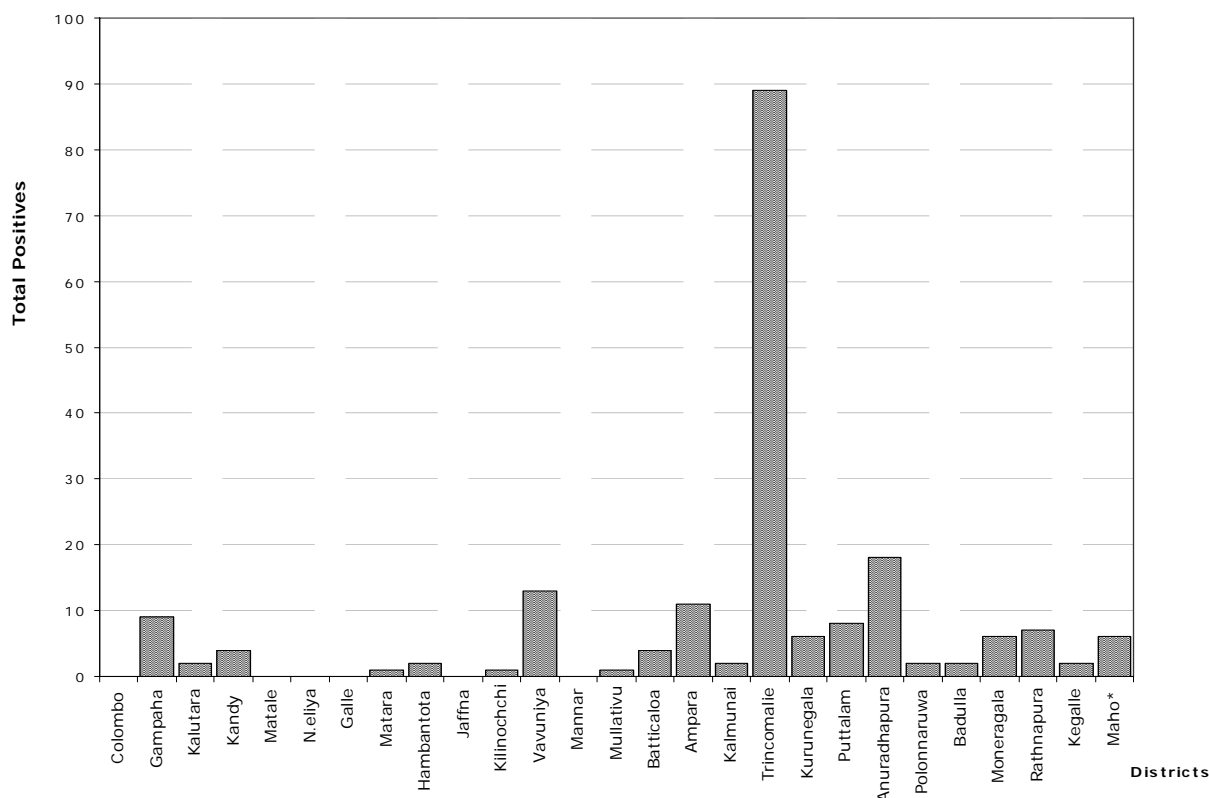
5.2.1.5 Strategies of the Anti Malaria Campaign

- To provide early diagnosis and prompt treatment of malaria patients and symptomatic parasite carriers
- To plan and implement selective and sustainable vector control measures based on the principles of IVM
- Forecasting, early detection, prevention of outbreaks, and the rapid and effective containment of outbreaks

5.2.1.6 Objectives of the Anti malaria Campaign

- To reduce the API among at risk populations in the country by the year 2009, to a level less than 25 percent of that in 2005(0.4)
- To reduce the proportion of P falciparum infections to less than 3 percent of all reported malaria of infections by the year 2009 (2005-5.7 percent)
- To sustain zero mortality from malaria
- To prevent outbreaks/epidemics of malaria in the country
- To eliminate the occurrence of malaria infections in pregnant women by the year 2009
- To reduce the proportion of malaria infections children below 5 years to less than 5 percent of all reported infections by the year 2009(2005-10 percent)

Fig 5.2.1 - Microscopically confirmed malaria cases (District Wise) - 2007



* Areas within districts

5.2.2 National programme for Tuberculosis Control and Chest diseases

In Sri Lanka, Tuberculosis and respiratory diseases control is implemented by a decentralized unit which functions through a network of 26 district Chest Clinics and 1 Chest Hospital in close coordination with other general health institutions. The main function of the programme is the control of tuberculosis (TB) as well as other respiratory disease in the country

The resurgence of tuberculosis globally and its association with HIV, and the emergence of multidrug - resistant TB, accords top priority for its control.

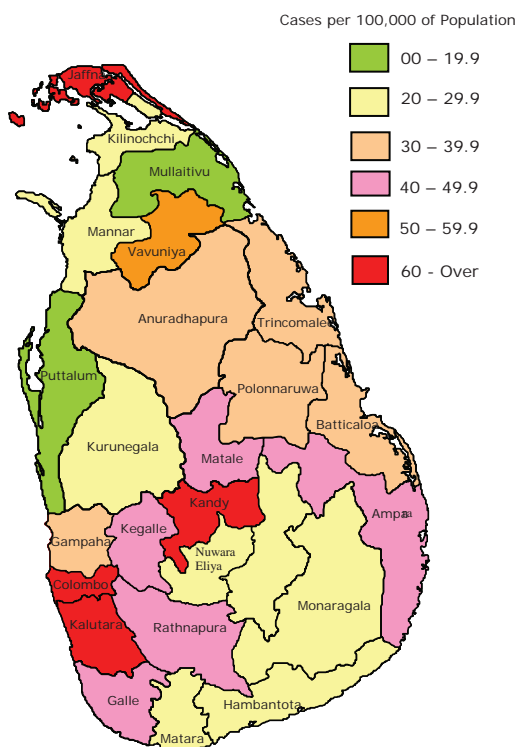
The overall objectives of the National TB control Programme are:-

- To reduce the mortality, morbidity and the transmission of the disease in the community, until it is no longer a public health problem.
- To prevent the emergence of multidrug-resistant tuberculosis.

In achieving the above objectives the main strategies adapted by the programme are:-

- Passive case finding by sputum smear microscopy of symptomatic patients who attend any health facility.
- Treatment of diagnosed cases with short-course chemotherapy.
- Direct observed of treatment by trained health personnel (DOTS).
- To monitor results of treatment of every patient registered through a standardized recording and reporting system and quarterly cohort -analysis.

Fig. 5.2.2 Distribution of Tuberculosis New Cases by District 2007



notification. Only very few private hospitals notify the TB cases diagnosed in those institutions.

Table 5.2.4 New Tuberculosis cases detected 1993 - 2007

Year	New Cases	Rate
1993	6,809	38.6
1994	6,132	34.4
1995	5,710	31.7
1996	5,366	29.2
1997	6,542	35.6
1998	6,925	37.3
1999	7,157	38.2
2000	8,129	42.9
2001	8,418	44.0
2002	8,884	42.3
2003	9,312	48.3
2004	8,689	44.6
2005	9,448	47.9
2006	8,602	43.0
2007	8,814	43.5

Rate per 100,000 population

Source : National Programme for Tuberculosis Control & Chest Disease

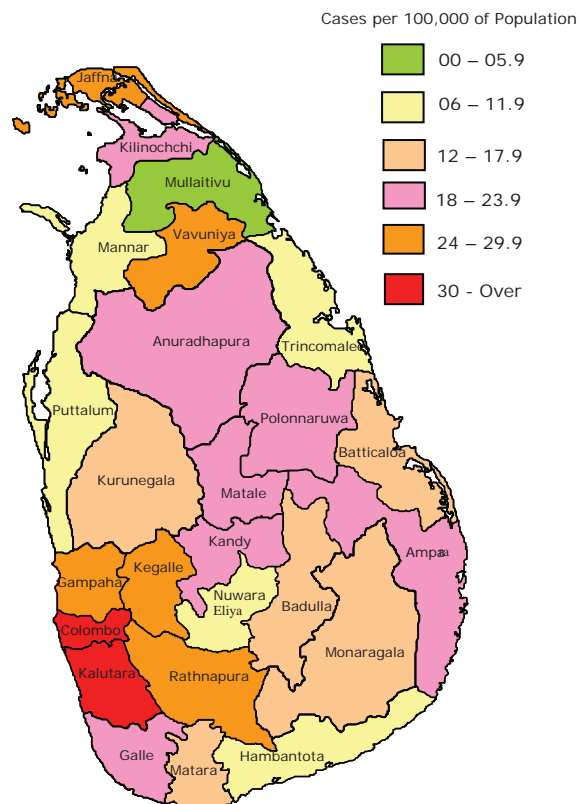
5.2.2.1 Morbidity

Around 8,500-10,000 new cases of TB are detected annually and tuberculosis still continues to pose a major public health challenge in Sri Lanka. A marginal increase in the number of new cases detected since 1996 is evident. This is due to improved case detection, activities have been inadequate in the past and also due to regularization of referrals and improved notification.

5.2.2.1.1 Data Collection:

NPTCCD receive **case notifications** in a special form (Health 816) from District Chest clinics, other Government Health Institutions and from private Health Institutions. The number of notifications received in this special form does not tally with the number of cases reported in the quarterly report. The discrepancy could be attributed to the fact that the notifications are received from all government and few private medical institutions but may not be registered in the District Tuberculosis Register. When the case is referred to the DCC, it will be notified again in Form 816 from the DCC, if the referral letter had not given the information of previous

Fig. 5.2.3 Distribution of Tuberculosis New Smear-Positive Cases by District 2007



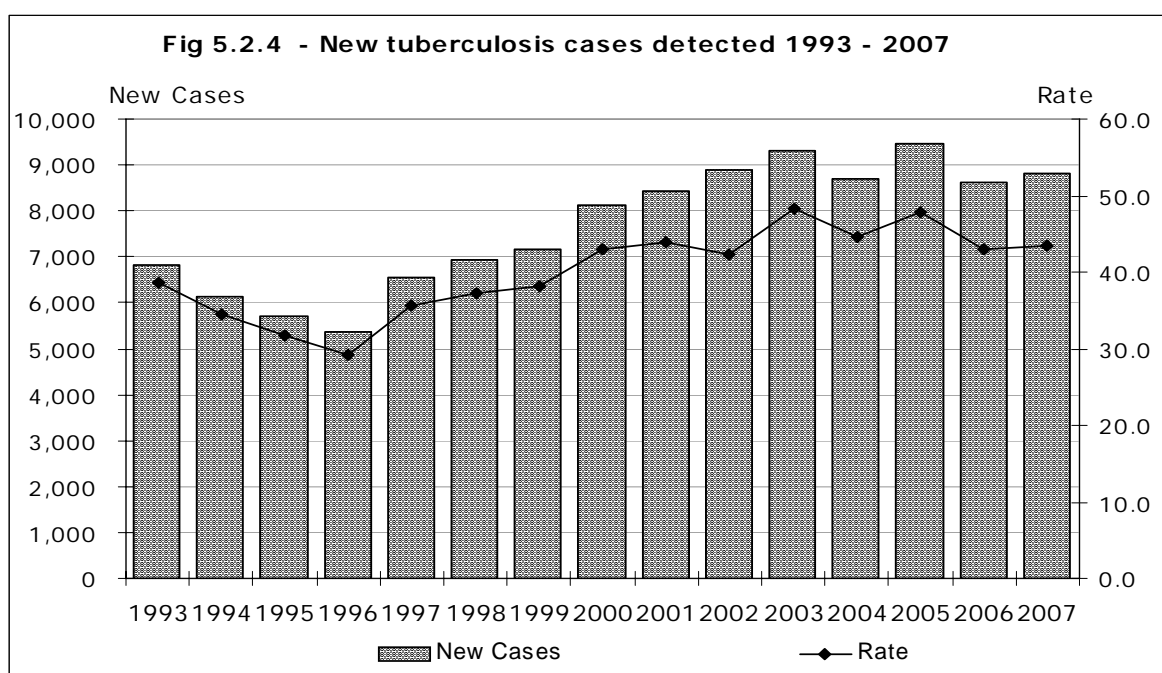
5.2.2.1.2 Number of cases notified from private hospitals in year 2007

Private Hospital	No. of cases
Asiri Hospitals, Colombo	3
Nawaloka Hospital, Colombo	3
Durdans Hospital, Colombo	2
Apollo Hospital, Colombo	2
Oasis hospitals, Colombo	1

Data on case detection, sputum conversion and treatment outcome from District Chest Clinics are collected quarterly on the standard data collection forms, which are updated yearly to gather information needed to report to the WHO.

5.2.2.2. Age and sex distribution

The lowest number of TB patient was under 14 years of age. Comparing with other age groups, a higher number is reported in 45 – 54 age group. However the rate of new TB cases per 100,000 population is higher in older ages. Increased rates can be seen with the rising of age. Male to female ratio was 2 : 1 as in the previous years.



The DTCO is responsible for sending the data collected for each quarter to the central unit before the end of the 1st month in the next quarter.

5.2.2.1.3 Case notifications

8814 new cases of Tuberculosis of all forms have been notified to the centre in 2007, by the form H 816. Out of this 4,805 were sputum smear positive. The notification rate was 43.5 per 100,000 population. This shows an increase in the notification rate when compared with the 43.0 per 100,000 populations in 2006. The total number of notified smear-positive cases has decreased by 1.78% (4892 in 2006 and 4805 in 2007). 229 relapses, 150 treatment after default and 65 treatment after failures were registered; Total number of death notified among the TB cases was 362.

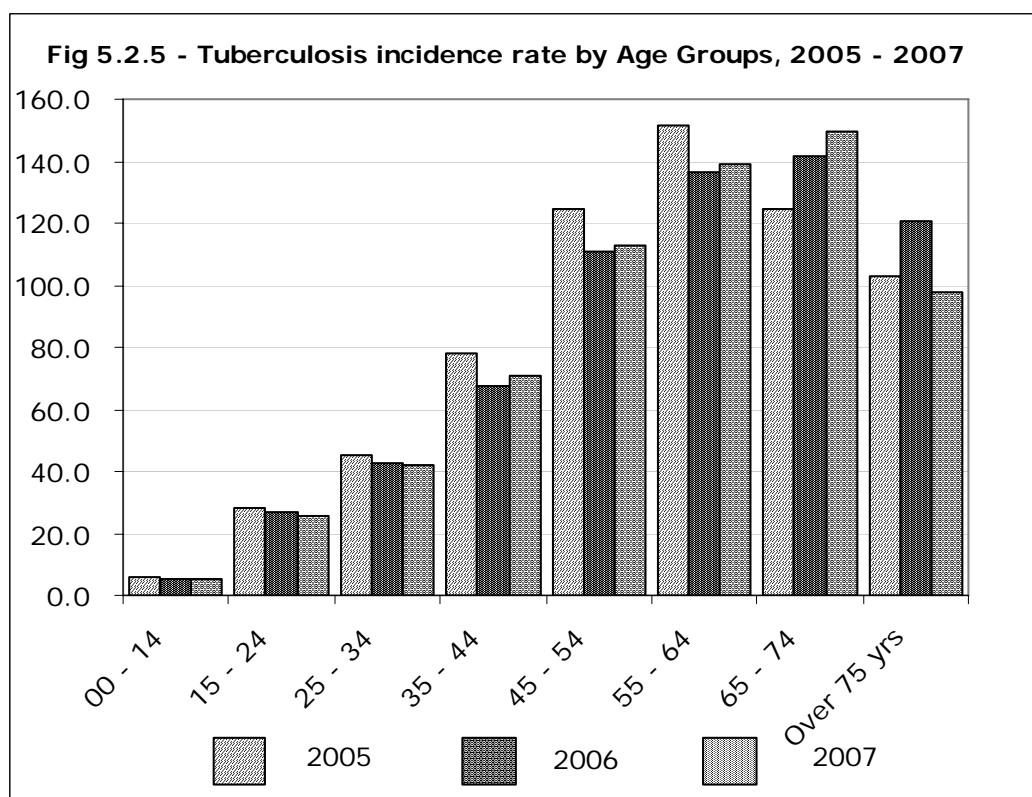
5.2.2.3 Case finding and treatment

The chest clinics, branch clinics and chest hospitals are main centers for case finding. All diagnosed patients are provided with a short course of chemotherapy. The best way to ensure cure of patients and prevent the spread of tuberculosis is by the use of 'DOTS' strategy (Directly Observed Treatment, Short course).

This is a strategy to provide a short course of chemotherapy to all sputum-positive patients, under the direct observation by health personnel and to ensure that patient complete the full course of treatment.

Age Group (yrs)	2005	2006	2007
00 - 14	5.9	5.1	5.1
15 - 24	28.3	26.8	25.7
25 - 34	45.2	42.4	42.1
35 - 44	78.2	67.8	70.9
45 - 54	124.8	110.8	112.8
55 - 64	151.5	136.6	139.3
65 - 74	124.5	141.9	149.3
Over 75 yrs	102.8	120.6	98.0

Source : National Programme for Tuberculosis Control & Chest Disease



The total number of new cases reported from DCCs in the quarterly reports was 8,497 in 2007, of which 4528 (53.3 percent) were smear-positive, among all new TB cases reported, 221 relapses, 141 treatment after default and 71 treatment after failures were registered. 8418 originated in DOTS districts. Of the smear positive cases 4447 were reported from the DOTS districts. 53.18 percent of all new cases were smear positives in DOTS areas.

5.2.2.3.1 DOTS coverage

In 1997, the DOTS strategy was started in the Galle district as a community-based programme, and was carried out through the general health institutions and in remote areas through the field staff.

Community based DOTS are now been implemented in 23 districts covering approximately a population of 97.55 percent.

Table 5.2.6 DOTS coverage

Year	District covered	Cumulative DOTS population coverage (%)
1997	Galle	5.42
1998	Kandy	12.87
1999	Colombo	32.76
	Matara	
	Anuradhapura	
2000	Kalutara	55.39
	Ratnapura	
	Kurunegala	
	Puttalam	
2001	Gampaha	73.08
	Hambantota	
	Kegalle	
	Polonnaruwa	
2002	-	73.08
2003	-	74.24
2004	Matale	87.32
	Nuwara Eliya	
	Badulla	
	Monaragala	
	Vavuniya	
2005	Ampara	97.54
	Kalmunai	
	Batticaloa	
	Trincomalee	
	Jaffna	
2006	-	97.55
2007	-	97.55

5.2.2.4 X-ray and Laboratory Services

Case finding and follow up of treatment depend mostly on sputum microscopy. Improvement of laboratory services, therefore, is given high priority; especially since the follow up of treatment is monitored by sputum smears. X rays too, play an important role mainly in the diagnosis of sputum smear negative TB and other chest diseases.

5.2.2.5 B.C.G. Vaccination

This has been included in the Expanded programme of Immunization. All newborn children are being vaccinated within 24 hours of the delivery. (Before they discharge from hospitals.) BCG vaccination will protect the child from two deadly forms of Tuberculosis, i.e.; TB Meningitis and Millitary TB. (Disseminated TB)

5.2.3 Leprosy

5.2.3.1 History of Leprosy in Sri Lanka

The history of leprosy in Sri Lanka dates back to 1708 when Dutch rulers set up a leprosy asylum in order to segregate the patients as a mode of controlling the disease. British rulers made the admission compulsory with the introduction of lepers' ordinance in 1901 and also established the second leprosy asylum in the Mantivu Island, Batticaola. The first effective chemotherapy, Dapsone was introduced in late 1940s; however, the monotherapy was of no use by 1960s due to emergences of drug resistant strains due to prolonged uses of dapsone immunotherapy. In 1954, the vertical structure, Anti Leprosy Campaign (ALC) was started as the national programme for Leprosy control activities.

The island-wide introduction of short term effective chemotherapy- Multi drug Therapy (MDT) – for all diagnosed patients in 1983 and the launching of Social Marketing Campaign in 1990 to create awareness of early signs of leprosy among general public and to dispel the myths and misconception surrounding the disease paved the way for achieving the elimination target in 1995. Leprosy control activities hitherto implemented through the vertical organization, ALC was intergrated into General Health Service (GHS) in 2001.

5.2.3.2 Vision of the programme

To reduce Leprosy and related distress, by reducing the reservoir of leprosy sustainable and by improving the quality of life of people affected by leprosy.

5.2.3.3 General objective

To reach elimination target at sub-national level (in remaining endemic MOH areas) with the intergration of elimination activities into the General Health Services.

5.2.3.4 Special objectives

1. To re-orientate curative medical officers of the GHS in the diagnosis and management of leprosy. (Capacity Building –MOO and RMOO of curative sector)

2. To train Regional Epidemiologists (RE), Medical Officers of Health-MOH) and the staff attached to those offices in the epidemiological assessment of leprosy at local level (Capacity Building –MOO and other staff attached preventive sector)

3. To monitor regularly the epidemiological situation, both at local and central levels, using the simplified and registers and software on Leprosy Management Information System (LMIS) which facilitate the Monitoring Leprosy situation and maintaining the surveillance (Monitoring and Evaluation)

4. To conduct awareness programme for general public to reduce the stigma and to inform early signs and the availability of drugs in all health units.(Social Marketing Campaign)

5. To make leprosy drugs (MDT blister packs) available in all health units.(Easy Accessibility to MDT)

6. To provide rehabilitative care for 'cured' patients with disabilities (Care after Cure)

5.2.3.5 Current Status

The reported prevalence at the beginning of 2007 was 0.7 per 10,000. The number of new cases detected IN 2007 was 2044 (9.8/100,000) a slight increase of 5 patients when compared to the previous year. From the second year of integration i.e. 2002, the annual new case detection was fluctuating around 2000.

A total of 7 of p provinces and 21 of the 26 districts (including Kalmunai) reported prevalence of <1/10,000 (target for elimination as a public health problem).

The new case detection has remained more or less static during the last 5 years. The current NCDR is 9.8 per 100,000 population. Seven districts i.e. Colombo (372), Gampaha (282), Kalutara (219), Batticaola (138), Kurunegala (121) and Rathnapura (119) have reported over 100 patients and in total accounted for 61 percent of total new cases during the year 2007. Four provinces i.e. Western (879), Eastern(290), southern (234) and North-Western (210) accounted for 80 percent of total new case detected during 2007. Percentage of new patients in all other provinces is less than 10 percent.

High population density which favors the transmission through air droplets, availability of dermatologists both in government and private sector, high literacy rate, trained medical officers and easy accessibility(good network of road) to health centers are some of the reasons for high enedemicity.

Though treatment facilities were available in all health institution up to 2006, 90 percent of the patients have sought treatment from tertiary care centers (Teaching and Base Hospitals). But majority of patients from districts i.e. Polonnaruwa , Kalmunai and Hambantota, Where no dermatologists were available have visited secondary and primary care institutions in the same districts, Almost all the patients from Moneragala and Nuweraliya have visited institution outside the districts. At the end of 2007, with the appointment of dermatologists (permanent and visiting), it was observed, that patients have visited the tertiary care hospitals within those districts.

Regarding the profile of new cases, it was reported that the proportion of MB among new cases ranged from 65 percent in Kurunegala to 33% in Matara. The proportion of female cases ranged from 53 percent in Batticaola to 32 percent in Anuradapura. The proportion of child caseranged from 18 percent in Ampara to 5 percent in Polonnaruwa. The proportion of deformity cases ranged from 11 percent in Hambantota to 3 percent in Colombo. This demonstrated the wide variation observed among districts regarding the indicators and the importance of interpreting these indicators within the context of each programme with emphasis with emphasis on looking at its trends.

Year	Prevalence	Incidence	Child Rate	Multibacillary Rate	Deformity Rate
	Per 10,000 Population				
1991	1.5	1.7	18.0	15.0	6.8
1992	1.2	1.4	16.0	15.0	8.8
1993	1.0	1.1	13.5	16.1	11.3
1994	1.1	1.2	14.0	17.1	8.2
1995	1.0	1.0	11.8	22.4	8.3
1996	0.9	0.8	11.9	21.2	10.8
1997	0.9	0.8	9.2	24.0	9.8
1998	0.7	0.7	11.5	29.0	11.3
1999	0.6	0.8	10.9	35.6	11.4
2000	0.6	0.9	11.3	36.5	9.6
2001	0.8	1.2	7.0	35.0	8.0
2002	0.9	1.2	10.1	35.1	9.7
2003	0.7	1.0	11.5	37.7	8.2
2004	0.7	1.0	8.4	41.6	6.7
2005	0.7	1.0	10.5	41.7	5.7
2006	0.7	1.0	10.3	43.9	5.4
2007	0.7	1.0	10.0	44.8	6.0

Source: Anti-Leprosy Campaign

5.2.3.6 The main challenges for leprosy control activities at district level are as follows

Reducing the burden : Coverage of leprosy control activities to be maintained or improved in some districts to ensure further reduction of disease burden. Burden should be regarded in terms of disabilities, cases among children and leprosy related and discrimination.

Intergration : D/ALC noted with gratitude that the district level authorities have taken measures such as inclusion of leprosy in their district plans, conducting of skin camps and other field level activities with funds generated from sources other than ALC and WHO. This indicates that under integration they have taken the ownership of the programme. D/ALC emphasized that they should sustain these activities and assured that ALC will continue to provide technical guidance. Continued support from ALC may ensure that leprosy remains on the health agenda and that success does not lead to complacency.

Capacity building : this should be continued not only in high endemic but low endemic pockets also. RE and PHI to identify the areas from which MOO are to be trained.

Referral system : Sri Lanka is unique when compared to other endemic countries as 90% of new patients are detected and followed up by consultant dermatologists available in all districts except 4 districts in the Northern Province. Referral system is already functioning; however , It is important to provided feed back information to those who refer cases.

MDT Logistics : Un- interrupted supply of MDT blister pack is one of the priority activities of a leprosy control programme. Contrary to the concerns that smooth functioning of MDT logistics will be severely affected with the integration, the team work of staff attached to skin unit, PHI/ Leprosy and pharmacists who provides relevant information on MDT stock is commendable. No shortage of MDT was reported during the year 2007. It is important to sustain these activities in the districts where senior PHII/ Leprosy are to be retired in next few years.

Curer rate : the problems encountered in compilation of the cure rate in the past have been solved to a greater extent with the support from the staff of skin units. New recruits i.e MOO, nurses and pharmacists have to be trained on regular basis to sustaining the collection of information to compile cure rate one of the important indicators in post – integration period.

Table 5.2.8 Epidemiological Profile of Leprosy by Provinces, 2007

Province	Prevalence		New		Child		MB		Female		Deform		Early		Late	
	No.	Rate ¹	No.	Rate ²	No.	Rate ³	No.	Rate ³	No.	Rate ³	No.	Rate ³	No.	Rate ³	No.	Rate ³
Western	600	1.0	879	14.9	103	12.0	331	37.7	404	46.0	36	4.0	552	63.0	191	22.0
Southern	155	0.6	234	9.7	17	7.0	102	43.6	96	41.0	16	7.0	136	58.0	56	24.0
Wayamba	166	0.7	210	9.1	13	6.0	114	54.0	83	40.0	14	7.0	147	70.0	31	15.0
Central	62	0.2	78	3.1	9	12.0	31	39.7	21	27.0	5	6.0	55	71.0	13	17.0
North-Central	104	0.9	143	12.0	9	6.0	70	49.0	50	35.0	14	10.0	99	69.0	23	16.0
Sabaragamuwa	119	0.6	145	7.7	10	7.0	79	54.5	58	40.0	7	5.0	94	65.0	26	18.0
Uva	23	0.2	29	2.3	2	7.0	16	55.2	12	41.0	4	14.0	15	52.0	8	28.0
Eastern	238	1.4	290	17.2	28	10.0	155	53.4	158	54.0	16	6.0	181	62.0	59	20.0
Northern	27	1.0	36	4.0	5	14.0	18	50.0	16	44.0	6	17.0	15	52.0	8	28.0
Sri Lanka	1,494	0.7	2,044	10.0	196	10.0	916	44.8	898	44.0	118	6.0	1,301	64.0	403	20.0

Source : Anti-Leprosy Campaign

¹ Per 10,000 Population² Per 100,000 Population

5.2.4 Anti Filariasis Campaign – 2007

5.2.4.1 Background Information

Lymphatic Filariasis (LF), one of the most disfiguring diseases in the world is the world's second leading cause of permanent disability leading to social stigma, economic loss with a heavy burden on health systems. Being endemic in 83 countries, more than a billion people are at the risk of LF infection.

In 1997, as a result of advances in diagnostics and treatment of LF, the disease was classed as one of the six infectious diseases considered to be a 'potentially eradicable'. The 50th World Health Assembly (WHA) adapted a resolution (WHA 50.29) calling all member states to work towards elimination of LF as the public health problem by 2020. Elimination was defined as a microfilaria rate of < 1/100 population.

One of the main strategies adapted to elimination was the interruption of transmission through Mass Drug Administration (MDA) once yearly of single dose, two drug regimen with DEC and Albendazole to the entire endemic population for at least five years.

The term 'Elephantiasis' was found in ancient chronicles written in Sri Lanka in 400 B.C. But the first authentic description of the disease was that of a survey conducted in 1936 to measure the extent of the problem. Microfilaria rate (percentage of blood films positive for the parasite) was found to be between 20-25 percent but it has declined to 5-10 percent few years after the establishment of a vertical programme – Anti Filariasis Campaign (AFC) - to control the disease in 1947. With the support from the international partners and WHO, Sri Lanka successfully completed five rounds of MDA in 2006 which covered more than 80 percent of the population residing in endemic eight districts) in three provinces of Western, Southern and Wayamba.

Lymphatic Filariasis is caused by the parasite *Wucheraria banarofti* the adult of which live usually in the lymphatic system of a person. The adult produce live embryos, which find their way into the blood stream, where they are capable of living for a considerable period of time, without developing further. The life span of the microfilaria is about a year at the most.

The only insect vector responsible for the spread of urban filariasis in Sri Lanka is the *Culex quinquefasciatus* mosquito, which serves as the intermediate host, in which the microfilaria count coincides with the biting habits of the vector. This mosquito breeds in highly polluted collections of water, such as blocked drains, damage septic tanks, and latrine pitas ect, which abound in urban habitats.

5.2.4.2 Vision

Filariasis and associated complications, including stigma free Sri Lanka

5.2.4.3 Mission

To achieve the zero transmission by control of parasites and vectors

5.2.4.4 General Objective

Interrupt transmission, sustain elimination of LF , to alleviation suffering of patients affected with disabilities

5.2.4.5 Specific Objectives

- a. To interrupt transmission by vector and parasite control activities
- b. To reduce suffering of patients with lymphodema
- c. To strengthen laboratory facilities for Xenomonitoring by establishing PCR techniques
- d. To train health workers (capacity building)
- e. To conduct social mobilization activities for prevention of disability and stigma associated with the disease
- f. To conduct operational research

5.2.4.6 Strategies

1. Vector surveillance - Routine activities in endemic areas and periodic activities in non-endemic areas
2. Parasite surveillance - Routine activities in endemic areas and periodic activities in non-endemic areas
3. Capacity building – (Vertical as General health staff)
4. Social Mobilization Campaign – (destigmatization and de-linking Filariasis with lymphodema)
5. Inter-sector coordination
6. Monitoring and evaluation
7. Integration of all possible activities into the General Health Service

5.2.4.7 Major Activities Implemented in 2007

- Routine night blood filming in endemic areas and special programmes
- Treating of all *Microfilaria* + ve and clinically suspected cases
- Prevention of further deteriorating of lymphodema among ex-patients
- Vector surveillance in vulnerable area
- Awareness programmes on basic facts and services available among health staff and general public especially in endemic areas
- Strengthen the laboratory diagnosis with latest technologies and trained human resources

Review meetings with Regional Medical Officers (Filariasis) were held regularly at the headquarters of the AFC. Patients and health workers were trained on management of lymphodema legs. Further, review meetings were held with the staff attached to 7 AF units.

5.2.4.8 Morbidity

In Sri Lanka, the highest endemicity is found in the Western, Southern and the North-western Provinces. It is mainly seen in these areas due to rapid and unplanned urbanization. The migration of people to and from the endemic zone has resulted in spreading the disease to other areas as well.

5.2.4.9 Microfilaria rate (Figure 5.2.8)

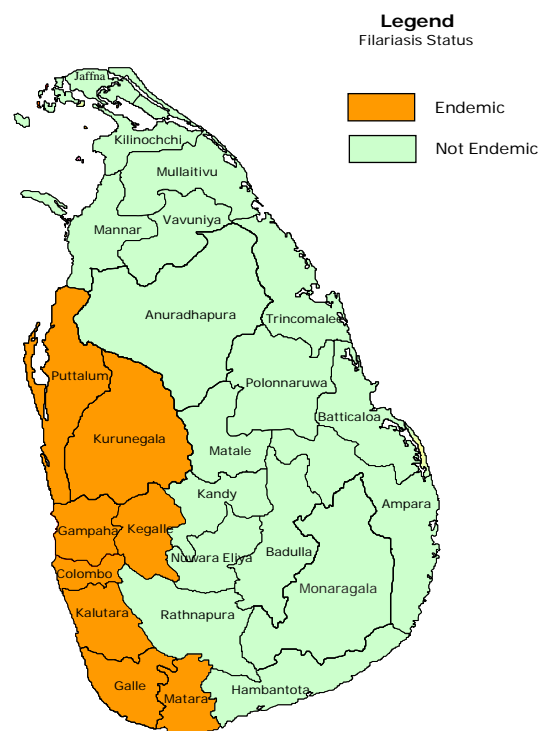
During the year under review 555,679 night blood films were examined for microfilaria by the thick blood smear technique. This includes cases screened at the night blood filming centres and by special surveys conducted in the endemic areas. Microfilaria rate for 2007 was 0.05 percent.

5.2.4.10 Infected and infective rates (Figure 5.2.8.1 and Table 5.2.7)

Infected rate (percentage of mosquitoes with all larval stages) and infective rate (percentage of L3 stage) from the indoor resting *Culex quinquefasciatus* mosquitoes collected were 0.74 percent and 0.04 respectively

5.2.4.11 First visit to clinics by lymphodema patients (Figure 5.2.7)

In 2007 the number of patient with clinical manifestation who visited the AFC clinics are 1,126 when compared to 1,855 in 2006.

Fig. 5.2.6 Endemic Areas by District**Table 5.2.9 Trends in Entomological Indicators**

Year	Mosquitoes Dissected	Infection Rate	Infective Rate
1995	32,419	0.63	0.06
1996	56,587	0.72	0.06
1997	48,671	0.55	0.05
1998	49,238	0.56	0.05
1999	52,621	0.49	0.04
2000	45,539	0.47	0.07
2001	43,347	0.46	0.03
2002	38,012	0.80	0.05
2003	30,125	0.40	0.05
2004	33,446	0.73	0.05
2005	36,334	0.70	0.04
2006	38,284	0.76	0.05
2007	38,654	0.74	0.04

Fig 5.2.7 - Entomological Indicators, 1981-2007

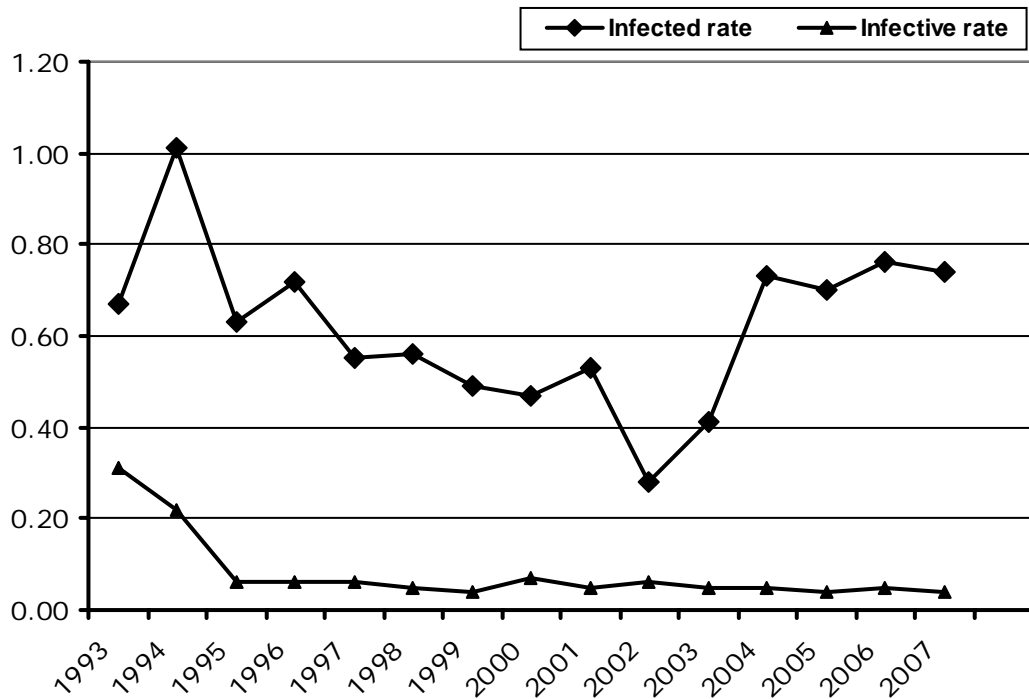
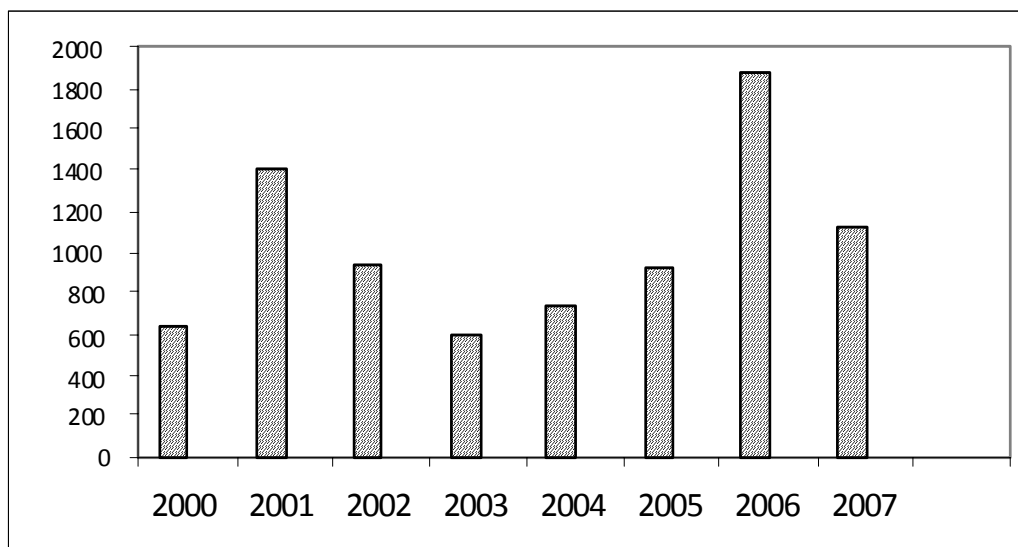


Fig 5.2.8 - First visits of Lymphodema Patients



5.2.5 Public Health Veterinary Services (Rabies Control Programme)

Public Health Veterinary Services of Ministry of Healthcare and Nutrition is the main body responsible in preventing the human and animal rabies and controlling other zoonotic diseases in Sri Lanka.

There is a strong evidence to suggest that the menace of rabies had been in existence in Sri Lanka for centuries. The Colonial rulers had been compelled to adopt legislation to combat the disease. The Rabies Ordinance of 1893 and the Dog Registration Ordinance of 1904 are clear indicators of this.

Official statistics are not available to gauge the rabies situation that prevailed in the country till 1970s. Existing records indicate that rabies had been recognized as an important public health problem in Sri Lanka from early 1950s.

Rabies is a zoonotic viral disease which infects domestic and wild animals. It is transmitted to other animals and humans through close contact with saliva from infected animals (i.e. bites, scratches, licks on broken skin and mucous membranes). World wide the dog is the principal vector in transmitting rabies to man. Once the symptoms of the disease develop, rabies is fatal to both animals and humans.

5.2.5.1 Status of Human Rabies

Rabies control measures launched in Sri Lanka since 1975 have had a tremendous effect on the incidence of human rabies. The number of human rabies deaths declined from 377 in 1973 to 56 rabies deaths in the country in 2007.

5.2.5.2 Status Animal Rabies

The dog is the main reservoir as well as the transmitter of rabies in Sri Lanka. A dog ecology study conducted in 1980s has revealed a dog to human population of 1:8. A dog ecology study conducted during 1997, in Mirigama, a recently urbanized area reveals an increased dog population of 1:4:6. Further, the study indicates that 20 per cent of the dogs were ownerless.

During 2007, about 91 percent of animal rabies reported among dogs. The reported positive animals were, 659 dogs (91.4 percent), 42 cats (5.8 percent), 10 cows, 2 mongoose, 1 pig, 4 goats, 1 pole cat, 1 bandicoot and 1 rock squirrel.

In all the human rabies deaths in 2007, dogs have transmitted the disease to human and about 60 percent of these dogs were stray dogs.

Table 5.2.10 Human Rabies Deaths Distribution by districts

District	2002	2003	2004	2005	2006	2007
Ampara	2	3	0	0	3	0
Anuradhapura	1	2	4	7	4	4
Badulla	3	2	2	6	3	0
Batticaloa	0	1	2	0	2	6
Colombo	4	3	9	2	4	1
Galle	4	7	11	1	6	5
Gampaha	7	7	6	4	7	8
Hambantota	1	1	2	1	1	2
Jaffna	8	6	14	5	8	1
Kalutara	1	2	12	1	1	5
Kandy	7	4	1	1	1	2
Kegalle	1	2	2	1	2	0
Kilinochchi	0	3	0	4	3	0
Kurunegala	7	8	4	5	4	8
Matale	1	0	0	1	1	2
Matara	1	1	8	0	6	2
Mannar	0	2	0	1	3	1
Moneragala	1	6	3	2	0	2
Mullitivu	3	2	2	0	2	2
N'eliya	2	2	0	0	1	1
Polonnaruwa	1	4	2	1	2	0
Puttalam	2	3	1	2	3	0
Rathnapura	2	4	4	4	3	3
Trincomalee	1	3	8	4	3	1
Vavuniya	4	0	3	2	0	0
Grand Total	24	76	98	55	73	56

Source: Rabies Control Programme

5.2.5.3 Vision of the program

Assure Maximum protection to public from deadly rabies and other zoonotic disease causing disability

5.2.5.4 General Objectives

- To maintain and further improve the achievement made in controlling human rabies in 2006
- To reduce the cost of treatment spend for dog bite victims.

5.2.5.5 Strategies

1. Promote Mass immunization dog.
2. Promotion of humane methods of controlling stray dog rabies

3. Increase the awareness on Rabies among the public
4. Human resources development for vaccination of owned dogs and ownerless neighborhood dogs and Stray dogs.
5. Conduction of special accelerated rabies elimination programs in rabies re-emerging districts.
6. Sustain of Human Rabies Elimination Program in Puttalam District with support of free roaming dogs birth control program using progesteron. And expand it to other district.
7. Promote chemical birth control program for community dogs and surgical sterilization for domestic dogs.
8. Control of Japanese Encephalities among pigs.

Table 5.2.11. Trends in Rabies Control Activities and Human Deaths from Rabies, 1970 - 2007

Year	Vaccination of Dogs	Elimination of Dogs	Dog Heads Examined at MRI		Human Rabies Deaths	
			Number	% Positive	Number +	Rate ¹
1970	11,844	688	535	62.1	262	2.1
1975	42,252	1,610	456	64.7	288	2.1
1980	120,143	36,845	420	52.5	209	1.4
1985	268,561	58,238	344	55.5	113	0.7
1987	293,603	88,919	415	56.4	158	0.9
1988	268,717	55,803	367	66.7	113	0.7
1989	236,728	47,175	734	87.1	173	1.0
1990	412,586	63,233	963	70.2	154 *	0.9
1991	336,053	102,292	1,222	67.8	136	0.7
1992	453,958	98,881	591	60.8	112 *	0.6
1993	491,690	112,098	664	71.8	98 *	0.5
1994	435,204	104,941	702	77.1	105 *	0.5
1995	452,828	106,862	1,217	69.7	124	0.7
1996	606,520	114,337	795	59.7	110	0.8
1997	553,468	91,215	934	85.5	135 *	0.7
1998	578,825	106,245	581	73.4	111 ²	0.6
1999	667,270	106,699	672	70.3	110 ²	0.6
2000	657,597	117,790	559	88.5	109 *	0.6
2001	770,375	119,761	644	69.0	83	0.4
2002	797,565	117,790	644	71.0	64	0.3
2003	664,493	83,350	707	60.0	76	0.4
2004	843,906	89,530	1105 **	58.0	98	0.5
2005	818,162	62,675	472 ***	42.6	55	0.3
2006	971,442	12,791	788 ****	55.3	73	0.4
2007	1,037,617		659	63.0	56	0.3

+ Registrar General's Department

* Notified by MOH

¹ Per 100,000 Population

² Medical Statistics Unit

** The new Laboratory at Galle started functioning

*** Galle laboratory was washed away by the tsunami

**** Re commence of Galle Laboratory

Source: Rabies Control Programme

5.2.5.6 Activities

1. Conduction of awareness program through Exhibitions, seminars.
2. Expansion free roaming community and stray dog vaccination.
3. Conduction of Animal Birth Control Program for free roaming community dogs and domestic dogs.
4. Conduction of Divisional Mass dog immunization programs in District.
5. Conduction of Surgical and Chemical sterilization in remote areas.
6. Conduction of Rabies Awareness Week
7. Promotion of Responsible dog ownership.
8. Develop partnership Collaboration with other sector for rabies elimination.
9. Develop new solutions for Stray dog Menace at hospital and other public places.
10. Launch Cost reduction program on Human Rabies treatment.
11. Training on divisional staff for dog vaccination & stray dog vaccination.
12. Vaccinate pigs against Japanese Encephalitis.

5.2.5.7 Training Programs, Health Education and other activities

The following trainings, health education programs and other activities were conducted during 2007 for primary Healthcare staff, curative staff and public.

1. Conduction of a Rabies awareness week to mark the World Rabies Day. Educated 300,000 school children on rabies prevention. 300,000 hand bills were distributed. Vehicle parades, dramas, debates and competitions were conducted.

2. Four quarterly project development meetings were held with district rabies control officers.
3. Training or curative staff on Economical Rabies Post Exposure treatment
4. Training of staff on domestic and stray dog vaccination
5. Training of staff on chemical sterilization of dogs
6. Training of Primary health care staff on effective mass vaccination

5.2.5.8 Pilot Studies

Pilot project of surgical and chemical sterilization of female dogs was initiated in Kalutara district in year 2005. This program was conducted in order to study the feasibility of establishing an animal birth control program with in the existing health system. It was revealed that conduction of female dog surgical and chemical sterilization were feasible within the existing health system with the help of primatry healthcare staff.

5.2.5.9 Dog population surveys

Four dog population surveys were conducted in Arachchikattuwa, Horana, Weeraketiya, Yatiyantota, Divulapitiya and Ruwanwella MOH areas and results are as follows. It reveals that the human to dog population varies in different MOH areas in different districts. Most of the persons were reluctant to rear female dogs and about 30% of dogs were free roaming dogs, This shows the need of conducting awareness programmes on responsible dog ownership.

Table 5.2.12 Results of Dog Population survey, 2007

MOH Area	Province	Human to dog (total)ratio	Human to do (Owned ratio)	%of female dogs out of house hold dogs	Mean age of dogs	%of Free Roaming dog out of all dogs
Horana	Western	5:1	7:1	20%	3y	35%
Divulapitiya	Western	2.5:1	4:1	20%	3y	35%
Weeraketiya	Southern	3:1	5:1	20%	3y	34%
Arachchikattuwa	North Western	2:1	3:1	16%	3y	24%
Ruwanwella	Sabaragamuwa	5:1	6:1	25%	3.5y	27%
Yatiyantota	Sabaragamuwa	3:1	5:1	24%	3y	23%

Source: Rabies Control Programme

5.2.5.10 Achievements in 2007

- Reduction of human rabies incidence from 0.4 per 100,000 Population in 2006 to 0.3 per 100,000. population in 2007. This shows in 2007 there was about 25% reduction in human deaths compared to 2006.
- Reduction of Anti Rabies Vaccine vials given to humans from 428,350 in 2006 to 317,945 in 2007.

- It was possible to achieve the human rabies free status in Polonnaruwa, Kegalle, Puttalam, Ampare, Vavuniya and Badulla district.
- Reduction in human deaths were achieved in Colombo, Galle, Jaffna, Kilinochchi, Mannar, Matara and Trincomalee in 2007 when compared to 2006

5.2.5.11 Control of Japanese Encephalitis (J.E.)

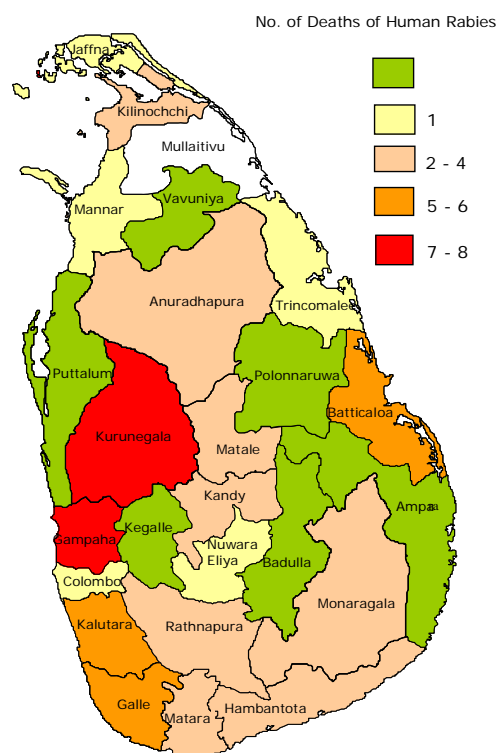
The Public Health Veterinary Services also handle the control of Japanese Encephalitis among pigs. This programme was implemented in collaboration with the department of Animal Production and Health. During 2007, 70,000 doses of J.E. swine vaccine were issued to Western, Southern, Sabaragamuwa and North Western Provinces. Funds were provided by Provincial Health Services and Department of Animal Production and Health provided the human resources.

Table 5.2.13 History of Human Rabies and Control Activities

Year	Deaths	Vaccination	Elimination
1969	235	0	0
1970	262	0	0
1971	270	0	0
1972	295	0	0
1973	377	75,386	3,128
1974	347	31,617	312
1975	288	42,252	1,608
1976	257	60,932	2,223
1977	312	85,798	278
1978	241	111,289	7,986
1979	266	130,070	22,431
1980	191	105,287	35,156
1981	216	135,266	37,633
1982	196	189,600	48,353
1983	174	194,146	42,237
1984	143	195,696	62,962
1985	113	268,561	58,238
1986	163	216,243	73,750
1987	158	293,603	88,919
1988	113	268,717	55,803
1989	173	236,728	47,175
1990	154	408,086	63,233
1991	136	336,052	100,340
1992	112	453,891	96,861
1993	98	491,871	112,098
1994	105	435,204	105,133
1995	151	452,828	106,862
1996	152	603,108	114,337
1997	135	553,468	91,215
1998	79	578,825	129,773
1999	110	667,270	106,699
2000	109	657,597	117,790
2001	83	770,375	119,761
2002	64	797,565	96,202
2003	76	664,993	84,350
2004	98	844,123	89,530
2005	55	818,162	62,675
2006	73	971,442	12,791
2007	56	1,037,617	0

Source: Rabies Control Programme

Fig. 5.2.9: Deaths of Human Rabies 2007



Data on Human Rabies Deaths were not available in Mullaitivu District.

Fig 5.2.10 - Trend of Human Rabies, 1969 - 2007

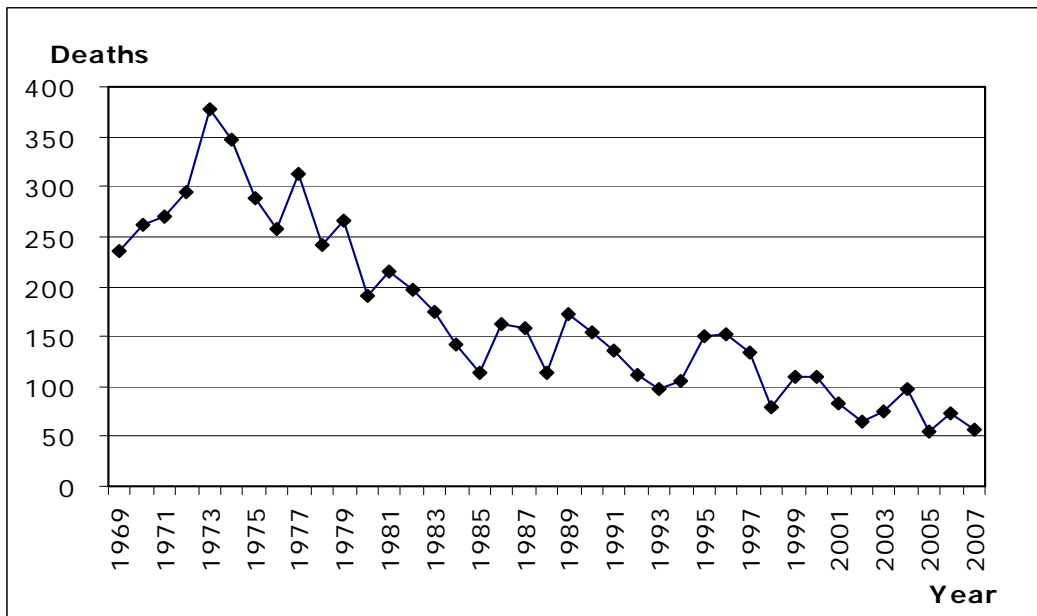


Fig 5.2.11 - Dogs Rabies vaccination, 1969 - 2007

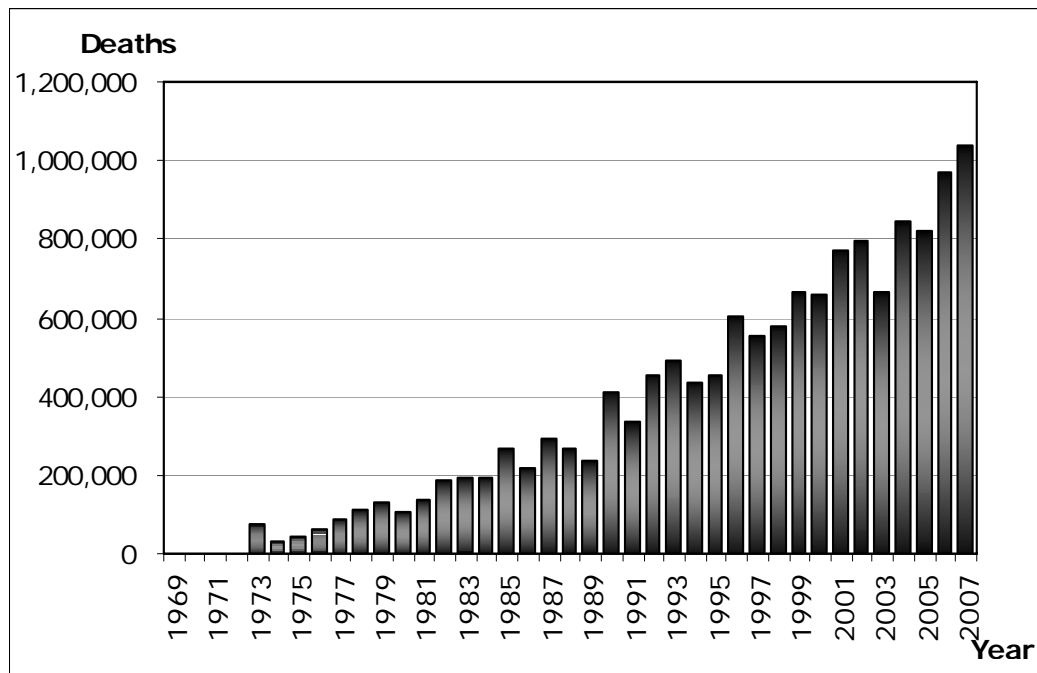


Table 5.2.14 Comparison of Rabies Control Activities by District

District	Dog Vaccination		Surgical Birth Control		Chemical Birth Control	
	2006	2007	2006	2007	2006	2007
Ampara	8,374	6,915	0	6	0	0
Anuradhapura	46,356	47,716	46	45	8,472	2,993
Badulla	42,659	36,744	136	0	3,625	5,273
Batticaloa	0	0	0	85	0	0
Colombo	67,844	79,622	317	0	3,123	9,131
Galle	21,490	36,645	0	0	294	2,493
Gampaha	123,558	101,347	215	46	1,380	2,341
Hambantota	45,928	62,872	30	20	171	3,481
Jaffna	44,639	56,901	0	0	0	467
Kalutara	46,656	64,476	615	0	2,155	5,483
Kandy	85,039	90,023	0	3,721	954	7,530
Kegalle	41,846	62,768	20	0	138	7,108
Kilinochchi	5,684	0	0	0	0	0
Kurunegala	100,776	84,732	40	33	7,787	7,324
Mannar	1,093	1,784	0	0	0	0
Mathale	37,423	45,954	0	0	0	5,523
Matara	51,109	46,889	0	0	1,267	2,881
Monaragala	28,040	16,059	0	42	1,559	1,866
Mulativu	0	0	0	0	0	0
N'Eliya	33,575	53,074	0	0	445	3,893
Polonnaruwa	39,628	52,021	0	18	14,386	20,698
Puttalam	66,393	61,563	0	0	6,688	9,588
Rathnapura	27,483	26,038	0	72	46	3,110
Trincomalee	0	0	0	0	0	0
Vavuniya	6,147	3,474	0	0	502	0
Grand Total	971,740	1,037,617	1,419	4,088	52,992	101,183

Source: Rabies Control Programme

5.2.6 Unit of youth, Elderly, Disabled and Displaced Persons

To improve quality of life of youth, elderly, Disabled and Displaced persons through improvement of health facilities, disease prevention and health promotion according to the Health Master Plan of Sri Lanka.

5.2.6.1 Youth

5.2.6.1.1 Vision

Healthy & Productive adolescent and Youth population.

5.2.6.1.2 General Objectives

To improve the knowledge attitude and life Skills (Life Competencies) Among School & Out of School Children as a means of reducing adolescent and Youth problems & improve their well being.

5.2.6.1.3 Specific Objectives.

- • To improve the capacity of the health staff Youth friendliness, promoting life skills among school and out school adolescent and youth.
- • To implement programme on adolescent health and life skills education through school curriculum, teacher training and through advocacy awareness programme for young people, parent and community leaders through the provincial health authorities and the heads of the health institutions.
- • To established the Youth Friendly Health Services in the country with the support of the central and provincial health authorities.

5.2.6.1.4 Activities.

1. Conducted consultative work shops the develop the Content on National Standers on Youth Friendly Health Services (YFHS) package.
2. Adaptation, Filed testing and Printing of the YFHS package for training of health providers.
3. Establish the YFHS centres from various districts of the country.
4. Provision of basic supplies and equipments needed for the proper functioning of the YFHS centres with the support of UNICEF.
5. Conduct workshop to train trainers from selected health facilities on YFHS.
6. Conduct awareness programme for clients and providers on YFHS.
7. Conduct progress review meetings.

8. Printing of IEC materials for the YFHS centres.
9. Production and institution of bill boards & name board for YFHS centres.
10. Conducting a National Meeting with the relevant stakeholders for preparation of the M & E matrix for the document on national minimum standers for YFHS.
11. Pre testing of the draft Training of trainer's manual for YFHS by the health providers of YFHS and regional training centres.
12. Training of adolescents in children's villagers and their guardians on RH, LS and on parenting skills.
13. Training teacher counsellors on RH, counselling and LS in collaboration with NIE.
14. Training peer communicators on RH and LS in collaboration with NIE.
15. lectures for graduates on health of Adolescents and youth in collaboration with University of Kelaniya.

5.2.6.2 Elderly

5.2.6.2.1 Vision

Healthy, active & productive elderly population.

5.2.6.2.2 General Objectives

- To improve the physical, mental and social well being of the present Elders.
- To achieve a healthier more active more productive elderly population in future.

5.2.6.2.3 Specific Objectives.

- To improve awareness among all age groups regarding "Active Aging" and through promotion of healthy life style.
- To improve awareness among elders and their family members regarding common health problems of elderly.
- To improve early detection of common health problems of elderly and referral for treatment and through timely management of common impairments to minimize & postpone disability.
- To promote the Physical, mental & social well being of elderly by establishment of day centres.

5.2.6.2.4 Activity

1. Conducting programmes with the help of the HelpAge, Sri Lanka for training health volunteers as carers of elders,
2. Conduct awareness programmes with the help of social services for per retirees on active ageing.
3. Conduct mobile cataract camps for reducing disability in old age.
4. Lectures for undergraduates on health of elderly in collaboration with University of Kelaniya.

5.2.6.3 Disabled**5.2.6.3.1 Vision**

To improve the quality of life of disabled persons.

5.2.6.3.2 General Objectives.

- To improve the health services for disabled persons.

5.2.6.3.3 Specific Objectives

- To improve awareness among members of the community regarding prevention disability.
- To improve the early detection, referral and treatments cataract among older persons.

5.2.6.3.4 Activity

1. Conduct meeting to identify the roll of PHC in rehabilitation.
2. Awareness programmes for PHC staff on integration of rehabilitation services in PHC.
3. Conducting awareness programme for parents of disabled children.
4. Organizing & conducting a medical camp with assistance of Kosala Dullewa Foundation for children affected with Down's syndrome.
5. Development & printing of resource materials and guidelines.
6. Conducting training programme for occupational therapist (OTs) on community based rehabilitation.
7. Establishing centres rehabilitating disabled children at MOH offices.
8. Training of health care providers at Digana hospitals to improve their skills services provision in rehabilitation in collaboration with PDHS.
9. Training nursing officers of government hospitals in Polonnaruwa district to improve their skills for service provision on spinal cord injury management in collaboration with RDHS & DMO.

10. Coordinating with VSO in recruiting and occupational therapist and mobilizing him to services the community at Jayanthipura Hospital in the Polonnaruwa district and to work with the community paediatrician who will be posted Jayanthipura in collaboration with RDHS.
11. Training relevant nursing officers of National Hospital Colombo to improve their skills for services provision on spinal cord injury management in collaboration with the Orthopaedics surgeons, Neurosurgeons and Neurologists.
12. Training special education teachers and master teachers in special education in collaboration with Director special Education (Western Province).
13. National consensus meeting for draft Child Health record for children with disability.
14. Lectures for undergraduates on person with disability on collaboration with University of Kelaniya & Colombo.

5.2.7 National STD/AIDS Control Programme 2006/2007

The National STD/AIDS Control Programme (NSACP) is responsible for planning, implementation and co-ordination of activities for prevention and control of sexually transmitted infections (STI) including human immunodeficiency virus (HIV) with full participation of the provincial authorities, other health sector and non health sector stakeholders.

HIV prevalence in Sri Lanka is very low compared with the other countries in the South Asia region. However, there are certain socio-demographic and behavioral factors which may fuel an epidemic in the future. Therefore there is a need to adopt strategies to modify high risk behaviors and provide treatment, care and support for those living with HIV. Sri Lanka is a signatory to the United Nations General Assembly Special Session (UNGASS), Declaration of Commitment on HIV/AIDS which reflects global consensus on a comprehensive framework to achieve the Millennium Development Goal of halting and beginning to reverse the HIV epidemic by 2015.

During the year 2006, the World Bank funded NHAPP project interventions were continued until it came to a close in 2008. Some of the achievements under this project were the implementation of targeted intervention among most at risk groups and other vulnerable groups, broad-based programs for youth and the general population, enhancing capacity of agencies involved in the national response to HIV/AIDS, improving the information base for policy decisions and program management, awareness and advocacy programs for policy makers and community opinion leaders to sustain political and societal commitment, so as to reduce stigma and discrimination against PLWHA and against most at risk and vulnerable sub-populations.

In 2006, an external review was carried out and together with its recommendations the National Strategic Plan (2007-2011) was developed. The overall goal of the NSP of Sri Lanka is to reduce the impact of HIV/AIDS on the social and development of the country. The main objectives are 1) to maintain the low HIV prevalence among most-at-risk groups and the general population, and 2) to increase the quality of life of those already infected. The national plan has 6 strategies.

The two core strategies are:

1. Increased coverage and quality of prevention interventions
2. Increased coverage and quality of care, support and treatment intervention

To support the above, four additional strategies are identified:

1. Improved generation and use of information for planning and policy development
2. Increased involvement of relevant sectors and levels of government in the response
3. More supportive public policy and legal environment for HIV/AIDS control
4. Improved management and coordination of the response

Implementation of the NSP depends on the efforts of many government departments, non-government organizations, people living with HIV, the private sector and Sri Lanka's development partners.

The NSACP coordinates the response, through development of technical strategies and guidelines, development of annual operational plans and budgets, resource mobilization, and capacity building of all implementing partners. The main components of the NSACP working towards achieving these objectives are policy development, management and care of sexually transmitted infections, STI /HIV/AIDS surveillance, behaviour change communication, counseling, laboratory support, prevention of mother to child transmission of HIV, infection control, research, continuum care and treatment for those infected and affected with HIV/AIDS.

In 2007, The Global Fund (GFATM) committed a grant of 1.8 m US\$ for prevention services in schools and plantations and for the purchase of antiretroviral drugs. WHO recommended first line drugs and a few second line drugs were purchased.

5.2.7.1 Sexually Transmitted Infections (STI) in Sri Lanka – 2006/2007

In 2006 and 2007, the numbers of new patients recorded were 12,811 and 15,171 respectively. This number does not reflect the total number of cases in the country as some seek alternative treatment options. Of the newly registered clinic attendees, 62% were diagnosed having at least one STI in 2006, while the figure was 50% in 2007. Male to female ratio of newly registered clinic attendees was 1:1.2 in 2006 and 1:1.1 in 2007.

Number of new episodes of STI recorded during 2006 was 10,266 and, in 2007 it was 9,496. New episodes denote STI diagnosed in new and previously registered persons.

It must be noted that one person may be diagnosed with more than one STI and therefore the number of new patients with STI and the number of new episodes of STI may not be the same. Among the new episodes that were reported in 2006, 75% were among 20-39 year age group. Similarly majority (74 percentage) of reported new episodes were among 20-39 year age group in 2007.

The table below shows the declining trends of some of the bacterial STI and gradual increase of viral STI.

All new female STD clinic attendees at the central STD clinic, Colombo undergo cervical cytology screening (Pap smear screening). Table 5.2.16 depicts the results of pap smears taken during the period of 2006 -2007.

Antibiotic sensitivity monitoring of *Neisseria gonorrhoeae* is routinely carried out by the National reference laboratory of the NSACP. This information is useful for all clinicians treating patients with gonococcal infections. The antibiotic sensitivity pattern for the period of year 2000 to 2007 is given in Table 5.2.17

Table 5.2.15 Rates of selected sexually transmitted infections per 100,000 population, 2000-2007

STI	2000	2001	2002	2003	2004	2005	2006	2007
Infectious Syphilis	1.43	0.98	1.09	0.72	0.67	0.82	1.80	1.31
Gonorrhoea	3.49	2.80	3.95	4.95	7.81	6.10	10.60	6.20
Non Gonococcal Infections	4.87	6.53	9.07	6.76	8.09	8.77	13.80	15.10
Genital Herpes	6.92	7.17	7.77	7.39	0.79	0.79	18.00	19.50
Genital Warts	2.61	3.17	3.20	3.28	7.43	7.81	9.60	11.50
Trichomoniasis	1.04	1.01	1.01	0.63	3.91	4.83	1.40	1.70

In government STD clinics the numbers of female sex workers registered were 597 and 610 in 2006 and 2007 respectively only a very few male sex workers were registered during this period. Sixty percent of registered female sex workers in 2006 had at least one STI, while in 2007, 57 percentage of the female sex workers were diagnosed with at least one STI. Bacterial vaginosis was commonest among them in both reporting years.

5.2.7.2 HIV/AIDS trend in Sri Lanka as of end year 2007

The first Sri Lankan infected with HIV was reported in 1987, and the first indigenously transmitted HIV infection was reported to the NSACP in 1989. The cumulative number of HIV infections reported from 1987 to end 2007 was 957. Of this, 266 were diagnosed as having AIDS and 172 were already deceased.

Table 5.2.16 Result of Pap smears, 2006-2007

Year	NSI/SI*	CIN** I	CIN II	CIN III	Carcinoma	HPV*** effect
2006 (n=688)	92	4	3	3	1	15
Year	NSI/SI*	LSIL#		HSIL##	Carcinoma	HPV effect
2007 (n=929)	235	15		5	2	28

*NSI /SI –

Non Specific Infection/ Specific Infection

**CIN -

Cervical intraepithelial neoplasia

***HPV-

Human papilloma virus

#LSIL –

Low grade squamous intraepithelial lesion,

#HSIL-

High grade squamous intraepithelial lesion,

It was estimated that there are 4000 persons living with HIV/AIDS by end of 2007. The disparity between estimated and reported numbers are probably due to under reporting and under diagnosis. However, the reported data indicate an increasing trend in HIV in Sri Lanka.

Highly Active Antiretroviral Treatment (HAART) started in Sri Lanka since December 2004. There were 107 HIV positive people on HAART as of end 2007.

Table 5.2.17 Percentage of gonorrhoea strains resistant to antibiotics, 2000-2007

Year	Penicillin	Tetracycline	Ciprofloxacin	Cefuroxime	Ceftraxone	Spectinomycin	Percentage of PPNG
2000	0	0	8.2	10.3	0	0	13
2001	79.2	1.7	6.1	3.4	0	0	9
2002	86.3	35.8	38.9	0	0	0	38
2003	94.2	56.3	82.1	0	0	0	62
2004	95.1	59.6	92.7	0	0	0	93.4
2005	89.2	43.6	88.7	0	0	0	85
2006	89.2	22.7	83	0	0	0	88
2007	69.3	24.2	81.9	0	0	0	61

* Penicillinase producing *Nisseria* Gonorrhoea

5.2.7.3 Age and sex distribution reported HIV cases

Of the 957 cumulative reported HIV infections, the age was known in 902 (94%). Of these, 91 percent were in the 15-49 year age group with approximately 41 percent in 30-39 year age group. The male to female ratio by the end of year 2007 was 1: 1.3 (Table 5.2.18).

Table 5.2.18 Cumulative HIV Cases by Age and Sex as of end December 2007

Age	Male	Female	Total
0 - 9	20	8	28
10 - 14	2	0	2
15 - 19	2	1	3
20 - 24	27	23	50
25 - 29	71	55	126
30 - 34	91	90	181
35 - 39	105	85	190
40 - 44	94	62	156
45 - 49	50	31	81
50+	56	29	85
Unknown	34	21	55

5.2.7.4 Probable mode of HIV Transmission

The probable mode of transmission of reported HIV infection was available for 668 cases. Of these, 84% were heterosexual, and 10.5 percent were homosexual/bisexual. Thirty cases (4.5%) have been reported as perinatally transmitted while three cases were due to transmission through blood/blood products. There were two cases of HIV transmitted via the injecting drug use (Table 5.2.7.19).

Table 5.2.19 Cumulative HIV cases by mode of transmission as of end December 2007

Mode of transmission	Number	Percentage
Hetero	563	58.8
Homo/Bi	70	7.3
IDU	2	0.2
Blood	3	0.3
Perinatal	30	3.1
Total (Unknown 204)	668	100

5.2.7.5 HIV sentinel surveillance

HIV sentinel surveillance is an on-going activity carried out annually, since 1993. In 2006 and 2007, sentinel surveillance was carried out in all 9 provinces. STD clinic attendees, female sex workers, patients diagnosed with tuberculosis, armed service personnel, drug users, and pre – employment category were included in the survey. All groups were surveyed on an unlinked anonymous basis. Of the 7092 samples tested, 12 HIV positive samples were detected in 2006 and of these HIV positives, 8 were STD clinic attendees, the remaining four samples were two from female sex workers, one each from patients diagnosed with tuberculosis and drug users. Of the 7103 samples were tested in 2007, 7 HIV positive samples were detected. Among those HIV positives five were STD clinic attendees and one each from TB and drug user categories.

5.2.7.6 HIV seropositivity rates, 2006-2007

A total of 319,614 HIV antibody tests were carried out in 2006 and the number tested for 2007 was 348,895. However, only a few private medical institutions in Colombo reported data on the total number of HIV tests carried out by their laboratories. The HIV seropositivity rate was 0.03 percent for 2006 and 2007.

5.3 Medical Supplies and Logistic

5.3.1 Medical Supplies Division

5.3.1.1 Objectives

The Medical Supplies Division (MSD) of the Ministry of Healthcare & Nutrition (MOH) is the central organization mainly responsible for the distribution of medical requirements to all state sector health institutions and narcotic drugs to both state and private sector health institutions. The number of items supplied is more than 20,000, and these are supplied quarterly, annually or on the need and requests basis.

Additionally donations of medical items and hospital supplies are cleared from Port /Air port, and distributed by MSD in keeping to the preplanned programmers.

MSD is guided by Cosmetics, Devices and Drug Act, Poisons Opium and Dangerous Drug ordinance, Manual on Management of Drugs, Establishment code, Financial Regulations and Circulars issued by Public Administration and Ministry of Healthcare and Nutrition.

5.3.1.2 Medical Supplies Items

Medical Supplies Items could be broadly categorized as;

Pharmaceuticals

- Drugs
- Dressing
- Narcotic
- X-ray Items

Dental Items

- Dental Consumables
- Dental Non Consumables

Surgical Items

- Surgical Consumables
- Surgical Non Consumables

Laboratory Items

- Lab Consumables
- Lab Non Consumables
- Lab Chemicals

5.3.1.3 Main Functions of Medical Suppliers Division (MSD)

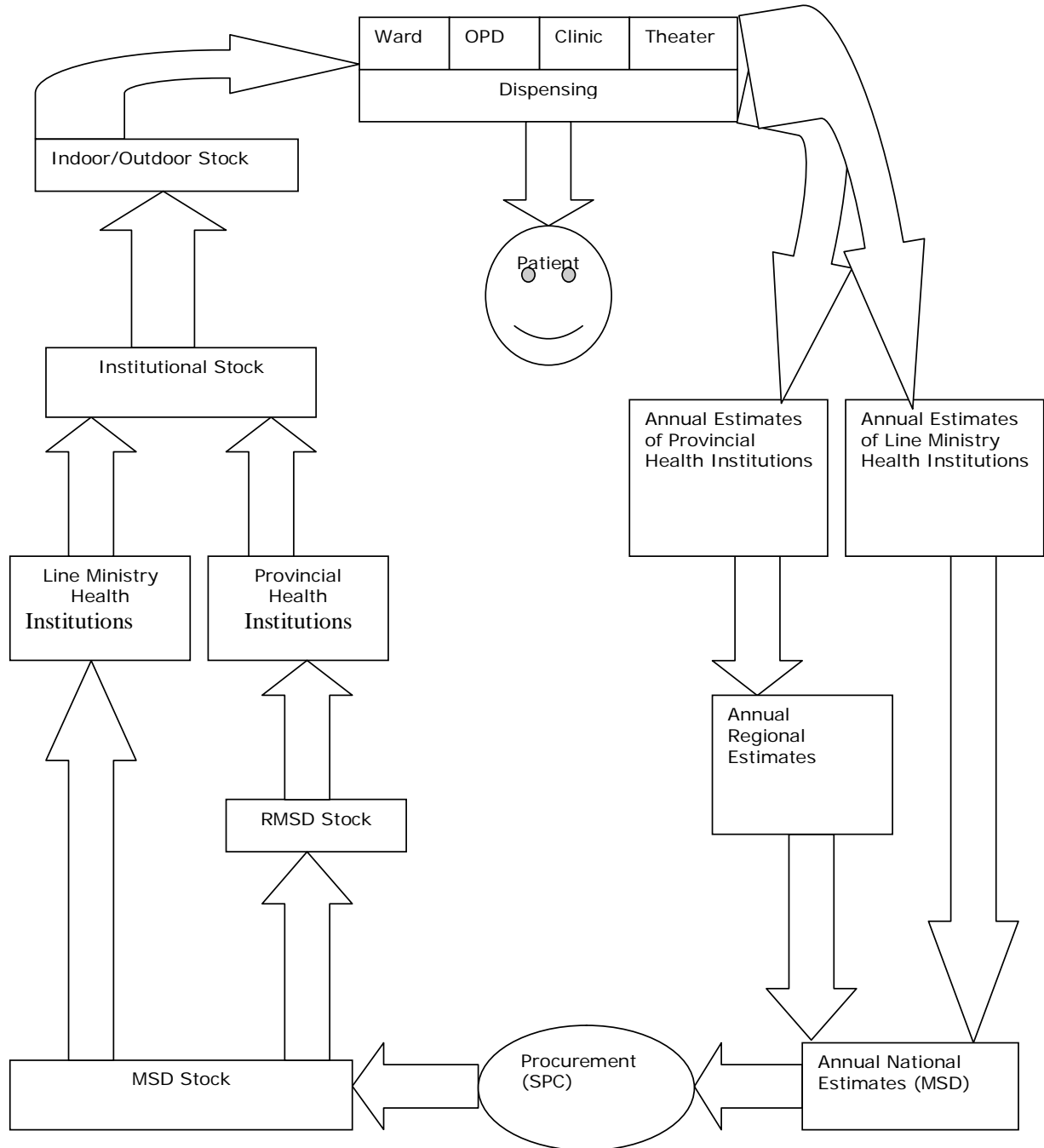
5.3.13.1 The Main Functions

- Estimates the annual national demand for each medical item based on institutional estimates trends and drug consumption patterns.
- Place orders with SPC, monitor the progress and make necessary arrangements based on past statistics of estimates, issues and forecast of national demand for the following year and considering stock available and balance due on order for supplies.
(Procurement of all Medical Items are done through State Pharmaceutical Corporation (SPC) which calls for worldwide tenders. Procurements are not done by MSD except in very urgent instances and where SPC had failed to supply the items on time. The procurement is usually done once a year. It takes more than 12 months lead time for the SPC to supply MSD orders.)
- Receipt of Medical Items from SPC and storage.
- Identify deficits in supply and demand for the year concerned with respect to national demand and place additional orders for supply during the year.
- Programme and distribute medical supplies items based on the estimates received.
- Review supplies/issues in mid-year and take appropriate action to ensure continuous availability of items in hospitals.

5.3.1.3.2 Other Functions

- Regular meetings with SPC representatives and representatives of MoH to review and decided the action on items in short supply.
- Prepare annual price list for all medical items.
- Coordinate with MoH, SPC and treasury regarding cash flow for procurement of Medical Supplies.
- Financial control of purchase and issues of medical items and preparation of reports.
- Support for the Quality assurance of medical items.
- Revision of hospital formulary items.
- Coordinate and prepare Quality reports to international narcotic control broad, Vienna.
- Medical Donations from various donors (local/foreign; persons/organizations) are received, stored and redistributed by MSD to all govt. Health Institutions under guidance of Minister, Secretary or Director General of Health Services.

Fig 5.3.1 - Management Cycle



5.3.1.4 Distribution of Medical Supplies

The distribution of Medical Supplies are;

- Direct to Central Government Institutions,
- Direct to Regional Medical Supplies Divisions,
- Direct to Armed Forces, Police and Prison Health institutions ... etc..
- Narcotic Drugs directly to govt. hospitals & private sector Health Institutions.

The objective is to ensure that the all vital and essential medical items are made available in all govt. hospitals within financial allocation of the year. Stock control and distribution of medical items are computerized. The computer system is used to prepare all necessary documents for issues. Quarterly distribution programmes are prepared and followed.

The management cycle shows the cycle of drugs from procured by SPC to dispensing it to the patient (See figure - 1).

5.3.1.5 Stores of MSD

Storage of items is done at MSD stores, which are located in following places.

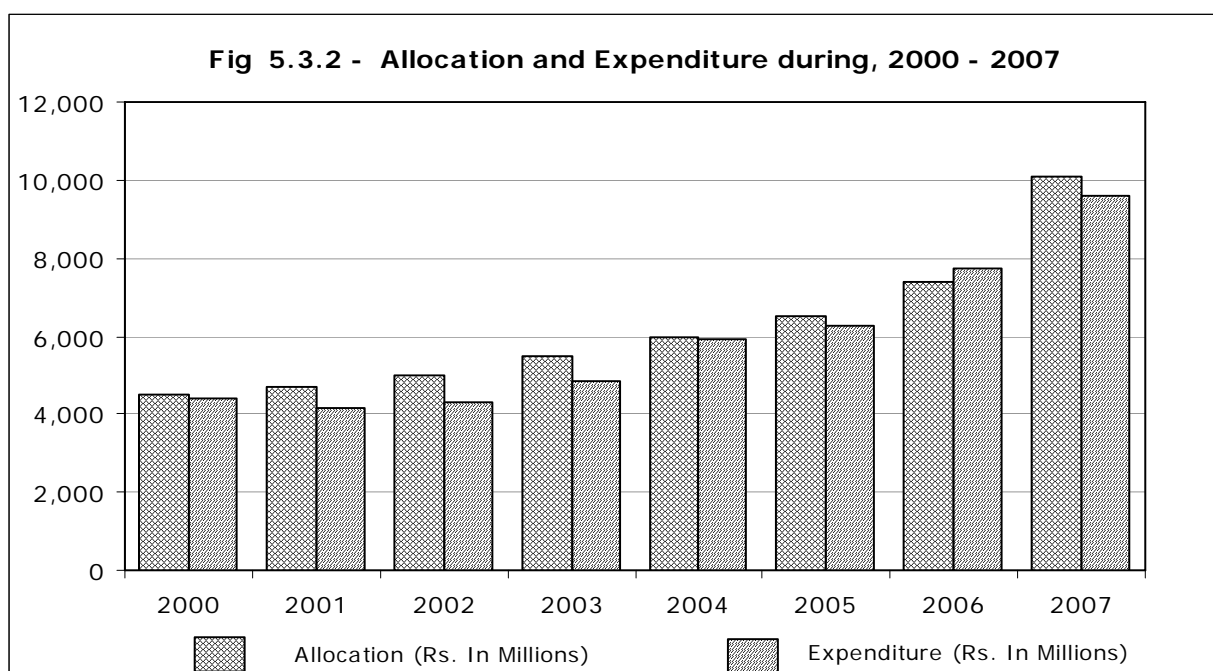
1. Main stores complex of MSD is at 357, Dean's road, Colombo-10. ; Drugs, Surgical instruments & consumables, and Dental items.
2. Wellawatta store -Laboratory items (Glassware and Lab. chemicals) surgical non-consumables, miscellaneous items Printed forms and Gift items.
3. Digana (Kandy) store- bulky items for mainly line Ministry hospitals in the Central Province.
4. Angoda store is a newly built one. - Surgical Items, X-ray films, Contrast media, and Drugs.
5. Walisara store is used to store unserviceable office equipment.

5.3.1.6 Financial situations

The total budget of MSD is approximately 24% of the budget of Ministry of Healthcare and Nutrition. The MSD handled approximately *SL Rs. 14 Billion worth of medical items in 2008 year.* The total Allocation and Expenditure of Medical Supplies, during 2000-2007 are shown in table

Table 5.3.1 Total allocation and expenditure of medical suppliers, 2000 - 2007

Years	2000	2001	2002	2003	2004	2005	2006	2007
Allocation (Rs. In Mn)	4,500	4,700	5,000	5,500	6,000	6,500	7,400	10,100
Expenditure (Rs. In Mn)	4,428	4,187	4,286	4,840	5,950	6,269	7,752	9,595



5.3.1.7 New Developments

- A. The computerization of Drug Distribution and Store Management Activities are conducting to link 82 health institutions including 26 RMSDs, National Hospital of Sri Lanka, all Teaching Hospitals and General Hospitals, Specialized Campaigns (Malaria control, Filariasis control, ... etc.), National Drug Quality Assurance Laboratory, Drug Authority and SPC to increase efficiency and effectiveness of Drug Management System.
- B. A new stores complex is to be built adjoining to the existing Angoda store complex.

5.3.1.8 Problems

The main problems in Medical Supplies are

- Supplies are not received to schedules,
- Unrealistic and high variation in estimates,
- Lack of storage facilities in MSD, Hospitals, and some RMSDs.
- Unavailability of store to keep medical items as per requirement with respect to temperature and humidity,
- Lack of cold storage space at MSD/Hospital and other health institutions,
- Inadequate pre marketing quality assurance.

5.3.1.9 General observation

- National Demand of Medical supplies is rapidly increasing.
- Storage facilities are highly limited both MSD and other relevant Health Institutions.
- Proposed to attend monthly drug review committee meetings of institutions to follow up usages of medical items and ensure that it is within allocation and for better management of Medical Supplies.

5.3.2 Logistic Division

A sum of Rs.3334/- Million out of the provision made to the Ministry of Health for 2007, has been allocated to the Logistic Division for Building Constructions, and repairs electrical maintenance, supply and installation of Air Condition and Medical Gas Systems, maintenance of sewerage systems etc.

Regarding the construction of Medical Officers' quarters, following actions have been taken under "Mahinda Chinthana Programme" from this funds.

Construction of Medical Officers' quarters in Castle Street Hospital for Women, GH-Badulla and GH-Matara have already been started and 75% has now been completed. Also construction of Official quarters in Base Hospital, Gampola has now been initiated.

Development of 14 hospitals under developed areas have been started and the development work of 05 hospitals in Kalmunai, Diyathalawa, Puttalam, Avissawella and Kanthale have been completed at present.

Construction work of official quarters in Provincial Hospitals of Dambulla, Panadura, Kuliyaipitiya, Mahiyanganaya, Balapitiya and Homagama have been completed by 80%.

In addition, a sum of Rs.1511 Million out of the total provision has been allocated for new building constructions in hospitals and other institutions under this Ministry and the progress of such construction works started out of these funds are as follows.

Table 5.3.2 Construction and Rehabilitation of Buildings 2007 (On going Projects)

Institution	Budget amount/ Contract Sum in Rs. Mn.	Financial Progress in up to 30.09.2007 Rs. Mn.	Physical Progress up to 30.09.2007
Infrastructure development of Hospital in less privileged areas - Balance Work.	90.00	51.68	57.42%
Nephrology Unit at Maligawatta	280.00	174.00	62.14%
Cardiology Unit, TH-Kurunegala.	39.00	31.21	80.02%
Oncology Unit at TH, Kurunegala.	90.00	25.92	28.80%
Construction of Third Medical Ward Block - NHSL	140.00	81.75	58.40%
Sirimavo Bandaranaike Children Hospital, Stage II	164.00	69.60	42.43%
Staff Quarters at Castle Hospital, for Women	14.00	12.96	92.57%
OPD building at BH-Kalmunai North and Oncology Unit at GH-Badulla.	38.00	32.16	84.63%
Theatre Complex at GH, Kandy	139.00	30.27	21.77%
Millennium Ward Complex - TH, Kalubowila	135.00	48.56	35.97%
Construction of New Drug Stores TH-Kurunegala, BH-Gampola, GH-Badulla.	65.00	26.87	41.33%
Improvements of BH, NuwaraEliya	79.00	60.00	76.83%
Construction of 200 Nos. Nurses' Qrts. - NHSL	85.30	69.65	81.65%
Construction of Laboratory - Cancer Institute, Maharagama.	42.00	30.00	71.00%
Urgently required Construction works at - BH, Kanthale	36.77	24.50	66.63%
Construction of Koriea Sri Lanka Friendship Hospital, Godagama.	130.00	21.30	16.38%
Renovation works at TH, Anuradhapura.	66.78	39.50	59.15%
Construction of Four storied ward complex - GH, Anuradhapura.	67.17	53.43	79.54%
Construction of Renal Care Research Centre at - GH, Anuradhapura.	22.95	11.15	48.58%
Construction of Proposed Ward Complex - GH, Hambantota.	247.60	56.95	23.00%

6. Education, Training & Research (E.T. & R.) Services

6.1 Education, Training & Research Unit

ETR & R Unit is functioning under Deputy Director General (Education, Training & Research) is responsible for the following main activities conducted under the Ministry of Healthcare & Nutrition.

1. Training Human resources.
2. Improving quality of the training courses
3. Promotion of health research

1. Training Human resources.

(a) Basic training courses conducted during 2006/2007

ET & R Unit coordinates and monitors the basic training courses in Nursing, PSM group, paramedical & technical services.

- Nursing
- Professions Supplementary to Medicine
 - ◆ Pharmacy
 - ◆ Medical Laboratory Technology
 - ◆ Radiography
 - ◆ Physiotherapy
 - ◆ Occupational Therapy

- Paramedical Categories
 - ◆ Cardiography
 - ◆ Ophthalmic Technology
 - ◆ Entomological Assistants
 - ◆ Public Health Inspectors
 - ◆ Public Health Midwifery
 - ◆ EEG Recordist
- Technical Services
 - ◆ Dispensers

(b) Post Basic Training and In-service Training

ET&R Unit organizes post basic and in-service training programmes.

Post basic training programmes are conducted for nurses through the Post Basic School of Nursing (PBS). 10 post basic training courses for Nurses.

National Institute of Health Sciences (NIHS) conduct in-service training for public health staff in addition to basic training courses.

2 Improving the quality of the training courses

The following activities were carried out with the view improving the quality of training during 2006/07

Table 6.1 Health Man Power Training

Category	Intake				Output			
	2004	2005	2006	2007	2004	2005	2006	2007
1. Nursing	3,549	4,276	6,310	1,966	2,837	828	1,262	1,155
2. Medical Laboratory Services	150	150		400	83			122
3. Pharmacy	200	80	210	215	34			89
4. Radiography	100		40	200				69
5. Physiotherapy	75			150				48
6. Occupational Therapy	25			50				13
7. Cardiography	42		40	47			39	36
8. Ophthalmic Technology	40			35				38
9. Entomological Assistants	6			50				5
10. Public Health Inspectors	260	100		18	176		289	33
11. Public Health Midwives	825	850	800	26			570	1,498
12. Public Health Laboratory Technicians	38						35	
13. EEG Recordist	10		8	9		9		8
14. Dispensers	35		100	187		32		93
15. Audiology Technicians	16					16		
16. Speech & Language Therapists					5			

- Revision and upbraiding of the curricula
- Provision of text books to the training schools
- Provision of learning / teaching materials
- Tutor training programmes – local and overseas
(Training on teaching methodology and IT training management training & technical training at overseas.)

3 Promotion of health research

ET &R Unit is functioning in collaboration with National Health Research Council to promote health research. Research grants are made available for the researchers through consolidated fund of the Ministry of Health.

6.2 Medical Research Institute (MRI)

The Medical Research Institute is the Premiere institute For the biomedical research in Sri Lanka. It is the reference laboratory for polio surveillance for the Asian region and the national reference laboratory for influenza measles and rabies.

MRI has 14 main divisions in relation to different disciplines. The department of vaccine functions as the national control laboratory for Biological (Vaccines etc) used in humans. The department of Immunology is the only such laboratory in Sri Lanka providing specialized laboratory testing and attending to referrals from both state and private sector. MRI also has a well equipped animal centre which a animals are specially maintained for animal experiments.

In addition to carrying out laboratory investigations on samples from both state and private sector MRI handles out break investigations, teaching and training of scientists, technologists and post graduates, attending to referrals of patients for expert opinion, carrying out quality assurance programmes for other laboratories, surveillance of disease and research.

The priorities of the institute include reference functions, laboratory quality assurance, disease surveillance, outbreak investigations and research on topics of national relevance. Identification of manpower and other resources in these areas are essential to improve them. A separate functional research arm and a laboratory quality assurance arm need to be developed. The latter is absolutely essential in the present state of uncontrolled expansion of the private laboratories.

Detailed Tables

Table 1. Administrative Divisions and Local Government Bodies, 2003 & 2004

Administrative Areas (Province/District)	Divisional Secretary		Grama Niladari Divisions	Pradesiya Saba	Villages	Local Government Bodies	
	Areas	Sub Office				MC	UC
Western Province							
Colombo	13	-	557	5	808	4	3
Gampaha	13	-	1,177	12	1,911	2	5
Kalutara	14	-	762	10	2,652	-	4
Central Province							
Kandy	20	-	1,188	17	2,987	1	4
Matale	11	-	545	11	1,355	1	-
Nuwara Eliya	5	-	491	5	1,421	1	2
Southern Province							
Galle	19	-	895	15	2,311	1	2
Matara	16	-	650	12	1,598	1	1
Hambantota	12	-	576	9	1,319	-	2
Northern Province							
Jaffna	15	-	435	12	954	1	3
Kilinochchi	3	1	95	3	258	-	-
Mannar	5	-	153	4	684	-	-
Vavuniya	4	-	102	4	527	-	1
Mullaitivu	4	1	127	4	516	-	-
Eastern Province							
Batticaloa	14	-	346	10	857	1	1
Ampara	20	-	503	14	876	1	1
Trincomalee	10	1	230	10	645	-	1
North-Western Province							
Kurunegala	27	3	1,610	18	4,509	1	1
Puttalam	16	-	548	10	1,284	-	2
North Central Province							
Anuradhapura	22	-	694	18	3,085	1	-
Polonnaruwa	7	-	295	6	657	-	-
Uva Province							
Badulla	15	-	567	14	2,229	1	2
Moneragala	11	-	319	10	1,198	-	-
Sabaragamuwa Province							
Ratnapura	17	-	575	13	1,941	1	1
Kegalle	11	-	573	10	1,677	-	1
Sri Lanka	324	6	14,013	256	38,259	18	37

* Provisional

Source : Department of Census and Statistics

Table 2. Population, Land Area and Density by Province and District

Administrative Area (Province/District)	Land Area (Sq. Km) As at 1998 ¹	Percentage Land Area	2006	2007*			Average Annual Growth Rate 2007 * ²
			Estimated Mid-year Population ² (‘000)	Estimated Mid-year Population ² (‘000)	Percentage Distribution of Population	Density (Person per Sq.Km)	
Sri Lanka	62,705	100	19,886	20,010	100.0	319.1	1.1
Western Province	3,593	5.73	5,648	5,707	28.5	1588.4	
Colombo	676	1.08	2,421	2,456	12.3	3633.1	1.5
Gampaha	1,341	2.14	2,125	2,140	10.7	1595.8	0.7
Kalutara	1,576	2.51	1,102	1,111	5.6	704.9	0.7
Central Province	5,575	8.89	2,567	2,599	13.0	466.2	
Kandy	1,917	3.06	1,361	1,380	6.9	719.9	1.3
Matale	1,952	3.11	471	477	2.4	244.4	1.3
Nuwara Eliya	1,706	2.72	735	742	3.7	434.9	0.9
Southern Province	5,383	8.58	2,391	2,417	12.1	449.0	
Galle	1,617	2.58	1,040	1,052	5.3	650.6	1.1
Matara	1,270	2.03	804	813	4.1	640.2	1.1
Hambantota	2,496	3.98	547	552	2.8	221.2	1.0
Northern Province	8,290	13.22	1,146	1,159	5.8	139.8	
Jaffna	929	1.48	595	599	3.0	644.8	0.7
Kilinochchi	1,205	1.92	100	146	0.7	121.2	2.3
Mannar	1,880	3.00	164	101	0.5	53.7	1.5
Vavuniya	1,861	2.97	145	166	0.8	89.2	1.0
Mullaitivu	2,415	3.85	142	147	0.7	60.9	1.8
Eastern Province	9,361	14.93	1,578	1,493	7.5	159.5	
Batticaloa	2,610	4.16	556	523	2.6	200.4	1.4
Ampara	4,222	6.73	627	615	3.1	145.7	1.5
Trincomalee	2,529	4.03	395	355	1.8	140.4	1.3
North-Western Province	7,506	11.97	2,256	2,276	11.4	303.2	
Kurunegala	4,624	7.37	1,511	1,524	7.6	329.6	0.9
Puttalam	2,882	4.60	745	752	3.8	260.9	1.0
North Central Province	9,741	15.53	1,173	1,196	6.0	122.8	
Anuradhapura	6,664	10.63	791	801	4.0	120.2	1.2
Polonnaruwa	3,077	4.91	382	395	2.0	128.4	1.2
Uva Province	8,335	13.29	1,257	1,275	6.4	153.0	
Badulla	2,827	4.51	837	850	4.2	300.7	1.4
Moneragala	5,508	8.78	420	425	2.1	77.2	1.2
Sabaragamuwa Province	4,921	7.85	1,870	1,888	9.4	383.7	
Ratnapura	3,236	5.16	1,073	1,086	5.4	335.6	1.2
Kegalle	1,685	2.69	797	802	4.0	476.0	0.6

* Provisional

Source : 1 : Survey General's Department
2 : Registrar General's Department

Table 3. Population by Five Year Age Groups and Sex - 2001 and 2007

Age Group	Year 2001 **						Year 2007 ***					
	Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number (000)	%	Number (000)	%	Number (000)	%
All ages	16,867,681	100.0	8,344,842	100.0	8,522,839	100.0	20,010	100.0	9,888	100.0	10,122	100.0
0 - 4	1,457,653	8.6	745,084	8.9	712,570	8.4	1,730	8.6	880	8.9	850	8.4
5 - 9	1,501,027	8.9	762,013	9.1	739,014	8.7	1,781	8.9	900	9.1	881	8.7
10 - 14	1,536,126	9.1	785,155	9.4	750,972	8.8	1,820	9.1	929	9.4	891	8.8
15 - 19	1,647,319	9.8	838,164	10.0	809,154	9.5	1,951	9.8	999	10.1	952	9.4
20 - 24	1,561,563	9.3	772,831	9.3	788,732	9.3	1,841	9.2	910	9.2	931	9.2
25 - 29	1,318,902	7.8	638,297	7.6	680,605	8.0	1,561	7.8	751	7.6	810	8.0
30 - 34	1,270,065	7.5	620,140	7.4	649,925	7.6	1,501	7.5	732	7.4	769	7.6
35 - 39	1,243,602	7.4	606,609	7.3	636,993	7.5	1,481	7.4	722	7.3	759	7.5
40 - 44	1,157,605	6.9	568,927	6.8	588,677	6.9	1,370	6.8	672	6.8	698	6.9
45 - 49	1,015,078	6.0	500,036	6.0	515,042	6.0	1,210	6.0	593	6.0	617	6.1
50 - 54	916,270	5.4	448,524	5.4	467,747	5.5	1,091	5.5	534	5.4	557	5.5
55 - 59	669,045	4.0	322,094	3.9	346,950	4.1	801	4.0	386	3.9	415	4.1
60 - 64	500,769	3.0	240,931	2.9	259,837	3.0	591	3.0	287	2.9	304	3.0
65 - 69	408,502	2.4	191,271	2.3	217,230	2.5	490	2.4	227	2.3	263	2.6
70 - 74	303,234	1.8	139,347	1.7	163,887	1.9	360	1.8	168	1.7	192	1.9
75 & over	360,922	2.1	165,417	2.0	195,505	2.3	431	2.2	198	2.0	233	2.3

Source: ** : Based on Population Census 2001

*** : sample estimates

*** : Registrar General's Department

Year 2001 Population Excludes :

Jaffna, Mannar, Vavuniya, Mullaitivu, Kilinochchi,
Batticaloa & Trincomalee Districts.

Table 4. Vital Statistics by District
(By Place of Occurance)

District	Crude Birth Rate		Crude Death Rate		Maternal Mortality Rate, 2002 ¹ Per 100,000 Live Birth's	Infant Mortality Rate 2003 ¹	Neo-Natal Mortality Rate		Perinatal Mortality Rate	
	2005 ¹	2007 ¹	2005 ¹	2007 ¹			2001	2002 ¹	2000	2001
	Per 1,000 Population						Per 1,000 Live Birth's			
Colombo	27.2	23.34	8.2	8.37	11.5	15.2	12.5	11.1	9.8	9.3
Gampaha	13.8	13.48	5.5	4.95	11.5	6.0	3.9	4.4	3.3	3.6
Kalutara	15.3	15.11	5.9	5.90	6.2	4.0	2.8	2.2	3.3	2.3
Kandy	22.4	21.33	6.6	6.89	10.2	15.3	14.0	12.0	11.7	11.4
Matale	16.7	20.16	5.0	5.48	..	10.4	6.1	5.0	5.9	5.8
Nuwara Eliya	14.5	15.82	5.1	5.03	52.1	15.6	13.7	10.8	10.1	9.6
Galle	18.1	20.24	9.2	7.11	10.5	10.9	10.1	8.1	6.3	7.5
Matara	18.0	18.12	7.2	5.80	13.9	8.3	5.4	5.2	10.7	4.8
Hambantota	14.1	16.41	9.3	4.56	14.8	7.0	4.7	2.8	2.1	3.3
Jaffna	17.2	14.39	6.8	6.38	39.9	4.4	2.3	3.3	1.5	2.0
Kilinochchi	19.8	29.36	4.5	4.05	..	1.2	2.6	1.4	4.3	1.9
Mannar	20.8	16.99	3.3	3.55	..	2.6	5.7	12.0	2.4	6.9
Vavuniya	23.9	18.07	4.6	5.75	..	6.8	5.6	9.8	1.2	5.3
Mullaitivu	13.9	21.41	26.1	3.39	..	1.7	11.6	1.4	6.4	11.2
Batticaloa	20.6	23.24	8.2	4.52	..	19.6	15.2	11.6	10.8	12.3
Ampara	21.4	24.82	11.0	4.30	17.4	6.3	3.1	3.4	2.0	1.8
Trincomalee	21.7	23.95	4.7	4.43	..	2.5	1.0	1.4	0.6	0.7
Kurunegala	18.4	17.43	6.2	6.23	20.0	14.0	10.9	9.7	12.6	8.1
Puttalam	17.3	20.45	4.5	4.73	21.1	5.9	5.1	4.5	5.5	4.2
Anuradhapura	19.3	20.73	5.1	5.50	19.2	19.4	18.0	14.2	10.1	13.0
Polonnaruwa	20.0	19.16	4.6	4.54	13.8	19.5	10.1	14.2	4.4	7.4
Badulla	21.8	22.42	5.6	5.54	27.5	9.9	17.4	12.9	11.0	14.0
Moneragala	15.1	15.75	3.4	3.34	14.5	2.0	1.9	0.9	0.5	0.9
Ratnapura	18.3	18.74	5.2	5.28	30.6	13.2	10.3	11.5	10.1	8.0
Kegalle	11.5	15.39	5.8	5.86	..	7.0	7.5	8.1	9.7	6.2
Sri Lanka	18.8	18.99	6.6	5.84	14.3	11.2	9.5	8.4	7.8	7.5

¹ Provisional.

Source : Registrar General's Department & Medical Statistics Unit.

Table 5. Percentage Distribution of Housing Units by Source of Drinking Water, 2001
(Excludes Northern and Eastern Provinces.)

Province/ District	Total	Protected Well Within Premises	Protected Well Outside Premises	Unprotected Well	Tube Well	Tap Within Premises	Tap Outside Premises	Bowser	River/Tank /Stream etc.	Other	Not Stated
Sri Lanka	100.0	28.3	21.8	9.8	4.8	15.7	11.2	0.2	5.2	1.5	1.6
Western Province											
Colombo	100.0	25.0	6.2	1.2	0.9	42.5	21.2	0.0	0.4	0.2	2.4
Gampaha	100.0	47.6	14.0	6.7	5.3	14.7	9.2	0.1	0.1	0.5	1.9
Kalutara	100.0	38.2	25.4	11.5	2.4	12.9	5.4	0.0	2.1	0.5	1.6
Central Province											
Kandy	100.0	13.6	20.8	8.9	8.1	22.4	17.4	0.3	5.4	1.5	1.6
Matale	100.0	15.2	27.6	13.6	14.8	11.2	10.2	0.2	5.4	0.9	0.8
Nuwara Eliya	100.0	5.8	8.6	6.9	2.9	20.4	31.1	0.0	18.1	3.9	2.4
Southern Province											
Galle	100.0	34.7	25.1	14.0	2.7	11.6	7.7	0.0	2.5	0.9	0.8
Matara	100.0	30.5	17.8	12.0	0.8	19.8	9.3	-	4.8	3.6	1.3
Hambantota	100.0	16.1	32.0	9.1	7.8	16.2	11.6	2.1	3.6	0.6	0.8
North Western Province											
Kurunegala	100.0	42.6	34.7	11.6	4.5	1.7	2.4	0.0	0.9	0.6	1.1
Puttalam	100.0	35.2	30.6	4.5	14.1	5.9	5.3	1.4	0.2	1.8	1.1
North Central Province											
Anuradhapura	100.0	23.7	37.4	12.7	12.8	7.0	2.6	0.0	1.3	0.7	1.8
Polonnaruwa	100.0	28.1	26.1	17.9	11.6	3.5	7.4	0.0	3.8	0.5	1.1
Uva Province											
Badulla	100.0	10.9	18.0	11.2	3.1	17.8	18.8	0.0	15.7	2.5	2.1
Moneragala	100.0	17.8	25.5	18.8	6.9	7.2	7.2	0.0	13.2	1.2	2.1
Sabaragamuwa Province											
Ratnapura	100.0	11.8	19.3	11.0	0.9	12.0	14.6	0.0	22.6	6.7	1.1
Kegalle	100.0	24.9	26.9	17.1	0.3	9.1	8.6	0.0	9.5	2.0	1.5

Based on Census of Population and Housing, 2001

Table 6. Percentage Distribution of Housing Units by Type of Toilet, 2001
(Excludes : Northern and Eastern Provinces.)

Province / District	Total	Water Seal	Pour Flush	Pit	Bucket	Other	Not Using a Toilet	Not Stated
Sri Lanka	100.0	66.5	13.6	12.0	0.4	1.0	4.3	2.2
Western Province								
Colombo	100.0	78.0	16.7	1.6	0.5	0.1	0.2	2.9
Gampaha	100.0	78.2	13.1	5.2	0.1	0.2	0.8	2.4
Kalutara	100.0	77.6	13.5	4.2	0.0	0.5	2.1	2.1
Central Province								
Kandy	100.0	65.9	17.5	12.2	0.1	0.5	1.9	2.0
Matale	100.0	49.7	15.6	30.1	0.0	0.4	2.8	1.4
Nuwara Eliya	100.0	41.4	24.3	14.2	1.9	2.3	11.6	4.4
Southern Province								
Galle	100.0	73.7	13.2	7.5	0.6	0.9	2.8	1.3
Matara	100.0	81.7	6.2	8.6	0.1	0.4	1.4	1.6
Hambantota	100.0	56.5	8.7	29.9	0.1	0.7	2.5	1.6
North Western Province								
Kurunegala	100.0	69.1	10.2	10.9	0.4	1.7	6.0	1.7
Puttalam	100.0	65.9	11.7	3.3	0.9	2.1	13.7	2.4
North Central Province								
Anuradhapura	100.0	48.4	13.5	21.4	0.4	2.5	11.2	2.6
Polonnaruwa	100.0	56.3	11.1	25.0	0.1	0.8	5.0	1.7
Uva Province								
Badulla	100.0	55.1	20.9	16.3	0.4	1.6	3.2	2.5
Moneragala	100.0	44.1	9.0	35.5	0.0	2.0	6.5	2.8
Sabaragamuwa Province								
Ratnapura	100.0	66.4	8.2	20.1	0.1	1.1	3.1	1.0
Kegalle	100.0	63.2	16.0	15.4	0.1	0.6	2.4	2.3

Based on Census of Population and Housing, 2001

Table 7a. Urine Tests, 2006 - 2007

Months	2006		2007	
	No. of Specimens	No. of positives	No. of specimens	No. of positives
January	526	80	685	72
February	642	98	676	88
March	742	109	777	122
April	541	83	540	57
May	673	104	735	112
June	643	97	787	92
July	776	122	854	75
August	806	134	808	95
September	602	79	747	86
October	787	80	558	261
November	763	73	631	60
December	765	92	547	66
Total	8,266	1,071	8,345	1,186

Source : National Institute of Health Sciences

Table 7b. Pap Smear, 2006 - 2007

Month	No. of Specimen	
	2006	2007
January	137	98
February	131	206
March	234	133
April	173	99
May	150	108
June	185	209
July	164	166
August	280	206
September	248	133
October	230	143
November	231	258
December	210	238
Total	2,373	1,997

Source : National Institute of Health Sciences

Table 7c. Blood Culture, 2006

Month	GH Kalutara		B.H./KMH Panadura		B.H.Horana		Total
	Total no. of Samples	No. of positives	Total no. of Samples	No. of positives	Total No. of Samples	No. of Positives	
January	148	20	62	10	8	2	250
February	160	32	65	14	12	1	284
March	168	29	77	12	12	0	298
April	152	31	68	19	6	0	276
May	176	7	36	3	3	0	225
June	188	30	100	18	10	0	346
July	176	10	90	3	12	1	292
August	166	7	30	3	4	0	210
September	172	9	28	1	11	0	221
October	182	16	58	1	19	0	276
November	188	13	70	3	20	0	294
December	172	7	30	2	4	1	216
Total	2,048	211	714	89	121	5	3,188

Source : National Institute of Health Sciences

Table 7d. V.D.R.L. 2006 - 2007

Month	Total No. of Samples received		No. of Decomposed & haemolysed		No. of positive	
	2006	2007	2006	2007	2006	2007
January	980	762	0	42	7	3
February	879	814	0	40	7	7
March	998	1,174	1	8	15	6
April	598	577	8	7	3	4
May	789	1,001	24	26	8	4
June	872	1,042	10	26	4	4
July	696	683	0	15	3	12
August	600	1,030	0	2	3	4
September	814	910	0	0	8	1
October	871	905	5	38	6	6
November	949	885	13	8	9	2
December	924	841	27	23	3	6
Total	9,970	10,624	88	235	76	59

Source : National Institute of Health Sciences

Table 7e. Infection Control Swabs, 2006 - 2007

Hospital	No. of specimen	
	2006	2007
G.H.Kalutara	50	93
KMH Panadura	55	37
BH Horana	10	33
Total	115	163

Source : National Institute of Health Sciences

Table 7f. CSF, SPUTUM, SWAB, and Body fluids, 2006

Month	CSF		Body fluids		Sputum		Swabs	
	Total No.	No. of Positives	Total No.	No. of Positive	Total No.	No of positive	Total No.	No. of Positive
January	51	0	15	4	54	22	151	99
February	59	0	21	2	44	18	133	75
March	46	1	10	1	52	23	134	86
April	52	0	11	1	39	12	59	29
May	60	0	16	1	38	10	92	23
June	106	0	19	2	40	11	139	94
July	64	1	19	3	65	24	135	82
August	55	0	22	1	39	9	106	47
September	43	0	32	2	26	13	136	61
October	49	1	22	1	43	23	111	61
November	51	1	20	2	38	10	123	74
December	62	0	20	2	29	14	103	54
Total	698	4	227	22	507	189	1,422	785

Source : National Institute of Health Sciences

Table 7g. Stool Culture and ABST, 2006 - 2007

Month	No. of Specimens		No. of positives for shigella sp.		No. of positives for Salmonella	
	2006	2007	2006	2006	2006	2007
January	50	12	1	2	0	
February	46	9	3	1	1	
March	29	15	3	1	0	
April	62	10	5	0	1	
May	48	50	5	3	0	
June	63	32	3	9	0	
July	43	43	7	9	1	1
August	42	23	6	2	2	
September	33	21	2	5	1	
October	15	12	2	1	2	
November	21	21	3	6	0	
December	17	26	2	3	0	
Total	469	274	42	42	8	1

Source : National Institute of Health Sciences

Table 7h. Other tests from January to December, 2006 - 2007

Description	2006	2007
Urine for FR	225	231
W BC	190	244
ESR	198	133
Blood sugar	-	303
Hb%	-	207

Source : National Institute of Health Sciences

Table 7i. Blood CSF, Body fluids, Sputum, Throat swabs, pus and wound swab, Eye swabs and ear swabs, 2007

Month	Blood		CSF		Body fluids		Sputum		Throat Swabs		Pus and Wound swabs		Eye swabs		Ear swabs	
	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P
January	223	7	56	1	25	1	32	9	8	1	82	32	5	1	12	4
February	250	4	40	0	14	2	22	7	5	1	86	34	9	7	6	2
March	289	6	36	0	15	2	35	8	8	3	109	91	13	6	16	10
April	203	4	32	0	16	2	27	4	4	1	81	27	9	8	1	0
May	255	5	31	0	7	1	28	7	3	0	80	33	20	5	5	2
June	245	4	33	0	20	2	42	15	10	4	68	17	4	7	2	1
July	281	8	34	0	22	1	32	11	6	0	67	29	8	2	12	4
August	254	8	41	0	9	0	43	8	4	0	67	18	8	4	5	2
September	248	13	57	1	19	2	25	5	1	0	52	21	5	4	2	2
October	251	21	44	0	20	5	35	11	7	1	67	20	8	5	4	1
November	188	11	23	0	14	2	21	6	5	2	67	24	4	1	3	1
December	190	4	32	0	21	1	23	7	11	3	37	22	4	3	4	2
Total	2877	95	459	2	202	21	365	98	72	16	863	368	97	53	72	31

S - Total no. of samples

P - No. of positive samples

Source : National Institute of Health Sciences

Table 7j. No. of samples, Salmonella typhi and Salmonella paratyphi

Month	No. of Samples		Salmonella typhi H		Salmonella typhi O		Salmonella paratyphi	
	2006	2007	2006	2007	2006	2007	2006	2007
January	-	13	-	2	-	-	-	1
February	-	11	-	-	-	-	-	-
March	-	-	-	-	-	-	-	-
April	-	1	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-
June	-	8	-	-	-	-	-	-
July	4	1	-	-	-	-	-	-
August	6	-	1	-	-	-	1	-
September	1	-	1	-	-	-	1	-
October	1	-	-	-	-	-	-	-
November	9	-	1	-	-	-	2	-
December	7	-	2	-	-	-	1	-
Total	28	34	5	2	-	-	5	1

Source : National Institute of Health Sciences

Table 8 a. Health related Millennium Development Goals (MDGs) - Targets & Indicators

Goal		Target		Indicator		
1	Eradicate Extreme Poverty and Hunger	2	Halve between 1990 and 2015 ,the proportion of people who suffer from hunger	4	Prevalence of underweight children under 5 years of age	
				5	Proportion of the population below minimal level or dietary energy consumption	
*4	Reduce Child Mortality	5	Reduce by two thirds between 1990 and 2015, the under five mortality rate.	13	Under-five mortality rate	
				14	Infant mortality rate-special emphasis on neonatal mortality	
				15	Proportion of 1-year-old children immunized against measles	
*5	Improve maternal health	6	Reduce by three quarters, between 1990 and 2015 , the maternal mortality ratio	16	Maternal mortality ratio	
				17	Proportion of births attended by skilled health personnel	
6	Combat HIV/AIDS, Malaria, & other diseases	7	Have halted by 2015 and begun to reverse the spread of Hiv/AIDS	18	HIV prevalence among pregnant women aged 15-24 years	
				19	Condom use rate of the contraceptive prevalence rate	
				20	Ratio of school attendance of orphans to school attendance of non orphans aged 10-14 years	
		8	Have halted by 2015 and begun to reverse the incidence of	(a) Malaria	21 a	Incidence of Malaria per 100,000 population.
					21 b	Deaths associated with Malaria
					22	Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures
					23 a	Incidence of TB per 100,000 population
				(b) Tuberculosis	23 b	Death rates per 100,000 associated with TB
					24	Proportion of TB cases detected and Cured using DOTS
				7	Ensure Environmental Sustainability	9	Intergrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.	29	Proportion of population using solid fuels
10	Halve by 2015, the proportion of people without sustainable access to safe drinking water and sanitation					
31	Proportion of population with access to improved sanitation					
8	Develop a global partnership for development	17	In co-operation with pharmaceutical companies, provide accessto affordable essential drugs in developing countries	46	Proportion of population with access to affordable drugs	

Source : Ministry of Healthcare & Neutrition

Table 8b Health Indicators in the Millennium Development Goals (MDGs) – Sri Lanka.

Indicator	Bench Mark	Target for 2015
Prevalence of underweight children < 5 years	29.40%	20%
% population with minimal level of dietary energy consumption	36%	See ⁷
Under 5 mortality rate	4.4/1000 under population	3/1000 under 5 population
Infant mortality rate	12.2/1000 LB	9/1000 LB
% of 1 year-old immunized against measles	90.10%	99%
Maternal mortality ratio	47/100 000 LB	24/100 000 LB
% births attended by skilled health personal	97%	99%
HIV prevalence among 15-24 year old pregnant women	See Below ¹	-
Condom use rate of the contraceptive prevalence rate	3.70%	4.50%
Proportion of children orphaned by HIV/ AIDS	See Below ²	-
Prevalence and death rate associated with Malaria	See Below ³	* to have halted by 2015, and begun to reverse the spread of Malaria
% population in Malaria risk areas using effective Malaria preventive measures	See Below ⁴	-
Prevalence and death rates associated with TB	See Below ⁵	* have halted by 2015 and begun to reverse the spread of TB
% of TB cases detected and cured under directly observed treatment short course (DOT)	73%	-
% population using solid fuels	See Below ⁶	-
% population with sustainable access to an improved water source	93.90%	100%
% population with access to improved sanitation	75.40%	100%
% population with access to affordable essential drugs on a sustainable basis (% of hospital with access to 75% of the essential drugs on a sustainable basis)	75%	100%

Source : Ministry of Health

¹ As Sri Lanka is HIV low prevalence country HIV prevalence among the Antenatal Population is not screened for HIV

² As Sri Lanka is a low prevalence county this indicator is not very relevant to Sri Lanka

³ The data on Malaria prevalence is not available in Sri Lanka. The total number of Malaria cases reported in Sri Lanka in 2001 was 27,791 and total number of deaths reported was 27.

⁴ New indicator for Sri Lanka. Data on this indicator is not yet available.

⁵ The data on the prevalence of TB in Sri Lanka is not available. The annual incidence of Tuberculosis in 2001 was 12,421 and the number of deaths reported was 689.

⁶ The data on solid fuel was not available in Sri Lanka. The reduction of use of solid fuel is targeted through increasing the fuel efficacy.

⁷ Global target is to halve between 1990 and 2015, the proportion of people who suffer form hunger. A value for 1990 is not available. The target for Sri Lanka by the year 2015 has to be decided.

* Global targets.

Table 8c. Health Development Targets to be Achieved by Year 2002

Indicator	Benchmark		Current ¹		Target for year 2002
Infant mortality rate (per 1000 live births)	19.5	1990	11.2	2003	15.0
Neo-natal mortality rate (per 1000 live births)	13.0	1989	9.5	2001	7.5
Maternal mortality rate (per 1,000 live births)	0.4	1991	14.3 ²	2002	0.3
Life expectancy at birth (years)	67.8 (M) 71.7 (F)	1981	70.4 (M) 75.7 (F)	2001-2006	73 (M) 75 (F)
Percentage of newborns with birth weight less than 2500 gm	22.8	1990	17.6	2005	18.0
Crude birth rate (per 1,000 population)	19.9	1990	18.8	2005	16.0
Neo-natal tetanus cases (per 100,000 live births)	4.7	1990	0.0	2005	0.0
Cases of poliomyelitis (per 100,000 population)	0.1	1990	Last case in 1993		0.0
Malnutrition among children under 5 years of age %	35.0	1990	23.8	1993	17.5
Deaths among children under 5 years due to diarrhoeal diseases %	2.9	1991	2.0	1996	To reduce the 1990 level by 25%
Deaths among children under 5 years due to acute respiratory infections %	8.3	1991	5.6	1996	6.0
Iron deficiency anaemia among pregnant and lactating women %	58.0	1990	39.0	1994	22.0
Eligible couples using contraceptive methods %	61.7	1987	66.1	1993	72.0
Housing units with access to safe drinking water at home or immediate	65.0 (Rural) 91.1 (Urban)	1981	68.4	1994	100.0 Rural 100.0 Urban
Housing units with latrines %	63.5 (Rural) 80.3 (Urban)	1981			85.0 (Rural) 96.0 (Urban)

¹ Provisional.

Source: Medical Statistics Unit

Table 9. Distribution of Government Medical Institutions and Beds¹ by Districts, December 2007

District	Teaching Hospitals		Provincial Hospitals		Base Hospitals		District Hospitals		Peripheral Units		Rural Hospitals ²		Central Dispensaries & Maternity Homes		Other Hospitals ³		Total Hospitals		Beds per 1,000 Pop.	Central Dispensaries	MOH Areas *
	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds			
Colombo	7	7,627			2	839	4	509	5	341	1	20			8	2,790	27	12,126	4.9	27	13
Gampaha	1	1,393			3	2,005	6	855	3	162	5	121			6	1,542	24	6,078	2.8	44	15
Kalutara			1	817	3	816	8	730	4	254	5	156			2		23	2,773	2.5	7	11
Kandy	2	3,466			2	735	15	1,125	6	302	26	819			5	239	56	6,686	4.8	28	21
Matale					2	949	3	245	4	228	12	238		1	3		25	1,661	3.5	14	10
Nuwara Eliya	2	1,729			1	305	15	1,211	1	57	8	190		3	40		28	1,803	2.4	21	7
Galle					1	344	8	702	8	394	5	114		3	20	11	31	3,314	3.2	22	17
Matara			1	1,037	1	191	4	528	4	316	6	214		2		1	19	2,286	2.8	17	15
Hambantota			1	317	3	526	4	268	4	278	7	206		4	29		23	1,624	2.9	7	11
Jaffna	1	1,307			1	279	6	349	6	328	3	98		8	94	3	28	2,455	4.1	16	11
Kilinochchi																	9	378	2.6	2	4
Mannar					1	206	3	173	1	41	1	23		2	29		8	472	4.7	3	4
Vavuniya																					
Mullaitivu																					
Batticaloa	1	724			2	209	5	241	1	147	1	112		3	2		6	481	3.3	3	2
Ampara					1	92	1	55	1	50	3	96		3	41		11	784	1.3	18	7
Kalmunai					3	679	8	820	4	146				4	0		19	1,645		13	13
Trincomalee					2	273	1	146	3	121	5	170		4	54		18	1,185	3.3	15	11
Kurunegala	1	1,435			2	762	16	1,670	12	593	15	338		1	16		47	4,814	3.2	52	18
Puttalam					2	741	4	389	3	143	5	123		6	93		22	1,489	2.0	19	9
Anuradhapura					2	203	5	572	7	394	23	701					39	3,198	4.0	21	19
Polonnaruwa					1	110	1	141	4	243	4	200					11	1,291	3.3	12	8
Badulla					2	561	13	1,020	1	42	16	422		1	12	33	35	3,390	4.0	16	15
Moneragala					1	362	9	778	1	31	7	205					19	1,376	3.2	10	10
Ratnapura					3	570	10	946	9	402	11	268					34	3,193	2.9	12	15
Kegalle	1	770			3	634	5	536	1	45	9	197		3	21	5	27	2,245	2.8	18	10
Total	16	18,451	12	7,799	44	12,391	161	14,417	95	5,127	182	5,180	59	596	46	4,733	615	68,694	3.4	441	291

¹ Excludes examination and labour room beds, cribs and bassinets etc used for healthy newborn.

Includes:

² Estate Hospitals

³ Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation Hospitals.

* : Provisional

Source : Medical Statistics Unit

Table 10. Beds by Speciality and District, December 2007

District	Mixed Medical & Surgical ¹	Medical	Surgical	Paediatrics / Children ²	Obstetric/ Gynaecology	Communicable Diseases	Tuberculosis	Cancer	Leprosy	Psychiatry	Neurology/ Neuro Surgery	Genito Urinary	Cardiology	E.N.T	Eye	Skin	Orthopaedic / Accident	Thoracic Surgery	Plastic Surgery/ Burns Unit	Rheumatology/ Rehabilitation	Dental	Others ³	Total
Colombo	737	2,431	2,254	473	1,541	44	14	344	.	1,039	319	143	219	182	537	60	679	144	103	33	.	830	12,126
Gampaha	529	1,198	1,077	526	1,040	26	493	.	63	390	7	18	8	106	252	59	.	.	.	106	21	159	6,078
Kalutara	337	725	541	288	552	.	.	.	.	39	.	.	10	45	26	14	.	.	.	.	.	196	2,773
Kandy	584	1,569	758	688	1,029	.	213	134	.	135	195	106	80	64	216	46	164	.	.	75	75	555	6,686
Matale	142	697	181	92	332	26	40	.	.	22	.	.	.	16	46	22	.	.	.	.	.	45	1,661
Nuwara Eliya	207	535	201	184	444	.	.	.	.	.	.	.	.	8	18	.	.	.	.	.	.	206	1,903
Galle	377	712	619	398	393	.	.	108	.	84	50	20	25	43	46	43	63	.	.	.	21	312	3,314
Matara	231	638	303	154	446	.	.	.	.	.	23	.	16	.	47	54	22	.	.	.	.	352	2,286
Hambantota	165	612	290	147	331	.	.	.	.	74	6	.	.	.	16	.	.	.	.	.	.	59	1,624
Jaffna	145	715	374	259	543	5	19	60	.	.	.	.	6	.	.	24	.	.	.	.	.	225	2,455
Kilinochchi	.	155	79	32	83	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29	378
Mannar	135	91	113	71	71	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	481
Vavuniya	42	96	59	62	162	.	.	.	.	.	.	.	.	17	10	.	.	.	.	.	.	15	463
Mullaitivu	90	140	45	45	119	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30	472
Batticaloa	116	485	178	174	242	.	15	20	76	26	.	.	.	27	49	.	28	.	.	.	.	48	1,484
Ampara	80	227	67	111	184	.	.	.	.	12	.	.	.	.	30	.	26	.	.	.	.	47	784
Kalmunai	218	697	187	180	247	.	.	.	.	15	.	.	.	.	30	.	.	2	.	.	.	69	1,645
Trincomalee	81	394	161	145	303	.	.	.	.	40	.	.	.	.	23	.	.	.	.	.	.	78	1,185
Kurunegala	623	1,530	424	428	971	8	.	15	.	40	29	46	13	47	60	44	60	61	.	34	60	321	4,814
Puttalam	181	487	287	140	306	.	17	.	.	.	.	.	.	.	28	.	.	.	.	.	.	43	1,489
Anuradhapura	397	884	343	310	632	42	.	65	.	56	40	.	35	.	31	20	69	.	.	.	274	3,198	
Polonnaruwa	296	405	150	82	278	.	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.	30	1,291
Badulla	519	758	455	395	646	.	.	112	.	70	65	31	8	22	55	.	55	.	.	.	199	3,390	
Moneragala	348	291	135	218	271	.	.	.	.	.	.	.	.	.	31	.	.	.	.	.	.	82	1,376
Ratnapura	434	839	560	352	690	.	34	.	.	29	.	.	.	23	44	.	.	.	.	.	140	48	3,193
Kegalle	269	622	354	257	531	.	.	.	.	.	.	.	.	33	34	.	.	.	.	.	1	144	2,245
Total	7,283	17,933	10,195	6,211	12,387	154	845	858	139	2,031	738	364	420	633	1,679	386	1,166	207	103	248	318	4,396	68,694

Source : Medical Statistics Unit

Includes:

¹ Beds in medical and surgical intensive care units, wards for priests, service personnel and medical and surgical paying wards.

² Beds in the premature baby units.

³ Mixed wards with beds for obstetrics, psychiatry, skin, ENT, eye, dental, neurology, surgery, tuberculosis and haematology.

Table 11. Key Health Personnel, 1982-2007

Year	Medical Officers ¹		Dental Surgeons ²		Registered/ Assistant Medical Officers		Nurses		Public Health Nursing Sisters		Public Health Inspectors		Public Health Midwives		Hospital Midwives	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1982	2,035	13.4	275	1.8	911	6.0	6,931	45.6	241	1.6	962	6.3	2,296	15.1	1,512	9.9
1984	1,951	12.5	288	1.8	984	6.3	7,400	47.4	209	1.3	916	5.9	3,001	19.2	1,538	9.9
1986	2,217	13.7	318	2.0	1,047	6.5	8,019	49.7	189	1.2	966	6.0	3,102	19.2	1,463	9.1
1988	2,316	14.0	355	2.1	1,100	6.6	8,317	50.1	154	0.9	977	5.9	3,209	19.3	1,531	9.2
1990 ³	2,440	15.5	317	2.0	1,074	6.8	8,957	57.1	140	0.9	886	5.6	3,321	21.2	1,638	10.4
1991	2,934	17.0	358	2.1	1,201	7.0	9,934	57.6	101	0.6	914	5.3	3,583	20.8	1,776	10.3
1992	3,345	19.2	381	2.2	1,253	7.2	11,214	64.4	113	0.6	846	5.0	4,108	23.6	2,025	11.6
1993	3,713	21.1	390	2.2	1,305	7.4	11,818	67.1	109	0.6	876	5.0	4,361	24.8	2,172	12.3
1994	4,047	22.7	387	2.2	1,357	7.6	13,060	73.1	117	0.7	928	5.2	4,400	24.6	2,214	12.4
1995	4,577	25.3	421	2.3	1,376	7.6	13,403	74.0	174	1.0	932	5.1	4,383	24.2	2,288	12.6
1996	5,117	27.9	462	2.5	1,397	7.6	13,933	79.1	189	1.0	915	5.0	4,352	23.8	2,393	13.1
1997	5,628	30.1	481	2.6	1,384	7.4	13,815	73.8	145	0.8	901	4.8	4,497	24.0	2,284	12.2
1998	6,427	34.2	521	2.8	1,340	7.1	14,448	77.0	183	1.0	888	4.7	4,578	24.4	2,410	12.8
1999	6,994	36.7	529	2.8	1,340	7.0	14,052	73.8	237	1.2	1,142	6.0	4,625	24.3	2,503	13.1
2000	7,963	41.1	637	3.3	1,349	7.0	14,716	76.0	270	1.4	1,486	7.7	4,798	24.8	2,596	13.4
2001	8,384	44.8	751	4.0	1,343	7.2	15,797	84.4	259	1.4	1,401	7.5	4,654	24.9	2,723	14.5
2002	9,290	48.9	867	4.6	1,326	7.0	16,517	86.9	310	1.6	1,470	7.7	4,819	25.4	2,794	14.7
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	8,874	45.6	915	4.7	1,218	6.3	18,654	95.8	315	1.6	1,397	7.2	4,524	23.2	2,668	13.7
2005	10,198	51.9	954	4.9	1,274	6.5	19,934	101.4	313	1.6	1,512	7.7	4,896	24.9	2,371	12.1
2006	10,279	51.7	1,181 ^(a)	5.9	1,183	5.9	24,988	125.7	299	1.5	1,535	7.7	5,080	25.5	2,555	12.8
2007	11,023	55.1	1,314 ^(a)	6.6	1,194	6.0	31,466	157.3	290	1.4	1,740	8.7	6,167	30.8	2,828	14.1

Source : Medical Statistics Unit

(a) Provisional

Rate per 100,000 Population

¹ All Medical Officers in curative, administrative and preventive services including Specialists and Interns² Includes Regional and Consultant Dental Surgeons³ Excludes the Northern Province

Table 12. Distribution of Health Personnel by District, December 2007

DPDHS	Administrative Grade (Senior and Deputy)	Specialists (Curative care)	Hospital Medical Officers (D.M.O., S.H.O., H.O., MO in OPD, ect)	DHS/MOH/AMOH	School Medical Officers	Medical Officers (Malaria)	Medical Officers (Filariasis)	Medical Officers (Leprosy)	Medical Officers (Venereal Diseases)	Medical Officers (Tuberculosis)	Epidemiologists	Medical Officers (Maternal and Child Health)	Judicial Medical Officers	Medical Officers (Blood Bank)	Internee Medical Officers	P.G.I.M. Trainees ** (a)	Other Medical Officers (Specify)	Medical Officers ^{2(a)}	Total Medical Officers ^{1(a)}	Regional Dental Surgeons	Consultant Dental Surgeons	Hospital Dental Surgeons	P.G.I.M. Trainees ** (a)	Dental Surgeons ^{3(a)}
Colombo	38	229	1,768	137	5	4	5	0	15	0	3	3	4	26	110	147	87	2,314	2,581	7	21	117	440	585
Gampaha	8	75	847	47	0	0	1	2	3	0	1	1	4	21	90	93	4	1,114	1,197	11	5	51	0	67
Kalutara	7	32	350	37	2	0	1	0	2	2	1	1	1	13	70	17	34	531	570	6	3	41	9	59
Kandy	6	83	625	41	1	1	0	0	0	0	0	0	4	15	104	214	26	1,031	1,120	0	5	90	24	119
Matale	2	26	147	22	0	0	0	0	2	1	1	1	3	8	31	0	14	230	258	1	1	17	3	22
Nuwara Eliya	2	17	144	16	0	0	0	0	0	0	0	0	2	8	19	0	5	194	213	1	0	27	0	28
Galle	6	58	447	31	0	0	1	0	0	3	1	3	1	14	20	4	6	531	595	2	0	30	2	34
Matara	3	24	228	29	2	0	0	0	0	0	1	1	1	3	0	5	8	278	305	1	1	26	2	30
Hambantota	3	22	201	19	0	0	0	0	0	2	0	5	2	7	27	0	4	267	292	0	2	11	1	14
Jaffna	2	11	164	2	0	1	0	0	3	1	0	0	1	7	26	2	0	207	220	0	1	18	0	19
Kilinochchi	1	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	1	16	17	1	0	3	0	4
Mannar	2	0	14	4	0	1	0	0	1	0	0	1	0	3	0	0	23	47	49	1	0	4	0	5
Vavuniya	2	7	48	5	0	0	0	0	0	0	1	1	2	6	4	0	3	70	79	1	0	7	0	8
Mullaitivu	0	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	1	0	0	0	1
Batticaloa	2	15	59	13	0	0	0	0	0	0	0	0	2	3	0	0	0	77	94	0	0	18	0	18
Ampara	1	18	155	9	0	1	0	0	1	2	0	0	1	3	0	0	1	173	192	0	0	14	0	14
Kalmunai	1	10	151	15	0	0	0	0	0	0	0	0	0	2	5	0	1	174	185	0	0	9	0	9
Trincomalee	3	12	136	10	0	1	0	0	1	0	1	1	3	7	14	2	7	183	198	1	0	13	0	14
Kurunegala	6	48	427	50	0	1	0	0	0	0	1	2	6	15	36	0	74	612	666	2	4	59	0	65
Puttalam	4	30	175	15	1	1	0	0	5	2	1	1	2	7	34	1	14	259	293	1	1	24	0	26
Anuradhapura	3	28	235	28	0	1	0	0	1	2	1	2	1	9	24	1	6	311	342	3	2	30	0	35
Polonnaruwa	1	16	63	13	0	1	0	0	0	0	1	0	0	0	0	0	1	79	96	1	0	9	1	11
Badulla	6	40	298	31	0	0	0	0	1	0	0	0	3	10	55	5	14	417	463	1	1	30	0	32
Moneragala	2	9	135	19	0	5	0	0	0	0	1	2	0	5	16	0	1	184	195	2	0	22	0	24
Ratnapura	3	19	338	51	0	0	0	0	1	1	1	3	3	2	0	0	4	404	426	0	1	42	0	43
Kegalle	3	23	203	21	15	0	0	0	0	0	1	1	4	9	17	0	65	336	362	1	1	26	0	28
Total	117	852	7,385	668	26	18	8	2	36	16	17	29	50	203	702	491	403	10,054	11,023	45	49	738	482	1,314

(a) Provisional

** Include PGIM trainees drawing their salaries from the institutions concerned

1 Total Medical Officers

2 Total Medical Officers, Exclude: Administrative and Specialists

3 Total Dental Surgeons

Continued...

Source : Medical Statistics Unit

Table 12. Distribution of Health Personnel by District , Decem ber 2007														... Continued									
DPDHS	Registered/Assistant Medical Officers	Matrons	Ward Sisters	Principals/Sister Tutors	Nursing Officers	Supervising Public Health Nursing Sisters	Nursing Sisters	Pupil Nurses	Total Nurses	MRO	PPD	SSO	MRA	PPA	Total Medical Recording Officers	Pharmacists	Medical Laboratory Technologists	Radiographers	Physiotherapists	Occupational Therapists	School Dental Therapists	Dental Technician	Entomological Assistant
Colombo	133	23	176	54	5,302	49	2,089	7,693	6	7	1	10	36	60	216	260	148	102	22	50	10	12	
Gampaha	109	6	66	10	1,955	28	671	2,736	3	0	0	10	30	43	86	71	30	34	16	41	2	1	
Kalutara	77	3	24	20	928	37	106	1,118	1	1	2	8	17	29	35	51	13	7	1	35	1	3	
Kandy	138	19	56	20	2,478	21	964	3,558	10	42	12	29	2	95	81	66	48	23	5	39	3	4	
Matale	36	3	24	0	395	13	3	438	1	10	11	9	0	31	20	16	5	3	0	16	0	0	
Nuwara Eliya	25	1	5	0	288	6	0	300	1	4	1	7	2	15	7	8	2	3	0	5	0	0	
Galle	77	6	32	2	1,394	6	860	2,300	2	1	0	5	19	27	54	50	32	12	3	26	3	2	
Matara	57	2	11	0	725	6	0	744	0	2	1	4	30	37	32	23	8	3	1	31	0	1	
Hambantota	12	3	4	1	422	7	141	578	2	1	0	4	15	22	14	16	4	1	0	13	0	0	
Jaffna	44	1	6	426	1	137	572	0	2	0	2	1	1	5	37	16	9	5	1	7	0	1	
Kilinochchi	3	0	1	0	27	1	0	29	0	0	0	1	1	2	1	0	0	1	0	0	0	0	
Mannar	4	0	3	0	46	1	0	50	0	0	0	0	0	22	5	3	1	1	0	0	0	0	
Vavuniya	4	1	3	0	82	2	0	88	0	2	0	0	0	16	18	10	6	1	0	0	0	0	
Mullaitivu	6	0	0	0	17	0	0	17	0	0	0	0	0	10	10	0	1	0	0	0	0	0	
Batticaloa	21	2	16	8	435	14	317	792	0	7	0	1	21	29	25	15	7	3	1	4	0	0	
Ampara	6	0	3	0	300	5	0	308	0	1	0	0	4	5	18	18	9	2	0	3	0	2	
Kalmunai	18	1	1	1	369	6	0	378	0	6	0	3	10	19	16	18	5	0	0	1	0	2	
Trincomalee	12	0	6	0	230	2	0	238	0	2	0	0	0	2	12	9	3	1	0	2	0	1	
Kurunegala	133	8	68	32	1,504	31	1,934	3,577	3	1	1	21	52	78	53	59	15	10	0	36	2	0	
Puttalam	36	5	14	0	439	7	0	465	1	0	0	4	17	22	26	27	5	3	1	9	1	2	
Anuradhapura	44	6	35	11	713	6	513	1,284	1	0	1	2	4	8	28	38	15	6	0	12	2	3	
Polonnaruwa	8	0	1	0	74	5	0	80	0	3	0	2	4	9	3	2	0	0	0	7	0	3	
Badulla	40	8	27	7	817	12	639	1,510	0	5	0	5	21	31	31	30	14	7	6	12	0	0	
Moneragala	15	0	11	1	294	3	0	309	0	1	0	9	11	21	15	11	4	1	0	4	0	2	
Ratnapura	71	3	12	10	775	12	721	1,533	0	0	7	12	19	38	27	21	7	2	0	30	0	4	
Kegalle	65	2	27	1	731	9	1	771	0	0	0	6	17	23	34	23	7	3	0	19	0	0	
Total	1,194	103	627	184	21,166	290	9,096	31,466	31	98	37	154	381	701	886	858	392	233	57	402	27	43	

Continued...
Source : Medical Statistics Unit

...Continued

DPDHS	Optalmic Technician	Food and Drug Inspectors	Supervising Public Health Inspectors	Public Health Inspectors	Supervising Public Health Midwives.	Public health Midwives	Hospital Midwives	ECG Recordists	ECG Recordists	EEG Recordists	Microscopists	Dispensers	Public Health Field officers	Froeman	Photograph Technician	Audiology Technician	Workmen Technician	Orthapdic Technician	Cinema Technician	Assistant Technician	Attendants	Other reported
Colombo	30	1	11	125	2	375	260	88	17	26	89	20	2	1	2	9	1	3	0	1,090	2,999	
Gampaha	8	3	15	116	1	507	183	18	4	34	67	23	0	0	1	0	0	0	1	1	508	2,230
Kalutara	8	6	12	90	7	392	162	10	2	15	32	35	0	0	0	0	0	0	0	0	220	1,743
Kandy	8	0	7	80	22	465	164	14	1	11	75	22	0	0	0	0	0	0	1	1	318	3,170
Matale	3	1	1	44	18	258	17	3	1	10	27	12	0	0	0	0	0	0	0	0	166	672
Nuwara Eliya	2	0	1	35	7	162	82	3	0	1	23	3	0	0	0	0	0	0	0	0	162	719
Galle	8	2	12	82	1	349	174	16	2	8	58	4	0	0	0	2	0	1	0	0	176	1,017
Matara	5	1	15	66	0	287	150	7	1	2	38	15	0	0	0	1	0	0	1	1	270	1,093
Hambantota	2	1	7	58	1	241	124	4	0	10	26	41	0	0	0	0	0	1	1	1	166	634
Jaffna	1	1	4	76	19	118	79	1	2	5	47	22	1	0	0	0	0	0	0	0	491	898
Kilinochchi	0	0	0	7	4	14	18	0	1	2	5	0	0	0	0	0	0	0	0	0	49	261
Mannar	0	0	1	13	2	33	30	0	0	0	12	8	0	0	0	0	0	0	0	0	111	237
Vavuniya	1	1	0	13	3	33	27	1	0	1	11	2	0	0	0	0	0	0	0	0	102	347
Mullaitivu	0	0	8	2	2	14	16	0	0	0	5	0	0	0	0	0	0	0	0	0	57	217
Batticaloa	1	0	7	67	8	378	107	7	1	4	36	16	1	0	0	2	0	0	0	0	200	775
Ampara	2	0	3	32	6	99	46	1	0	5	10	20	2	1	0	0	0	0	0	0	37	426
Kalmunai	0	0	5	55	3	133	85	10	0	6	20	18	0	0	0	0	0	0	0	0	76	584
Trincomalee	1	1	6	30	2	118	26	1	0	5	25	22	0	0	0	0	0	1	0	0	125	600
Kurunegala	6	2	13	87	22	443	263	11	2	38	88	126	0	0	0	1	0	0	1	0	556	2,554
Puttalam	2	2	7	42	3	186	73	6	2	23	32	29	0	0	0	0	1	0	0	0	68	640
Anuradhapura	1	1	9	84	19	282	128	5	1	27	56	63	0	0	0	1	0	0	1	0	319	1,233
Polonnaruwa	0	0	5	37	4	121	24	1	0	10	14	18	0	0	0	0	0	0	0	0	82	305
Badulla	7	0	6	63	33	231	109	9	2	7	53	12	0	0	0	4	3	6	1	10	153	1,286
Moneragala	2	1	6	34	6	192	71	3	0	11	30	38	0	0	0	0	0	0	0	0	91	655
Ratnapura	3	0	22	143	13	465	271	6	0	26	68	67	0	0	0	0	0	0	0	0	263	1,138
Kegalle	4	2	9	67	9	271	139	3	0	4	42	9	0	0	0	0	0	0	0	0	266	1,312
Total	105	26	192	1,548	217	6,167	2,828	228	39	291	989	645	6	2	14	13	7	11	14	6,122	27,745	

Source : Medical Statistics Unit

Table 13. Distribution of Specialists in Curative Care Services¹ by District, December 2007

Districts	General Physician	General Surgeon	Obstetricians & Gynaecologists	Cardiologist	Chest Physician	Thoracic Surgeons	Neurologist	Neuro Surgeons	Dermatologists	Rheumatologists	Psychiatrists	Paediatricians	Paediatric Surgeons	ENT Surgeons	Eye Surgeons	Orthopaedic Surgeons	Plastic Surgeons	Genito Urinary Surgeons	Anaesthesiologists	Histo-Pathologists / Chemical Pathologists	Haematologists	Bacteriologists/Microbiologists	Biochemist	Oncologists / Radiotherapists	Oncology Surgeons	Radiologists	Venerologists	Mycologists	Public Health / Community Health Physicians	Specialist Dental Surgeons-Orthodontists	Specialist Dental Surgeons-Maxillofacial	Others					
Colombo	34	28	30	5	3	6	4	4	4	4	24	28	3	5	13	8	4	1	31	16	8	10	7	8	4	15	6	1	14	5	48	31					
Gampaha	9	7	8	1	3	1	1	5	2	2	1	8	3	3	5	1	4	1	7	5	1	1															
Kalutara	4	3	6	1	1	1	1	1	2	1	1	5	1	1	3	1			2	2	2																
Kandy	17	7	9	4	3	2	1	2	1	1	3	12	2	3	3	2			12	4	2	1	-	2	1	5	0	0	0	1	1	20					
Matale	4	2	2	2	2		1	1	1	1	1	4	1	1	2				1	1																	
Nuwara Eliya	2	1	2	1	1		2	1	1	1	1	2	1	2	1	1			5	3				2	1	1											
Galle	8	5	5	1	1	1	1	1	1	1	1	8	1	1	2	1			1	1				2	1	2											
Matara	2	1	1									2							2	1				1	1	1											
Hambantota	4	3	4	1					1		1	5			1	1			2	1				1	1	1											
Jaffna	6	3	2	1							1	1			2	1			1	1				1	1	1											
Kilinochchi																																					
Mannar																																					
Vavuniya									1			1																									
Mullaitivu																																					
Batticaloa	2	3	3	1					1		1	2			1	1			1	1						1											
Ampara	3	4	3	2								3			1																						
Kalmunai	3	2	2									1			1																						
Trincomalee	4	3	3									3			1				1																		
Kurunegala	5	4	6	1			1	1	1	1	1	5		1	2	1			4	1	1			1	1	2											
Puttalam	4	4	4						1	1	1	3		1	3	1			3	1	1					1											
Anuradhapura	4	2	3	1			1	1	1	1	1	4		1	1	1			4	1	1					1											
Polonnaruwa	2	2	3									2		2	2				2	1	1					1											
Badulla	5	5	6	1			1	1	2	1	2	5		2	2	1			4	1	1			1	1	1											
Moneragala	1	1	2									2		1	1				1	1					1	1											
Ratnapura	6	3	3	1			1	1	2	1	1	4		1	2	1			3	3		1				2											
Kegalle	5	5	4						1			5		1	1	1			2	1	1					1											
Sri Lanka	134	97	113	18	11	10	13	9	23	14	41	115	6	24	48	22	6	6	86	42	15	13	8	15	8	43	6	1	14	17	70	87					

Source : Medical Statistics Unit

¹ Specialists of the Faculties of Medicine working in Teaching Hospitals and MBF Consultants in the North and East of Sri Lanka.

² Haematologists, Virologists, Mycologists, Venerologists, Consultant JMO's, Phamacologists, Immunologists, Parasitologists, Nephrologists, Neonatologists & Oncology Surgeons.

Table 14. National Expenditure, Health Expenditure and GNP, 2002 - 2007

Item	2002	2003	2004	2005	2006	2007
National Expenditure (Rs million)	589,622	663,217	665,766	803,546	713,145	885,952
Health Expenditure (Rs million)	25,631	27,292	37,405	43,564	54,363	43,022
Health Expenditure as a % of National Expenditure	4.6	4.1	5.6	5.4	7.6	4.9
Per Capita Health Expenditure (Rs)	1,419	1,417	1,920	2,215	2,734	2,151
GNP(Rs billion)	1,560	1,737	2,016	2,349	2,790	3,540
Health Expenditure as a % of GNP	1.73	1.57	1.85	1.85	1.95	1.22

Source: Management Development and Planning Unit, Department of Health Services

Table 15. Summary of Health Expenditure and Source of Fund, 2002 - 2007

(Rs in 000)

Item	2002	2003	2004	2005	2006	2007
Health Expenditure						
Recurrent Expenditure	21,704,144	22,192,487	29,454,481	35,137,468	45,781,186	54,736,763
Capital Expenditure	3,987,021	5,100,336	7,950,518	8,430,891	8,582,739	8,727,260
	25,691,165	27,292,823	37,404,999	43,568,359	54,363,925	63,464,023
Source of Fund						
Consolidated Fund	22,953,551	26,074,242	31,651,988	40,369,004	50,994,515	60,930,869
Foreign Aid	2,737,614	1,218,581	5,753,010	3,199,355	3,369,410	2,533,154
	25,691,165	27,292,823	37,404,999	43,568,359	54,363,925	63,464,023

Source: Management Development and Planning Unit, Department of Health Services

Table 16. Summary of Health Expenditure by programme, 2007

Programme	Health Expenditure 2007		
	Ministry Of Health	Provincial Health	Total
Recurrent Expenditure			
01.Operational Activities	30,573,349,113.65	13,652,479,532.00	44,225,828,645.65
01. Ministr's Office	52,397,914.90		52,397,914.90
02. Ministry Administration and Establishment Services	7,824,539,012.59		7,824,539,012.59
03. Medical Supply Division	3,646,502,628.94		3,646,502,628.94
04. National Drugs Quality Control Unit	23,877,917.32		23,877,917.32
05. Population Division	5,507,803.20		5,507,803.20
06. Teaching Hospital Maintenance	9,374,644,650.56		9,374,644,650.56
07. District General and Base Hospital Maintenance	4,909,503,310.05		4,909,503,310.05
08. Special Hospitals and Treatment Units Maintenance	3,443,297,659.80		3,443,297,659.80
09. Other Hospital Maintenance	536,828,216.29		536,828,216.29
10. Co-operated Hospitals	756,250,000.00		756,250,000.00
02. Development Activities	4,334,002,490.61	6,176,932,084.44	10,510,934,575.05
11. Human Resources Development	2,893,892,474.95		2,893,892,474.95
12. Relief and Reconstruction in Tsunami Affected Areas	0.00		0.00
13. Hospital Development Projects	0.00		0.00
14. Health Promotion and Diseases Prevention	394,803,615.65		394,803,615.65
15. Control Of Communicable and Non Communicable diseases	0.00		0.00
16. National Nutrition Programme	919,791,258.96		919,791,258.96
17. Medical Research	125,515,141.05		125,515,141.05
Total	34,907,351,604.26	19,829,411,616.44	54,736,763,220.70
Capital Expenditure			
01.Operational Activities	421,754,872.58	383,082,711.90	804,837,584.48
01. Ministr's Office	11,789,129.58		11,789,129.58
02. Ministry Administration and Establishment Services	266,470,708.57		266,470,708.57
03. Medical Supply Division	11,136,034.43		11,136,034.43
04. National Drugs Quality Control Unit	0.00		0.00
05. Population Division	0.00		0.00
06. Teaching Hospital Maintenance	0.00		0.00
07. District General and Base Hospital Maintenance	0.00		0.00
08. Special Hospitals and Treatment Units Maintenance	0.00		0.00
09. Other Hospital Maintenance	0.00		0.00
10. Co-operated Hospitals	132,359,000.00		132,359,000.00
02. Development Activities	7,692,996,743.16	229,425,231.77	7,922,421,974.93
11. Human Resources Development	131,064,202.72		131,064,202.72
12. Relief and Reconstruction in Tsunami Affected Areas	528,997,758.04		528,997,758.04
13. Hospital Development Projects	6,232,851,084.23		6,232,851,084.23
14. Health Promotion and Diseases Prevention	107,097,398.32		107,097,398.32
15. Control Of Communicable and Non Communicable diseases	471,641,466.38		471,641,466.38
16. National Nutrition Programme	205,461,705.58		205,461,705.58
17. Medical Research	15,883,127.89		15,883,127.89
Total	8,114,751,615.74	6,12,507,943.67	8,727,259,559.41
Total Health Expenditure			
01.Operational Activities	30,995,103,986.23	14,035,562,243.90	45,030,666,230.13
01. Ministr's Office	64,187,044.48		64,187,044.48
02. Ministry Administration and Establishment Services	8,091,009,721.16		8,091,009,721.16
03. Medical Supply Division	3,657,638,663.37		3,657,638,663.37
04. National Drugs Quality Control Unit	23,877,917.32		23,877,917.32
05. Population Division	5,507,803.20		5,507,803.20
06. Teaching Hospital Maintenance	9,374,644,650.56		9,374,644,650.56
07. District General and Base Hospital Maintenance	4,909,503,310.05		4,909,503,310.05
08. Special Hospitals and Treatment Units Maintenance	3,443,297,659.80		3,443,297,659.80
09. Other Hospital Maintenance	536,828,216.29		536,828,216.29
10. Co-operated Hospitals	888,609,000.00		888,609,000.00
02. Development Activities	12,026,999,233.77	6,406,357,316.21	18,433,356,549.98
11. Human Resources Development	3,024,956,677.67		3,024,956,677.67
12. Relief and Reconstruction in Tsunami Affected Areas	528,997,758.04		528,997,758.04
13. Hospital Development Projects	6,232,851,084.23		6,232,851,084.23
14. Health Promotion and Diseases Prevention	501,901,013.97		501,901,013.97
15. Control Of Communicable and Non Communicable	471,641,466.38		471,641,466.38
16. National Nutrition Programme	1,125,252,964.54		1,125,252,964.54
17. Medical Research	141,398,268.94		14,398,268.94
Total	43,022,103,220.00	20,441,919,560.11	63,464,022,780.11

Source : Management Development and Planning Unit,
Department of Health Services

Table 17. In-door Morbidity Statistics by Broad Disease Groups, 2007

Disease Group	Total *	Live Discharges* (%)									Deaths*
		Sex		Age Group							
		Male	Female	under 1	1-4	5-16	17-49	50-69	70 & above	Not Known	
1 Intestinal infectious diseases (A00-A09)	141,430	49.1	50.9	12.1	24.5	16.1	26.3	13.7	7.1	0.3	76
2 Tuberculosis (A15-A18)	7,033	69.9	30.1	0.6	1.5	3.6	43.1	38.6	12.3	0.1	288
3 Other bacterial diseases (A20-A49)	10,143	70.0	30.0	18.1	6.8	9.0	42.7	18.7	4.3	0.3	1,923
4 Infections with sexual mode of transmission (A60-A64)	236	34.7	65.3	1.3	-	4.2	79.7	11.0	1.3	2.5	-
5 Viral diseases (A80-B34)	241,031	54.2	45.8	5.3	12.3	16.8	44.1	15.5	5.7	0.2	175
6 Malaria (B50-B54)	1,032	64.0	36.0	0.2	6.0	17.1	55.6	17.7	3.3	0.1	1
7 Helminthiasis (B76,B77,B79,B80)	294	52.4	47.6	1.0	24.8	35.0	22.4	10.2	6.5	-	-
8 Other infectious and parasitic diseases	5,969	54.1	45.9	5.3	12.0	18.9	41.5	17.0	5.1	0.2	2
9 Neoplasms (C00-D48)	65,838	45.9	54.1	0.6	3.1	5.5	32.5	44.5	13.6	0.2	3,498
10 Iron deficiency anaemias (D50)	8,339	40.3	59.7	-	10.1	29.5	20.4	17.8	9.6	12.5	16
11 Haem. con. and other diseases of blood and ... (D51-D89)	10,817	50.6	49.4	3.4	6.6	15.6	38.7	22.7	12.8	0.2	52
12 Diabetes mellitus (E10-E14)	61,489	45.5	54.5	0.0	0.2	1.3	28.3	51.9	18.0	0.3	545
13 Malnutrition and vitamin deficiencies (E40-E46,E50-E56)	1,419	44.3	55.7	2.1	8.7	11.2	28.6	31.6	17.1	0.6	12
14 Oth. endo, nutr. and metabo... (E00-E07,E15-E34,E58-E89)	17,451	34.8	65.2	1.8	2.1	7.6	46.8	30.0	11.5	0.2	77
15 Mental and behavioural disorders (F00-F99)	40,333	58.8	41.2	-	0.2	4.1	67.4	22.8	4.9	0.7	-
16 Diseases of the nervous system (G00-G98)	58,689	50.4	49.6	2.8	5.3	12.8	45.2	23.2	9.2	1.5	535
17 Diseases of the eye and adnexa	102,443	49.4	50.6	1.0	2.6	6.1	23.7	41.7	24.8	0.1	-
18 Dis. of the ear.. (H60-H61,H65-H74,H80-H83,H90-H95)	25,887	50.2	49.8	4.7	13.5	22.2	38.1	15.8	5.5	0.1	-
19 Rheum. fever and rheum. heart dis. (I00-I02,I05-I09)	5,019	34.7	65.3	-	0.6	11.7	45.9	25.6	9.1	7.1	37
20 Hypertensive diseases (I10-I15)	93,985	41.7	58.3	-	-	-	20.6	47.7	30.3	1.4	583
21 Ischaemic heart disease (I20-I25)	85,455	54.2	45.8	-	-	-	20.3	50.3	28.3	1.0	4,536
22 Other heart diseases (I26-I51)	29,842	51.5	48.5	-	-	-	24.1	38.8	29.3	7.8	3,490
23 Cardiovascular disease (I60-I69)	28,114	59.7	40.3	-	-	-	12.3	45.5	41.0	1.2	3,193
24 Other diseases of the circulatory system (I70-I84)	30,645	61.6	38.4	-	-	-	43.1	38.7	12.5	5.7	139
25 Influenza (J10-J11)	1,440	50.9	49.1	10.3	20.9	17.4	27.8	15.7	7.8	0.2	10
26 Pneumonia (J12-J18)	18,708	55.3	44.7	15.7	20.4	13.6	22.1	18.3	9.7	0.1	1,380
27 Other dise. of the upper respir. tract (J00-J06,J30-J39)	94,148	51.5	48.5	11.9	20.9	18.3	29.4	13.6	5.7	0.3	52
28 Diseases of the resp. system exclud... (J20-J22, K40-J98)	365,741	53.0	47.0	8.8	14.1	12.6	23.1	24.4	15.6	1.5	2,260
29 Diseases of teeth and supporting structure (K00-K04)	13,756	56.3	43.7	1.3	13.7	24.0	40.0	16.5	4.4	0.2	-
30 Diseases of the gastrointestinal tract (K20-K92)	223,984	56.6	43.4	0.8	2.9	10.1	50.8	25.6	9.2	0.6	2,431
31 Diseases of skin and subcutaneous tissue (L00-L08,L10-L98)	146,175	57.5	42.5	2.3	7.8	11.7	41.2	26.5	10.3	0.2	-
32 Disorders of the musculoskeletal system (M00-M99)	122,936	51.0	49.0	-	0.6	7.9	46.9	30.0	12.9	1.7	31
33 Diseases of the urinary system (N00-N39)	160,926	52.6	47.4	2.1	4.8	8.0	50.3	23.7	10.5	0.6	1,805
34 Diseases of the male genital organs (N40-N50)	18,988	100.0	-	-	8.4	11.7	32.5	25.6	19.6	2.2	-
35 Disor. of female genit-urinary sys. (N70-N98, N99.2, N99.3)	85,370	-	100.0	0.1	0.2	2.2	74.9	19.4	3.1	0.1	8
36 Abortions (O00-O08)	47,558	-	100.0	-	-	0.5	98.3	-	-	1.1	3
37 False labour and those admitted... (O47)	43,188	-	100.0	-	-	0.6	99.0	-	-	0.4	-
38 Other obstetric conditions	202,743	-	100.0	-	-	0.5	98.6	-	-	0.9	77
39 Single spontaneous delivery (O80)	230,948	-	100.0	-	-	0.5	98.3	-	-	1.2	1
40 Slow fetal growth, fetal malnutrition and... (P05-P07)	7,686	48.9	51.1	100.0	-	-	-	-	-	-	759
41 Other conditions originating in the perinatal period	28,067	51.7	48.3	100.0	-	-	-	-	-	-	784
42 Congenital malformations deformations... (Q00-Q99)	12,783	55.8	44.2	30.8	24.7	-	-	-	-	44.5	568
43 Signs, symptoms and abnormal clinical findings (R00-R99)	326,845	50.2	49.8	4.6	9.5	13.0	42.1	20.7	9.9	0.2	1,829
44 Traumatic injuries (S00-T19, V64)	669,052	67.6	32.4	0.8	6.9	17.2	53.1	16.4	5.3	0.3	1,389
45 Burns and corrosion (T20-T32)	13,409	57.3	42.7	2.8	21.1	15.3	46.4	10.9	3.4	0.2	292
46 Toxic effects of pesticides (T60.0,T60.1-T60.9)	17,723	60.3	39.7	0.4	3.6	9.7	73.6	10.4	2.0	0.3	1,148
47 Snake bites (T63.0)	39,321	59.9	40.1	0.4	3.0	13.4	58.0	20.9	3.9	0.3	91
48 Tox. effe. of ot. sub. oth. tha.. (T36-T59,T61-T62,T63.1-T65)	44,998	45.4	54.6	1.2	10.1	15.4	62.5	8.5	2.0	0.2	413
49 Effects of unspecified external causes... (T33-T35,T66-T79)	27,171	54.5	45.5	1.7	7.4	19.1	47.2	17.9	6.5	0.2	74
50 Complications of surgical and medical care... (T80-T88)	4,887	48.3	51.7	2.6	5.5	10.3	53.1	20.3	8.0	0.3	9
51 Sequelae of injuries, poisoning and of other... (T90-T98)	1,843	55.7	44.3	2.0	6.6	14.0	49.7	19.5	8.0	0.1	1
52 Persons encountering health services.... (Z00-Z13,Z40-Z54)	263,154	51.6	48.4	5.4	8.4	12.6	41.0	21.6	10.8	0.2	-
53 Sterilizations (Z30.2)	7,634	3.0	97.0	-	-	-	94.7	5.3	-	0.1	-
54 Undiagnosed/Un-coded (245)	295,377	51.5	48.5	3.1	4.8	8.3	47.6	25.2	9.4	1.6	3957
Total	4,609,492	47.5	52.5	3.8	6.8	10.3	48.2	20.7	9.3	0.9	38,550

* Total = (Number of Live Discharges + Deaths)

Source: Medical Statistics Unit

International Classification of Diseases (10th Revision)	Cases per 100,000 Population										Deaths per 100,000		
	1990 ³	1995 ⁴	2000	2003	2004	2005	2006	2007	1990 ³	1995 ⁴	2000	2003	
1. Certain infectious and parasitic diseases	2,382.6	1,758.7	2,431.7	1,855.7	2,094.2	1,693.8	2,153.6	2,034.8	14.2	13.2	13.5	10.0	
2. Neoplasms	142.1	190.1	260.2	276.2	301.7	282.2	289.7	329.0	10.2	11.6	13.2	6.7	
3. Diseases of the blood & blood- forming organs & certain disorders involving the immune mechanism	168.0	152.2	111.0	79.4	75.6	83.6	84.7	95.7	1.5	1.0	0.9	0.5	
4. Endocrine, nutritional and metabolic diseases	139.4	205.8	278.4	312.2	328.1	348.7	377.5	401.6	2.6	3.8	4.3	3.3	
5. Mental and behavioural disorders	211.3	261.6	247.0	211.4	199.8	215.7	211.1	201.6	0.4	0.6	0.7	0.1	
6. Diseases of the nervous system	126.6	172.4	243.4	257.7	249.3	250.2	274.7	293.3	3.7	2.9	3.3	2.7	
7. Diseases of the eye and adnexa	166.4	276.6	299.9	366.4	385.3	418.6	458.1	512.0	-	-	-	-	
8. Diseases of the ear and mastoid process	58.4	66.6	86.8	83.9	92.5	96.5	108.9	129.4	-	-	-	-	
9. Diseases of the circulatory system	645.4	925.5	1,153.0	1,206.7	1,188.2	1,236.0	1,266.6	1,364.6	41.7	50.6	54.0	50.3	
10. Diseases of the respiratory system	2,057.2	2,088.7	2,313.4	2,352.7	2,243.3	2,139.2	2,536.2	2,399.0	13.3	16.0	18.1	17.3	
11. Diseases of the digestive system	528.8	739.2	1,056.7	1,095.6	1,062.4	1,080.5	1,132.5	1,188.1	9.2	13.6	16.4	16.2	
12. Diseases of the skin and subcutaneous tissue	471.5	529.2	566.6	566.6	597.5	591.7	664.7	730.5	0.2	0.2	0.3	0.2	
13. Diseases of the musculoskeletal system and connective tissue	565.1	627.9	612.3	587.2	574.0	585.2	604.8	614.4	0.2	0.2	0.1	0.1	
14. Diseases of the genitourinary system	746.6	998.9	1,124.8	1,124.9	1,185.0	1,155.4	1,254.8	1,325.8	2.6	4.8	5.9	5.5	
15. Pregnancy, childbirth and the puerperium ^{1, 5}	1,945.2	2,207.3	3,122.6	3,560.2	3,726.0	3,689.4	4,241.8	4,521.3	1.8	1.3	1.1	4.2	
16. Certain conditions originating in the perinatal period ²	2,848.0	4,986.5	9,108.9	9,642.7	9,514.7	8,630.2			387.8	505.4	599.8	455.2	
17. Congenital malformations, deformations and chromosomal abnormalities	32.3	52.8	54.8	57.6	56.6	59.8	59.9	63.9	1.3	2.5	2.7	2.7	
18. Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	1,134.9	1,311.6	1,061.0	1,242.2	1,320.7	1,317.9	1,545.5	1,633.4	7.0	5.0	8.5	6.7	
19. Injury, poisoning and certain other consequences of external causes	1,799.8	2,552.1	3,345.7	3,371.7	3,361.5	3,460.6	3,809.0	4,090.0	23.3	22.7	23.6	17.7	

¹ Rate Per 100,000 females of the reproductive age group.

² Per 100,000 live births / infant population

Excludes:

³ Northern and Eastern Provinces.

⁴ Jaffna, Kilinochchi, Mullaitivu, and Ampara districts.

⁵ Spontaneous delivery, false labour and those admitted and discharged before delivery.

Table 19. Trends in Hospitalization and Hospital Deaths of Selected Diseases, 1990 - 2007

Disease and ICD Code	Cases per 100,000 Population										Deaths per 100,000 Population									
	1990 ¹	1995 ²	2000	2003	2004	2005	2006	2007	1990 ¹	1995 ²	2000	2003	2004	2005	2006	2007				
Intestinal infectious diseases (A00-A09)	837.5	676.1	747.4	622.5	668.5	670.7	692.9	706.8	3.0	1.0	1.0	0.6	0.9	2.2	0.4	0.4				
Tuberculosis (A15-A19)	80.8	54.0	60.7	42.2	58.0	43.1	37.1	35.2	3.5	3.1	3.0	1.8	3.3	1.7	1.4	1.4				
Diphtheria (A36)	-	-	-	-	0.0	0.0	0.0	-	-	-	-	-	0.0	0.0	0.0	-				
Whooping cough (A37)	1.9	1.0	1.1	0.8	0.0	0.0	0.7	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-				
Septicaemia (A40, A41)	8.5	5.5	13.6	16.0	16.7	18.2	20.1	20.3	4.7	1.4	6.3	4.9	5.9	5.9	7.1	8.5				
Rabies (A82)	1.7	0.9	0.8	0.5	0.5	0.3	0.3	0.3	0.3	0.5	0.5	0.2	0.3	0.2	0.2	0.2				
Measles (B05)	27.6	1.5	90.7	1.3	0.7	0.7	0.5	0.7	0.0	-	0.0	0.0	0.0	0.0	0.0	-				
Viral hepatitis (B15-B19)	40.9	38.7	26.3	23.8	19.2	18.5	20.1	33.1	0.4	0.1	0.1	0.1	0.1	0.0	0.1	-				
Malaria (B50-B54)	678.9	262.2	304.1	68.4	44.8	24.4	11.4	5.2	0.5	0.2	0.6	0.1	0.1	0.0	0.0	-				
Helminthiasis (B76, B77, B79, B80)	37.9	17.3	10.1	6.6	7.1	4.2	2.3	1.5	0.1	0.1	-	0.0	0.0	0.0	0.0	-				
Diabetes mellitus (E10-E14)	87.5	78.6	204.8	231.1	246.8	265.2	296.8	307.3	2.0	3.8	3.7	2.9	2.5	3.4	3.0	2.7				
Nutritional deficiencies (E40-E46, E50-E56)	24.8	7.3	15.9	10.9	8.8	11.7	6.9	7.2	0.4	0.1	0.1	0.1	0.2	0.2	0.1	0.1				
Anaemias (D50-D64)	154.9	134.6	98.9	67.5	62.5	69.6	68.7	74.5	1.0	0.9	0.7	0.4	0.5	0.3	0.4	0.2				
Hypertensive disease (I10-I15)	200.7	326.7	428.3	444.1	417.2	429.1	480.4	469.8	3.6	3.1	3.3	2.9	2.7	3.6	3.0	2.9				
Ischaemic heart disease (I20-I25)	163.2	263.3	313.2	341.7	336.4	353.9	399.9	427.1	15.1	16.8	18.6	18.8	19.2	19.1	20.7	22.7				
Asthma (J45)	554.7	779.3	894.8	921.4	832.1	817.3	910.4	893.5	2.0	3.7	4.4	3.6	4.3	4.3	3.8	3.6				
Diseases of the liver (K70-K76)	64.3	68.9	121.7	126.9	119.8	106.5	85.8	87.3	6.4	8.2	14.1	14.0	13.5	11.6	9.5	10.3				
Abortions ³ (O00-O08)	846.2	832.8	788.2	777.0	809.1	734.9	841.7	859.4	0.3	0.2	0.2	0.1	0.2	0.4	0.1	0.1				

Excludes:

¹ Northern and Eastern Provinces² Jaffna, Kilinochchi, Mullaitivu and Ampara districts³ Rate per 100,000 females of the reproductive age group

Source: Medical Statistics Unit

Table 20. Leading Causes of Hospitalization, 2007

Rank Order	ICD Code (10th Revision)	Causes of Hospitalization	Number of Cases	Proportionate Morbidity	Rate per 100,000 Population.
1	S00-T19, W54	Traumatic injuries	606,889	16.1	3,032.9
2	J20-J22, J40-J98	Diseases of the respiratory system, excluding diseases of upper respiratory tract	365,741	9.7	1,827.8
3	R00-R99	Symptoms, signs and abnormal clinical and laboratory findings	326,845	8.7	1,633.4
4	A80-B34	Viral diseases	241,027	6.4	1,204.5
5	K20-K92	Diseases of the gastrointestinal tract	223,984	5.9	1,119.4
6	O10-O46, O48-O75, O81-O99, Z35	Direct and indirect obstetric causes	202,743	5.4	1,013.2
7	N00-N39	Diseases of the urinary system	151,802	4.0	758.6
8	L00-L99	Diseases of the skin and subcutaneous tissue	146,175	3.9	730.5
9	A00-A09	Intestinal infectious diseases	141,430	3.7	706.8
10	M00-M99	Diseases of the musculoskeletal system and connective tissue	122,936	3.3	614.4
11	I10-I15	Hypertensive diseases	93,985	2.5	469.7
	A00-T98, Z35 Z00-Z13, Z30.2 Z40-Z54	All causes 1	3,776,825	100.0	18,874.7

1 Analysed discharges only

Source: Medical Statistics Unit

Excludes :

1. Single spontaneous delivery, false labour and those admitted and discharged before delivery.
2. Persons encountering health services for examination, investigation and for specific procedures of health care.

Table 21. Leading Causes of Hospitalization by District, 2007

Disease and ICD (10th Revision) Code	District and Rank Order																											
	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwera Eliya	Galle	Matara	Hambantota	Jaffna	Vavuniya	Mannar	Killinochchi	Mullativu	Batticaloa	Ampara ²	Trincomalee	Kurunegale	Puttalam	Anuradhapura	Poonarawa	Badulla	Moneragala	Ratnapura	Kegalle		
Traumatic injuries (S00-T19, W54)	1	1	1	1	1	1	1	1	1	1	1	1	1	7	1	2	1	1	1	1	1	1	1	1	1	1	1	1
Diseases of the respiratory system excluding diseases of the upper respiratory tract, pneumonia and influenza (J20-J22, J40-J98)	2	4	2	2	3	2	2	2	3	2	2	6	2	1	2	1	2	2	2	2	3	2	2	2	2	2	2	2
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	3	2	3	3	2	2	6	3	2	3	3	2	11	13	3	3	4	10	3	3	2	4	3	3	5	5	5	5
Viral diseases (A80-B34)	4	6	5	8	4	6	3	5	5	4	6	12	7	9	10	4	3	4	5	5	4	3	4	5	3	3	3	3
Diseases of the gastrointestinal tract (K20-K92)	5	7	4	5	5	4	5	6	6	5	4	7	6	3	6	6	6	3	4	4	6	5	5	4	4	4	4	4
Direct and indirect obstetric causes (Z35, O10-O46, O48-O75, O81-O99)	6	5	6	4	6	8	4	4	4	7	9	3	5	4	4	7	5	5	8	6	5	6	8	7	10	6	6	6
Diseases of the urinary system (N00-N39)	7	8	8	6	7	11	11	9	9	8	7	5	9	2	5	10	10	9	6	7	7	8	6	8	8	9	9	9
Diseases of the skin and subcutaneous tissue (L00-L99)	8	10	7	7	12	7	12	7	10	9	8	11	8	6	8	12	8	6	9	10	9	10	7	12	9	8	8	8
Intestinal infectious diseases (A00-A09)	9	13	10	9	11	13	7	8	7	6	11	15	3	10	11	5	7	7	8	8	8	10	9	6	6	7	7	7
Diseases of the musculoskeletal system and connective tissue (M00-M99)	10	12	11	10	9	10	10	11	8	10	5	10	14	8	13	8	12	12	10	10	9	9	11	10	7	11	11	11
Diseases of the eye and adnexa (H00-H59)	11	11	9	14	8	5	13	10	11	15	10	4	10	17	16	18	14	13	14	14	16	11	13	14	13	14	14	14
Diseases of the upper respiratory tract (J00-J06, J30-J39)	12	15	12	12	15	9	9	12	12	11	16	13	13	19	7	9	11	11	11	11	11	12	12	11	11	12	12	12
Hypertensive diseases (I10-I15)	13	16	13	13	13	14	8	15	14	12	14	8	4	5	12	11	9	8	13	15	12	16	10	9	12	10	10	10
Diseases of the female genitourinary system (N70-N98, N99.2, N99.3)	14	9	14	11	14	12	16	14	13	14	13	14	18	16	15	15	13	14	12	12	14	14	15	15	18	13	13	13
Neoplasms (C00-D48)	15	3	19	19	10	19	19	13	19	19	17	9	16	15	19	19	19	19	18	11	18	19	14	19	16	18	18	18
Poisoning and toxic effects, excluding toxic effects of pesticides (T36-T59, T64, T61-T62, T65)	16	17	15	16	17	16	14	18	15	16	12	16	15	11	9	13	15	15	16	19	15	15	17	16	15	15	15	15
Mental and behavioural disorders (F00-F99)	17	14	16	18	16	17	15	16	17	17	15	18	12	14	17	16	18	17	17	13	17	17	16	17	17	19	19	19
Snake bites (T63.0)	18	19	18	17	19	15	18	17	16	13	19	17	17	12	14	14	16	16	15	18	13	13	19	13	14	16	16	16
Other diseases of the circulatory system (I70-I84)	19	18	17	15	18	18	17	19	18	18	18	19	19	18	18	17	17	18	19	16	19	18	18	18	19	17	17	17

Source: Medical Statistics Unit

1 Excludes: Single spontaneous delivery, false labour and those admitted and discharged before delivery.

2 Includes Kaimunai DPDHS Division.

Table 22. Leading Causes of Hospitalization, 1997 - 2007

Disease and ICD (10th Revision) code	2007		2006		2005		2004		2003		2002 ⁶		2001		2000		1999		1998		1997 ¹		
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	
Traumatic injuries (S00-T19, V54)	1	16.1	1	17.0	1	16.2	1	16.5	1	16.7	1	14.5	1	13.4	1	14.6	1	14.1	1	13.4	1	13.0	
Diseases of the respiratory system (J20-J22, excluding diseases of upper the respiratory tract, pneumonia, and influenza)	2	9.7	2	10.4	2	9.3	2	10.0	2	10.8	2	9.7	2	8.1	2	9.6	2	9.9	2	10.0	2	10.1	
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	3	8.7	3	8.4	3	7.7	3	8.0	3	7.6	4	6.3	3	5.5	4	5.8	4	5.9	4	6.2	3	6.4	
Diseases of the gastro-intestinal tract (K20-K92)	5	5.9	5	5.9	4	5.9	5	6.0	5	6.3	5	5.6	4	5.0	5	5.4	5	5.3	6	5.3	6	5.2	
Viral diseases (A80-B34)	4	6.4	4	7.3	5	5.0	4	7.5	4	6.3	3	6.4	5	4.6	3	6.8	3	6.3	3	7.2	4	5.6	
Direct and indirect obstetric causes ⁵ (O10-O46, O48-O75, O81-O99, Z35)	6	5.4	6	5.1	6	4.7	6	4.9	6	4.7	6	4.0	7	3.3	7	3.6	9	3.3	9	3.0	10	2.9	
Diseases of the urinary system (N00-N99)	7	4.0	7	3.9	7	4.0	7	4.1	7	4.1	8	3.8	8	3.2	8	3.5	7	3.5	7	3.6	8	3.4	
Intestinal infectious diseases (A00-A09)	9	3.7	8	3.8	8	3.9	8	4.0	8	3.8	7	3.9	6	4.0	6	4.1	6	4.9	5	5.5	5	5.6	
Diseases of the skin and subcutaneous tissue (L00-L99)	8	3.9	9	3.6	9	3.4	9	3.6	10	3.5	10	3.1	10	2.7	10	3.1	10	3.0	10	3.0	9	2.9	
Diseases of the musculoskeletal system and connective tissue (M00-M99)	10	3.3	10	3.3	10	3.4	10	3.5	9	3.6	9	3.3	9	2.9	9	3.3	8	3.4	8	3.5	7	3.6	
Hypertensive diseases (I10-I15)	12	2.5	11	2.6	11	2.7			11	2.8	11	2.5	11	2.3	11	2.4	11	2.3	11	2.3			
Diseases of the upper respiratory tract (J00-J06, J30-J39)	11	2.5																					
Malaria (B50-B54)	14	0.0																					
Other injuries and early complications of trauma (T33-T35, T66-T79, T90-T98)	13	0.8																					

Excludes:

¹ Anpara District⁵ Single spontaneous delivery, false labour and those admitted and discharged before delivery.⁶ Kilirochchi District

Source: Medical Statistics Unit

Table 23. Leading Causes of Hospital Deaths, 2007

Rank Order	ICD Code (10th Revision)	Causes of Death	Number of Deaths	Proportionate Mortality	Rate Per 100,000 Population
1	I20 - I25	Ischaemic heart disease	4,536	13.1	22.7
2	C00 - D48	Neoplasms ¹	3,498	10.1	17.5
3	I26 - I51	Pulmonary heart disease and diseases of the pulmonary circulation	3,490	10.1	17.4
4	I60 - I69	Cerebrovascular disease	3,193	9.2	16.0
5	K20 - K92	Diseases of the gastrointestinal tract	2,431	7.0	12.1
6	J20 - J22 J40 - J98	Diseases of the respiratory system, excluding diseases of the upper respiratory tract	2,258	6.5	11.3
7	A20 - A49	Zoonotic and other bacterial diseases	1,923	5.6	9.6
8	R00 - R99	Symptoms, signs and abnormal clinical and laboratory findings	1,829	5.3	9.1
9	N00 - N39	Diseases of the urinary system	1,803	5.2	9.0
10	S00 - T19, W54	Traumatic injuries	1,389	4.0	6.9
11	J12 - J18	Pneumonia	1,380	4.0	6.9
	A00-T98, Z00-Z13, Z35 Z40-Z54	All causes ²	34,593	100.0	172.9

1 Includes deaths reported (not classified by type of neoplasm) from Cancer Institute, Maharagama

Source: Medical Statistics Unit

2 Analysed deaths only

Table 24. Leading Causes of Hospital Deaths by District, 2007

Disease and ICD (10th Revision) Code	District and Rank Order																								
	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuvera Eliya	Galle	Matara	Hambantota	Jaffna	Vavuniya	Mannar	Killinochchi	Mullativu	Batticaloa	Ampara ²	Trincomalee	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Moneragala	Ratnapura	Kegalle
Ischaemic heart diseases (I20-I25)	1	2	1	2	1	1	1	2	1	1	3	1	1	-	1	2	1	1	2	2	1	1	1	2	1
Neoplasms ¹ (C00-D48)	2	1	8	12	2	6	8	1	11	14	1	14	6	-	8	13	16	5	9	17	3	2	9	8	7
Pulmonary heart disease and diseases of the pulmonary circulation (I26-I51)	3	3	3	3	5	3	3	4	5	6	2	3	10	-	4	4	2	4	4	3	7	4	2	1	2
Cerebrovascular disease (I60-I69)	4	4	4	4	3	2	6	3	2	3	5	6	11	-	16	7	6	3	1	4	6	3	5	8	3
Diseases of gastrointestinal tract (K20-K92)	5	6	2	6	10	10	10	8	12	7	4	7	13	-	6	6	12	9	5	1	11	10	10	12	5
Diseases of the respiratory system, excluding diseases of upper respiratory tract, pneumonia and influenza (J40-J98)	6	7	5	5	6	4	5	5	3	2	7	8	5	-	3	3	5	7	3	6	8	6	7	3	4
Zoonotic and other bacterial diseases (A20-A49)	7	5	6	7	9	15	14	7	7	10	9	5	2	-	5	15	3	2	8	7	10	5	11	5	10
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	8	10	11	1	4	9	16	9	6	8	8	18	14	-	11	14	20	17	13	11	4	8	18	7	17
Diseases of the urinary system (N00-N39)	9	8	9	8	7	11	11	10	10	13	6	2	7	-	13	16	13	6	6	13	1	2	9	4	9
Traumatic injuries (S00-T19)	10	9	10	10	12	12	18	6	16	9	10	10	3	-	9	1	9	16	14	12	12	3	10	12	15
Pneumonia (J12-J18)	11	11	7	9	8	16	15	11	4	15	13	11	8	-	12	8	10	13	10	5	13	11	8	11	6
Toxic effects of pesticides (T60)	12	13	14	11	13	5	4	12	8	4	15	13	4	-	2	10	7	19	7	15	5	4	6	6	9
Conditions originating in the perinatal period, excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition (P00-P04, P08-P96)	13	12	17	14	11	8	9	14	13	16	14	4	17	-	15	19	8	10	12	14	14	14	17	13	17
Slow fetal growth, fetal malnutrition and... (P05-P07)	14	16	16	15	16	13	2	15	9	19	11	12	18	-	7	20	4	11	16	10	9	13	12	14	15
Hypertensive disease (I10-I15)	15	17	13	13	14	7	7	16	15	5	23	16	9	-	17	17	11	12	15	9	20	21	13	19	14
Diabetes mellitus (E10-E14)	16	14	12	17	15	14	12	13	18	12	16	17	19	-	19	21	14	15	17	16	15	15	15	16	19
Poisoning and toxic effects, excluding toxic effects of pesticides (T36-T59, T64 T61-T62, T65)	17	19	15	16	18	17	24	17	14	11	17	21	12	-	10	11	18	18	11	8	21	16	17	13	7
Burns and corrosion (T20-T32)	18	15	18	21	19	24	13	19	19	21	12	9	23	-	20	24	19	14	19	19	18	17	19	22	18
Viral diseases (A80-B34)	19	18	19	18	20	20	19	20	20	20	18	15	16	-	18	18	15	20	18	22	22	18	21	18	18
Other diseases of the circulatory system (I70-I84)	20	21	21	19	17	21	20	23	23	22	21	22	20	-	22	22	22	23	23	23	19	23	16	20	22
Snake bites (T63.0)	21	23	20	22	21	19	23	22	22	18	24	19	24	-	14	12	24	21	20	21	17	20	20	16	20
Other obstetric conditions 10-O16, O38-O46, O48, O60-O75, O81-O99, Z35)	22	24	24	20	23	23	22	21	24	24	20	24	22	-	24	5	23	8	24	18	16	19	23	24	21
Intestinal infectious diseases (A00-A09)	23	22	22	23	22	18	17	18	17	17	19	20	15	-	21	9	17	24	22	20	24	22	22	23	22
Other diseases of the upper respir. tract (J00-J06, J30-J39)	24	20	23	24	24	22	21	24	21	23	22	23	21	-	23	23	21	22	21	24	23	24	24	21	24

Source: Medical Statistics Unit

¹ Deaths reported from Cancer Hospital (not analysed by site and type of neoplasm).² Kalmunai DPDHS Division

Table 25. Leading Causes of Hospital Deaths, 1998 - 2007

Disease and ICD (10th Revision) code	2007		2006		2005		2004		2003		2002 ³		2001		2000		1999		1998	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Ischaemic heart disease (I20-I25)	1	13.1	1	12.6	1	11.4	1	11.6	1	12.5	1	9.9	1	8.5	1	10.6	1	10.0	1	9.5
Pulmonary heart disease and diseases of the pulmonary circulation (I26-I51)	3	10.1	2	10.0	2	15.4	5	8.4	3	9.1	3	7.6	4	6.7	4	8.6	4	8.0	3	8.8
Diseases of the gastro-intestinal tract (K20-K92)	5	7.0	5	6.9	3	8.5	3	9.4	2	10.8	2	9.1	2	8.0	2	9.3	2	9.3	2	9.4
Neoplasms ¹ (C00-D48)	2	10.1	3	9.9	4	8.3	2	9.5	8	4.4	5	6.1	5	6.4	5	7.5	5	7.4	5	6.7
Cerebrovascular disease (I60-I69)	4	9.2	4	8.9	5	7.7	4	8.9	4	9.1	4	7.4	3	7.1	3	9.0	3	9.1	4	8.6
Diseases of the respiratory system, excluding diseases of upper respiratory tract (J40-J98)	6	6.5	6	6.9	6	7.3	6	6.8	5	6.9	6	5.8	6	5.3	6	6.5	6	6.8	7	6.1
Toxic effects of pesticides (T60)	12	3.3	11	3.8	7	5.3	10	4	6	4.5	7	4.0	7	4.1	7	5.4	7	5.7	6	6.7
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	8	5.3	9	4.7	7	5.3	7	5.3	7	4.5	8	3.7	8	3.7	8	4.8	8	5.0	8	4.6
Traumatic injuries (S00-T19, w54)	10	4.0	12	3.8	8	5	11	4.2	11	4.2	11	3.2	9	3.2	10	4.0	9	4.5	11	3.8
Pneumonia (J12-J18)	11	4.0	10	4.4	9	4.3	8	4.3	9	4.4	9	3.5	10	3.5	11	3.6	11	3.6	10	4.4
Zoonotic and other bacterial diseases (A20-A49)	7	5.6	7	4.9	10	4.2	9	4.1	10	4.3	10	3.5	10	3.1	9	7.3	9	7.3	9	4.4
Diseases of the urinary system (N00-N39)	9	5.2	8	4.7									11	2.8						
Disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition (P05-P07)	13	2.2	13	2.3																

¹ Includes deaths reported from the Cancer Hospital (not analysed by site and type of neoplasm).

Exclude:

³ Kilinochchi District

Source: Medical Statistics Unit

District	Poisoning by Drugs Medicaments and Biological Substances		Toxic Effects of Pesticides				Toxic Effects of Other Substances Chiefly Non Medicinal		Total				Case Fatality Rate
	Cases	Deaths	Organophosphate and Carbamate		Other Pesticides		Cases	Deaths	NO		Rate per 100,000 population		
			Cases	Deaths	Cases	Deaths			Cases	Deaths	Cases	Deaths	
Colombo	3,225	8	473	75	726	46	1,650	21	6,224	150	253.4	6.1	2.4
Gampaha	3,074	36	361	56	168	12	1,497	13	5,217	117	243.8	5.5	2.2
Kalutara	1,153	3	318	23	88	4	873	12	2,474	42	222.7	3.8	1.7
Kandy	1,505	6	823	65	268	30	1,625	33	4,355	134	315.6	9.7	3.1
Matale	321	-	273	15	224	12	559	5	1,409	32	295.4	6.7	2.3
Nuwera Eliya	449	-	525	33	202	8	534	-	1,751	41	236.0	5.5	2.3
Galle	994	8	307	20	187	68	669	12	2,265	108	215.3	10.3	4.8
Matarra	773	-	126	17	64	8	1,022	13	2,023	38	248.8	4.7	1.9
Hambantota	598	8	959	31	170	-	576	9	2,351	48	425.9	8.7	2.0
Jaffna	510	2	295	23	27	-	1,540	9	2,406	34	401.7	5.7	1.4
Kilinochchi	3	-	-	-	-	-	-	-	3	-	2.1	0.0	-
Mannar	67	1	96	4	30	1	112	-	311	6	307.9	5.9	1.9
Vavuniya	136	-	243	12	9	-	406	-	806	12	485.5	7.2	1.5
Mullatiyu	186	3	114	10	2	-	574	2	891	15	606.1	10.2	1.7
Batticaloa	327	-	309	1	21	-	361	1	1,020	2	195.0	0.4	0.2
Ampara ¹	614	9	373	23	212	8	328	-	1,567	40	254.8	6.5	2.6
Trincomalee	489	4	228	6	21	-	410	2	1,160	12	326.8	3.4	1.0
Kurunegale	2,460	15	2,205	135	371	9	2,895	71	8,161	230	535.5	15.1	2.8
Puttralam	1,057	2	418	14	67	1	1,124	23	2,706	40	359.8	5.3	1.5
Anuradhapura	1,622	3	1,687	69	660	41	1,036	-	5,118	113	639.0	14.1	2.2
Polonnaruwa	837	2	555	30	582	33	746	9	2,794	74	707.3	18.7	2.6
Badulla	762	7	931	90	209	5	1,004	3	3,011	105	354.2	12.4	3.5
Moneragale	645	12	489	29	131	2	281	2	1,591	45	374.4	10.6	2.8
Ratnapura	1,249	25	666	34	128	3	495	6	2,606	68	240.0	6.3	2.6
Kegalle	773	-	305	38	77	4	852	13	2,062	55	257.1	6.9	2.7
Total	23,829	154	13,079	853	4,644	295	21,169	259	64,282	1,561	321.2	7.8	2.4

Source : Medical Statistics Unit

Includes :

1 Kalmunai DPDHS Division

Table 27. Distribution of Mental Disorders by Region / Campaign³, 2007

District	Dementia		Mental and Behavioral Disorders				Schizophrenia, Schizotypal and Delusional Disorders		Mood Disorders		Neurotic, Stress-Related Somatoform Disorders		Mental Retardation Related Disorders		Behavioral and Emotional Disorders Usually in Childhood and Adolescence		Other and Unspecified Mental Disorders		Total	
	Cases	Deaths	Due to Alcohol		Due to Other Psychoactive Substance Use		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
			Cases	Deaths	Cases	Deaths														
Colombo	214	-	979	-	212	-	4,952	-	2,160	-	289	-	104	-	33	-	252	-	9,195	-
Gampaha	51	-	991	-	42	-	1,477	-	732	-	246	-	63	-	42	-	491	-	4,135	-
Kalutara	19	-	460	-	17	-	246	-	168	-	55	-	5	-	16	-	226	-	1,212	-
Kandy ¹	33	-	884	-	45	-	813	-	1,253	-	183	-	21	-	68	-	286	-	3,586	-
Matale	7	-	176	-	19	-	87	-	238	-	54	-	2	-	3	-	62	-	648	-
NuwaraEliya	33	-	212	-	76	-	94	-	54	-	41	-	27	-	22	-	222	-	781	-
Galle ²	42	-	536	-	103	-	1,659	-	748	-	41	-	32	-	27	-	196	-	3,384	-
Matara	26	-	309	-	4	-	46	-	38	-	69	-	1	-	3	-	85	-	581	-
Hambantota	12	-	154	-	20	-	125	-	209	-	10	-	17	-	4	-	216	-	767	-
Jaffna	22	-	136	-	22	-	856	-	280	-	297	-	7	-	4	-	140	-	1,764	-
Kilinochchi	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-
Mulaitivu	-	-	7	-	48	-	35	-	21	-	146	-	3	-	8	-	52	-	320	-
Vavunia	1	-	17	-	3	-	56	-	79	-	16	-	2	-	4	-	28	-	206	-
Mannar	-	-	59	-	39	-	14	-	48	-	2	-	3	-	2	-	59	-	226	-
Bataloia	-	-	61	-	-	-	23	-	66	-	60	-	3	-	7	-	36	-	256	-
Ampara	8	-	14	-	1	-	40	-	58	-	80	-	22	-	4	-	1	-	228	-
Kalmunai	-	-	8	-	68	-	261	-	42	-	13	-	-	-	32	-	32	-	456	-
Trincomalee	3	-	74	-	13	-	230	-	250	-	27	-	10	-	7	-	31	-	645	-
Kurunegala	60	-	642	-	94	-	1,508	-	1,077	-	148	-	3	-	136	-	221	-	3,889	-
Puttalam	12	-	371	-	37	-	102	-	64	-	37	-	12	-	4	-	77	-	716	-
Anuradhapura	12	-	414	-	21	-	504	-	487	-	42	-	24	-	57	-	473	-	2,034	-
Polonnaruwa	21	-	35	-	8	-	46	-	38	-	27	-	14	-	9	-	327	-	525	-
Badulla	69	-	112	-	89	-	764	-	121	-	89	-	2	-	4	-	787	-	2,037	-
Moneragala	3	-	50	-	116	-	143	-	85	-	23	-	5	-	-	-	79	-	504	-
Rathnapura	27	-	303	-	76	-	561	-	168	-	29	-	4	-	21	-	140	-	1,329	-
Kegalle	17	-	449	-	14	-	74	-	206	-	37	-	2	-	37	-	72	-	908	-
Sri Lanka	692	-	7,453	-	1,187	-	14,716	-	8,690	-	2,061	-	389	-	554	-	4,591	-	40,333	-

Source : Medical Statistics Unit

Includes :

¹ Deltota Mental Rehabilitation Centre Deltota.² Unawatuna District Hospital³ Angoda, Mulleriyawa and Hendala Mental Hospitals also included in respective DPDHS areas

Table 28. Age Specific Mortality Rates per 100,000 Population by Broad Disease Groups, 2001

Disease and ICD Code (10th Revision)	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	All Ages
1 Certain infectious and parasitic diseases A00-B99	54.1	8.2	4.4	3.4	3.3	4.9	5.7	11.3	20.7	39.7	64.8	140.2	206
1.1 Intestinal infectious disease	10.3	3.3	1.3	0.4	0.6	0.7	0.3	0.8	1.6	4.0	9.4	40.6	3.5
2 Neoplasms C00-D48	5.0	3.6	4.6	4.1	4.3	5.0	5.6	11.6	41.7	108.4	206.9	306.6	43.0
3 Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism D50-D89	3.6	0.7	0.4	0.6	0.2	0.5	0.4	0.5	1.2	3.8	7.4	18.7	2.0
4 Endocrine, nutritional and metabolic diseases E00-E88	4.5	0.3	0.3	0.1	0.5	0.8	1.4	2.3	8.2	25.5	76.2	179.8	15.4
5 Mental and behavioural disorders F01-F99	0.3	0.2	0.2	0.5	0.6	0.8	1.4	5.8	10.5	13.2	17.5	30.4	5.9
6 Diseases of the nervous system G00-G98	28.5	4.9	2.4	2.7	2.5	2.9	3.6	5.3	10.9	31.9	147.8	709.6	43.3
7 Diseases of the eye and adnexa H00-H57	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
8 Diseases of the ear and mastoid process H60-H93	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
9 Diseases of the circulatory system I00-I99	86.8	9.7	4.2	4.5	5.3	9.5	13.7	24.9	80.8	237.6	598.4	1,449.8	131.6
10 Diseases of the respiratory system J00-J98	56.1	9.0	2.6	2.1	3.4	4.4	5.4	11.5	28.2	70.7	198.0	488.6	45.2
11 Diseases of the digestive system K00-K92	10.3	1.9	1.1	1.1	0.5	1.6	5.5	25.0	53.6	76.0	80.0	97.4	27.1
12 Diseases of the skin and subcutaneous tissue L00-L98	0.3	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.4	1.9	3.7	0.4
13 Diseases of the musculoskeletal system and connective tissue M00-M99	0.3	0.0	0.1	0.2	0.2	0.3	0.2	0.4	0.6	2.1	10.5	50.3	3.0
14 Diseases of the genitourinary system N00-N98	11.2	1.0	1.1	1.0	1.3	2.4	3.1	5.2	12.2	24.1	50.5	101.2	12.4
15 Pregnancy, childbirth and the puerperium O00-O99 ¹					0.3	0.9	1.6	2.3	0.6				0.3
16 Certain conditions originating in the perinatal period P00-P96 ²	799.0												799.0
17 Congenital malformations, deformations and chromosomal abnormalities Q00-Q99	89.5	3.3	2.1	1.9	1.4	1.6	1.5	0.9	1.2	1.5	5.9	36.3	4.9
18 Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	82.3	15.7	7.7	6.1	8.0	10.2	11.4	20.7	39.7	95.3	323.8	2,822.2	152.5
19 External causes of morbidity and mortality V01-Y99	28.7	14.4	12.0	14.0	61.4	128.7	130.1	101.6	92.7	90.1	97.0	168.1	79.3
All Causes	1,260.5	72.9	43.2	42.1	93.0	174.2	190.1	228.3	402.9	820.4	1,886.7	6,603.0	602.5

Source: Medical Statistics Unit.

Based on Registrar General's mortality statistics

¹ Rates worked out by using the female population of the respective age groups.² Rate per 100,000 births

Table 29. Deaths and Rates for the Five Leading Causes of Death in Each Age Group, 2001

Age and Cause of Death	Number	Rate	Age and Cause of Death	Number	Rate
Under 1 Year Certain conditions originating in the perinatal period P00-P96 ¹	2,865	799.0	15 - 24 Years External causes of morbidity and mortality V01-Y99	3,344	94.0
Congenital malformations, deformations and chromosomal abnormalities Q00-Q99	321	90.2	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	323	9.1
Diseases of the circulatory system I00-I99	311	87.4	Diseases of the circulatory system I00-I99	260	7.3
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	295	82.9	Neoplasms C00-D48	165	4.6
Diseases of the respiratory system J00-J98	201	56.5	Certain infectious and parasitic diseases A00-B99	144	4.0
Others	563	158.1	Others	493	13.9
All causes	4,519	1269.4	All causes	4,706	132.3
1 - 4 Years Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	198	15.7	25 - 49 Years External causes of morbidity and mortality V01-Y99	6,977	104.6
External causes of morbidity and mortality V01-Y99	182	14.4	Diseases of the circulatory system I00-I99	2,848	42.7
Diseases of the circulatory system I00-I99	122	9.7	Diseases of the digestive system K00-K92	2,072	31.1
Diseases of the respiratory system J00-J98	113	8.9	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	1,704	25.6
Certain infectious and parasitic diseases A00-B99	103	8.2	Neoplasms C00-D48	1,413	21.2
Others	243	19.2	Others	3,934	59.0
All causes	919	72.8	All causes	18,885	283.2
5 - 14 Years External causes of morbidity and mortality V01-Y99	438	13.0	50 and above Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	25,816	733.4
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	232	6.9	Diseases of the circulatory system I00-I99	20,969	595.7
Diseases of the circulatory system I00-I99	147	4.4	Diseases of the nervous system G00-G98	7,302	207.4
Neoplasms C00-D48	145	4.3	Diseases of the respiratory system J00-J98	6,865	195.0
Certain infectious and parasitic diseases A00-B99	132	3.9	Neoplasms C00-D48	6,277	178.3
Others	369	11.0	Others	15,629	444.0
All causes	1,436	42.6	All causes	82,393	2340.7

Source : Medical Statistics Unit

Based on Registrar General's mortality statistics
Rate per 100,000 population of the respective age groups.¹ Rate per 100,000 births

Table 30. Age and Sex Specific Death Rates, 1945 - 2001

Age	1945		1955		1965		1975		1985		1991		1996		1997		2001	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
All ages	21.4	22.7	10.7	11.3	8.6	7.8	9.6	7.4	7.3	5.0	6.7	4.3	8.8	4.7	7.9	4.5	7.6	4.5
0 - 4	61.5	63.0	36.0	37.1	17.3	16.2	15.0	14.0	6.9	6.5	4.0	3.3	4.8	3.9	4.7	4.1	3.7	3.0
5 - 9	7.7	9.0	3.6	4.0	2.2	2.3	2.0	2.0	0.9	0.8	0.6	0.6	0.6	0.4	0.5	0.5	0.5	0.4
10-14	3.6	4.5	1.2	1.2	1.1	1.0	1.3	1.0	0.7	0.5	0.7	0.5	0.5	0.4	0.5	0.4	0.5	0.3
15-19	6.5	7.3	1.2	1.7	1.4	1.5	1.6	1.5	1.5	1.3	1.8	1.0	2.8	0.9	1.9	1.0	1.1	0.7
20-24	7.5	10.8	2.0	2.9	1.8	2.3	2.3	1.9	2.8	1.5	3.0	1.3	6.6	1.2	4.0	1.1	2.7	0.8
25-34	8.1	11.3	2.4	3.8	2.1	2.7	2.9	2.5	3.0	1.6	3.2	1.3	5.6	1.1	3.8	1.0	3.1	0.8
35-44	13.1	14.4	3.7	4.6	3.9	3.7	5.0	3.3	4.9	2.2	5.3	2.2	5.7	1.6	4.9	1.5	4.8	1.3
45-54	23.4	17.2	8.1	6.6	7.7	5.9	10.7	6.2	9.4	4.5	9.1	3.9	9.9	3.8	9.8	3.7	8.7	3.0
55 & above	78.2	90.2	44.3	47.7	42.3	42.5	51.9	43.9	42.0	32.6	38.9	30.7	39.2	27.4	39.4	26.6	36.8	24.1

Based on Registrar General's mortality statistics.
Rate per 1000 population.

Source: Medical Statistics Unit

Table 31. Age and Sex Specific Mortality Rates Per 100,000 Population for Selected Diseases, 2001

Disease and ICD (10th Revision) Code	Sex	All ages	Under 1 year	1-4	5-14	15-24	25-44	45-64	65 & over
Neoplasms C00-D48	M	47.3	3.8	3.7	5.3	5.1	13.7	111.2	345.9
	F	38.9	6.3	3.4	3.3	4.2	15.2	95.3	219.1
Anaemias D50-D64	M	1.9	3.3	0.5	0.5	0.4	0.6	3.2	14.4
	F	2.0	1.7	0.8	0.4	0.2	0.5	3.6	14.8
Mental and behavioural disorders F01-F99	M	9.8	0.5	0.2	0.3	1.0	10.3	24.0	36.8
	F	2.1	0.0	0.3	0.4	0.4	1.0	2.5	17.7
Hypertensive diseases I10-I14	M	25.7	2.7	0.0	0.2	0.4	2.8	42.8	281.8
	F	19.7	1.7	0.5	0.0	0.7	1.7	21.9	219.9
Ischaemic heart diseases I20-I25	M	71.3	8.7	1.2	0.7	1.7	23.5	168.5	551.9
	F	30.7	9.7	1.3	0.4	0.7	3.9	46.7	299.1
Diseases of the respiratory system J00-J98	M	58.6	64.9	8.7	2.3	4.3	17.3	102.3	530.3
	F	32.2	46.8	9.2	2.4	3.4	8.2	44.5	278.8
Diseases of the digestive system K00-K92	M	47.0	11.5	2.0	1.2	1.4	47.7	132.0	137.3
	F	7.7	9.1	1.8	1.0	0.7	3.6	14.1	50.2
Transport accidents V01-V99	M	18.2	1.1	1.9	3.0	13.0	22.5	30.1	48.8
	F	3.5	0.6	1.0	1.5	1.5	2.5	5.8	14.6
Accidental poisoning by and exposure to noxious substances X40-X49	M	1.0	0.0	0.5	0.1	0.6	1.1	1.9	2.7
	F	0.3	1.1	0.8	0.1	0.2	0.2	0.3	0.2
Intentional self-harm X60-X84	M	38.7	0.0	0.0	1.1	28.4	56.9	63.8	80.5
	F	10.6	0.0	0.0	0.9	22.3	13.5	8.0	11.8
Deaths from all causes	M	763.1	1,404.6	77.0	48.2	190.0	393.5	1,194.6	5,877.8
	F	745.7	1,109.7	68.7	36.9	74.1	104.4	466.0	4,153.7

Based on Registrar General's Mortality statistics.

Source : Medical Statistics Unit

Table 32. Case Fatality Rate for Selected Diseases, 2003, 2004, 2005, 2006* and 2007

Disease	2003			2004			2005			2006*			2007		
	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate
Typhoid and para typhoid	6,767	13	0.2	5,932	44	0.0	4,783	23	0.5	3,595	1	0.0	3,595	3	0.1
Tetanus	41	9	22.0	53	10	14.7	42	9	21.4	70	7	10.0	57	8	14.0
Shigellosis	8,662	20	0.2	9,798	25	0.2	7,226	127	1.8	6,375	7	0.1	6,195	4	0.1
Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight	9,625	913	9.5	8,578	810	9.8	7,553	726	9.6	7,533	743	9.9	7,686	759	9.9
Measles	243	-	-	143	-	-	129	2	2	103	-	-	132	1	0.8
Whooping cough	148	-	-	-	-	-	-	-	-	133	1	0.8	-	-	-
Viral hepatitis	4,582	11	0.2	3,727	17	0.4	3,631	7	0.2	3,994	13	0.3	6,611	10	0.2
Malaria	13,165	16	0.1	8,722	10	0.2	4,792	3	0.1	2,276	1	0.0	1,032	1	0.1
Tetanus neonatorum	21	-	-	11	2	17	24	-	-	0	-	-	3	-	-
Diseases of the liver	24,433	2,695	11.0	23,324	2,631	12.1	20,938	2,274	10.9	17,071	1,888	11.1	17,447	2,054	11.8
Septicaemia	3,088	948	30.7	3,253	1,150	39.4	3,574	1,161	32.5	3,996	1,412	35.3	4,067	1,693	41.6
Snake bites	36,832	92	0.2	34,596	102	0.2	36,861	134	0.4	39,793	100	0.3	39,321	91	0.2
Hypertensive diseases	89,131	609	0.7	86,745	615	0.6	90,016	767	0.9	95,540	593	0.6	93,985	583	0.6
Ischaemic heart disease	65,787	3,619	5.5	65,462	3,730	5.6	69,598	3,762	5.4	79,524	4,125	5.2	85,455	4,536	5.3
Pneumonia	24,093	1,278	5.3	21,450	1,393	5.1	21,111	1,417	6.7	21,811	1,448	6.6	18,708	1,380	7.4
Asthma	177,392	702	0.4	161,948	846	0.4	160,738	841	0.5	181,050	765	0.4	178,777	721	0.4
Bacterial meningitis	3,116	158	5.1	3,510	157	7.5	2,507	117	4.7	3,257	134	4.1	3,409	121	3.5

* Revised

Source: Medical Statistics Unit

Table 33. Average Duration of Stay (days) in Selected Types of Hospitals, 1990 - 2007

Type of Hospital	1990 ²	1995 ³	2002	2003	2004	2005	2006	2007
National Hospital, Colombo	6.6	6.1	5.3	5.0	4.8	4.4	4.4	4.3
Teaching Hospitals							3.6	3.6
Provincial Hospitals ¹	5.8	5.1	4.0	4.0	3.9	4.2	3.1	3.3
Base Hospitals	4.6	4.0	3.0	3.2	3.0	3.0	2.4	2.3
District Hospitals	3.5	2.9	2.3	2.3	2.3	2.2	1.9	2.0
Peripheral Units	3.3	2.7	2.1	2.2	2.2	2.0	1.9	2.0
Rural Hospitals	3.8	3.3	2.1	2.0	2.1	1.9	1.8	1.9
Children's Hospital	4.2	3.8	3.2	3.3	3.0	3.1	2.9	3.3
Eye Hospital	8.6	7.9	5.7	6.7	8.0	7.3	3.8	3.3
Cancer Hospital	21.9	15.9	8.8	9.3	8.9	10.0	8.3	8.2
Mental Hospitals	62.3	62.1	63.8	67.5	54.6	62.8	30.2	60.0
Chest Hospitals	19.0	26.9	N/A	N/A	25.0	8.7	14.4	N/A
Maternity Hospitals	4.5	4.8	4.7	4.1	4.5	5.5	5.7	3.6
Maternity Homes	4.5	2.8	2.9	2.4	2.4	2.2	3.1	2.6
Leprosy Hospitals							73.3	77.0
Rehabilitation Hospitals							24.5	30.0

¹ Includes Teaching Hospitals except 2006 & 2007

Source: Medical Statistics Unit

Excludes:

² Northern and Eastern Provinces³ Jaffna, Kilinochchi, Mullaitivu and Ampara Districts**Table 34. Registered Births and Hospital Births 1965 - 2007**

Year	Registered Live Births	Live Births in Government Hospitals	% of Live Births in Government Hospitals
1965	369,437	230,986	62.5
1970	367,901	243,844	66.3
1975	375,857	251,039	66.8
1980	418,373	316,394	75.6
1985	389,599	292,970	75.2
1990 ²	294,120	241,390	82.1
1991 ²	304,347	262,388	86.2
1992	356,842	296,484	83.1
1993	350,707	298,567	85.1
1994	356,071	300,180	84.3
1995	343,224	297,949	86.8
1996 ³	330,963	287,514	86.9
1997 ³	325,017	284,955	87.7
1998	322,672	287,514	88.2
1999	328,725	300,866	91.3
2000	347,749	314,352	93.9
2001	358,583	325,813	92.0
2002	363,549 ¹	307,272	84.5
2003	363,343 ¹	316,465	87.1
2004	360,220 ¹	336,642	93.5
2005	370,424 ¹	341,539	92.2
2006	371,264 ¹	353,361	95.2
2007	380,069 ¹	356,852	93.9

¹ Provisional

Source: Medical Statistics Unit

² Excludes Northern and Eastern Provinces³ Excludes Kilinochchi and Mullaitivu Districts

Table 35. Inpatients Treated and Hospital deaths by Type of Institutions and Districts, 2007

District	Teaching Hospitals ¹		Provincial Hospitals		Base Hospitals		District Hospitals		Peripheral Units		Rural Hospitals		Maternity Homes and CD		Other Hospitals ²		Total Hospitals		Inpatients per 1,000 population	Hospital Deaths per 100
	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths		
Colombo	495,695	8,205			105,115	907	16,119	71	28,975	170	987	3			63,995	1,611	710,886	10,967	289	1.5
Gampaha	124,789	1,368			208,774	1,827	51,345	141	11,429	18	21,100	20			4,970	12	422,407	3,386	197	0.8
Kalutara			79,645	430	98,748	832	46,883	100	15,258	25	11,296	6					251,830	1,393	227	0.6
Kandy	205,871	3,164			70,069	664	63,553	134	19,196	17	40,934	31			2,097	2	401,720	4,012	291	1.0
Matale					71,189	407	13,808	38	13,408	40	8,097	8					106,502	493	223	0.5
Nuwera Eliya					33,914	403	46,798	208	9,539	10	7,022	34					97,273	655	131	0.7
Galle	79,156	2,130			34,145	272	55,137	153	31,527	51	9,940	16			225		210,130	2,622	200	1.2
Matara			93,806	402	16,526	45	28,620	70	10,199	25	14,832	36					163,983	578	202	0.4
Hambantota					86,379	501	25,344	30	14,845	9	18,083	5					144,651	545	262	0.4
Jaffna	76,616	1,050			10,276	35	13,913	33	11,222	9	1,566				152		113,745	1,127	190	1.0
Kilinochchi									216								216		1	0.0
Mullaitivu							10,199	44	5,920	15	8,994	49					25,113	108	171	0.4
Vavuniya					39,434	320	3,218		514		74						43,240	320	260	0.7
Mannar					10,600	50	3,290		2,117								16,007	50	158	0.3
Batticaloa					22,875	54	14,479	6			5,640						45,230	60	86	0.1
Ampara ³					93,898	641	23,354	59	5,549	1	2,451	8					128,521	709	209	0.6
Trincomalee			34,603	297	13,900	40	16,683	10	7,032	5	7,421	5					79,639	357	224	0.4
Kurunegala	147,711	2,190			74,659	596	127,564	370	36,722	80	22,757	16					409,413	3,252	269	0.8
Puttalam			39,414	371	55,665	421	23,402	71	5,914	22	10,766	9					135,161	894	180	0.7
Anuradhapura			110,534	1,334	15,775	11	43,252	104	28,856	57	52,854	52					251,271	1,558	314	0.6
Polonnaruwa			60,865	635	11,736	53	8,556	23	14,576	36	16,800	7					112,533	754	285	0.7
Badulla			80,539	903	24,495	253	54,905	168	2,202		24,807	40			23		186,971	1,364	220	0.7
Moneragala					40,746	333	54,447	122	3,217		18,659	18			0		117,069	473	275	0.4
Ratnapura			98,852	848	71,913	559	48,137	155	26,129	62	9,437	31			0		254,468	1,655	234	0.7
Kegalle	66,860	748			69,276	390	33,872	61	3,555	16	7,941	3			9		181,513	1,218	226	0.7
Total	1,196,698	18,855	598,258	5,220	1,280,107	9,614	826,878	2,171	308,117	668	322,458	397			71,471	1,625	4,609,492	38,550	230	0.8

Includes : Source : Medical Statistics Unit

¹ De Soysa and Castle Street Hospitals for Women, Eye Hospital and Children's Hospital² Chest, Leprosy, Mental, Dental, Fever, Rehabilitation, Prison and Police Hospital.³ Kalmuna DPDHS Division

Table 36. Outpatient Attendance by District and Type of Institution, 2007

District	Teaching Hospitals ¹	Provincial Hospitals	Base Hospitals	District Hospitals	Peripheral Units	Rural Hospitals	Maternity Homes & CD	Other Hospitals ²	Central Dispensaries	Total Attendance	Attendance Per 1000 Population
Colombo	3,170,354		468,857	438,992	449,475	70,770		641,032	354,942	5,594,422	2,277.9
Gampaha	535,214		887,995	645,535	163,213	263,852		114,635	639,455	3,249,899	1,518.6
Kalutara		312,014	537,193	603,510	101,987	189,724			152,069	1,896,497	1,707.0
Kandy	585,548		425,270	898,042	206,244	689,169		94,425	380,830	3,279,528	2,376.5
Matale			428,301	216,808	141,382	194,502	7,726	7,484	200,396	1,196,599	2,508.6
Nuwara Eliya			141,752	317,279	34,308	76,876	20,844		89,117	680,176	916.7
Galle	354,832		110,534	589,053	409,941	237,551	67,374	75,127	345,146	2,189,558	2,081.3
Matara		214,446	112,460	278,707	222,063	206,168	62,301		359,657	1,455,802	1,790.7
Hambantota		202,223	347,676	275,270	191,818	245,136	119,503		112,702	1,494,328	2,707.1
Jaffna	243,989		102,335	312,901	262,886	78,095	193,492		275,247	1,468,945	2,452.3
Kilinochchi		86,686		13,247			40,870		9,987	150,790	1,032.8
Mannar			141,150	77,871	24,499	14,089	34,226		31,611	323,446	3,202.4
Vavuniya		215,587		32,193	18,457		88,434		27,700	382,371	2,303.4
Mullaitivu				97,138	43,671	52,559	35,729		31,727	260,824	1,774.3
Batticaloa	156,867		231,173	291,247	19,904	157,417	75,016	2,973	287,211	1,221,808	2,336.2
Ampara ³		186,753	482,782	480,526	168,847	74,480	116,664		264,850	1,774,902	2,886.0
Trincomalee		163,405	80,041	94,643	79,948	114,406	58,120		229,255	819,818	2,309.3
Kurunegala	402,288		395,908	1,182,965	511,208	456,282	13,970		686,553	3,649,174	2,394.5
Puttalam		224,470	244,859	304,199	134,371	136,704	92,199		262,906	1,399,708	1,861.3
Anuradhapura		176,092	152,629	415,237	399,738	703,292			339,414	2,186,402	2,729.6
Polonnaruwa		142,342	110,548	88,655	209,722	210,084			172,645	933,996	2,364.5
Badulla		164,915	350,243	829,789	39,616	455,136	12,503	15,965	303,048	2,171,215	2,554.4
Moneragala			148,449	713,034	40,297	292,455			139,428	1,333,663	3,138.0
Ratnapura		308,072	449,972	663,174	297,156	262,789			176,618	2,157,781	1,986.9
Kegalle	290,225		472,316	381,142	70,511	174,598	74,688	51,125	287,515	1,802,120	2,247.0
Total	5,739,317	2,397,005	6,822,443	10,241,157	4,241,262	5,356,134	1,113,659	1,002,766	6,160,029	43,073,772	2,152.6

Source: Medical Statistics Unit.

Includes:

¹ National Hospital Sri Lanka, TH Sri Jayawardanapura,

TH Colombo South, Children's Hospital and Eye Hospital

² Cancer, Dental, Fever, Chest, Police and Prison Hospitals and Mental Rehabilitation Centres³ Kalmunai DPDHS Division

Table 37. Out Patient Department (OPD) visits by DPDHS area - 2007

DPDHS	Quarter				Total Visits
	First	Second	Third	Forth	
Colombo	1,545,668	1,326,955	1,407,179	1,314,620	5,594,422
Gampaha	763,772	822,956	839,344	823,827	3,249,899
Kalutara	479,001	477,235	481,039	459,222	1,896,497
Kandy	754,471	897,100	816,681	811,276	3,279,528
Matale	286,778	292,604	303,143	314,074	1,196,599
Nuwera Eliya	162,549	173,204	171,060	173,363	680,176
Galle	539,372	528,434	566,529	555,223	2,189,558
Matara	358,484	354,597	374,524	368,197	1,455,802
Hambantota	381,199	345,091	384,351	383,687	1,494,328
Jaffna	383,649	349,824	363,568	371,904	1,468,945
Kilinochchi	72,996	53,984	11,545	12,265	150,790
Mannar	73,055	73,732	78,984	97,675	323,446
Vavuniya	101,477	96,667	91,322	92,905	382,371
Mullaitivu	.	43,467	103,147	114,210	260,824
Batticaloa	330,104	310,305	287,073	294,326	1,221,808
Ampara	185,872	180,505	178,848	185,064	730,289
Kalmunai	260,631	256,470	258,528	268,984	1,044,613
Trincomalee	207,358	215,182	208,579	188,699	819,818
Kurunegala	841,082	942,075	907,756	958,261	3,649,174
Puttalam	332,050	356,272	349,473	361,913	1,399,708
Anuradhapura	582,861	518,755	531,755	553,031	2,186,402
Polonnaruwa	226,258	226,418	245,034	236,286	933,996
Badulla	525,104	548,965	547,655	549,491	2,171,215
Moneragala	327,207	341,557	333,726	331,173	1,333,663
Ratnapura	537,864	525,439	531,864	562,614	2,157,781
Kegalle	425,633	481,036	451,097	444,354	1,802,120
Grand Total	10,684,495	10,738,829	10,823,804	10,826,644	43,073,772

Source: Medical Statistics Unit.

Table 38. Out Patient Department (OPD) visits by Type of hospital - 2007

Hospital Type	Quarter				Total Visits
	First	Second	Third	Forth	
Teaching Hospitals	1,575,890	1,393,809	1,428,478	1,341,140	5,739,317
Provincial Hospitals	630,646	618,320	580,626	567,413	2,397,005
Base Hospitals	1,661,707	1,709,882	1,737,823	1,713,031	6,822,443
District Hospitals	2,419,181	2,673,175	2,565,122	2,583,679	10,241,157
Peripheral Units	1,029,207	1,040,362	1,074,287	1,097,406	4,241,262
Rural Hospitals	1,295,497	1,314,698	1,356,658	1,389,281	5,356,134
Maternity Homes & CD	269,765	262,253	293,576	288,065	1,113,659
Other Hospitals	240,552	239,910	247,362	274,942	1,002,766
Central Dispensaries	1,562,050	1,486,420	1,539,872	1,571,687	6,160,029
Total Visits	10,684,495	10,738,829	10,823,804	10,826,644	43,073,772

Source: Medical Statistics Unit.

Table 39. Clinic Visits by quarter, by DPDHS division, 2007

DPDHS	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		Annual	
	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits
Colombo	208,526	741,933	233,814	757,934	237,683	812,994	227,064	799,466	907,087	3,112,327
Gampaha	102,761	350,944	91,497	338,826	107,966	375,214	100,173	355,419	402,397	1,420,403
Kalutara	63,349	191,748	55,314	181,234	64,165	201,971	61,827	202,399	244,655	777,352
Kandy	99,249	456,730	103,915	447,843	114,663	478,421	100,227	470,499	418,054	1,853,493
Matale	26,263	100,413	25,405	98,219	31,448	107,588	27,676	105,612	110,792	411,832
Nuwera Eliya	14,812	48,796	14,829	50,264	16,718	49,387	16,707	56,801	63,066	205,248
Galle	63,077	202,585	51,866	189,408	67,109	215,450	68,244	214,355	250,296	821,798
Matara	39,309	113,649	37,760	107,641	40,426	116,668	41,117	120,720	158,612	458,678
Hambantota	35,639	95,257	35,737	94,657	39,259	95,592	35,698	96,258	146,333	381,764
Jaffna	31,844	188,217	32,402	178,051	31,558	181,493	27,596	178,672	123,400	726,433
Kilinochchi	5,131	15,291	5,217	15,624	65	443	330	725	10,743	32,083
Mullaitivu			1,932	4,999					1,932	4,999
Vavuniya	9,167	38,589	9,751	39,912	10,633	42,898	9,507	39,922	39,058	161,321
Mannar	5,171	17,950	5,976	21,017	6,618	22,382	5,793	21,973	23,558	83,322
Batticaloa	19,815	62,154	18,710	65,000	21,390	65,073	20,058	63,165	79,973	255,392
Ampara	23,172	54,445	13,756	47,875	15,641	55,351	19,790	60,002	72,359	217,673
Kalmunai	16,465	61,606	18,689	64,687	18,689	64,203	18,689	64,203	72,532	254,699
Trincomalee	8,673	38,676	10,785	44,570	14,641	45,133	11,236	40,549	45,335	168,928
Kurunegala	71,586	321,473	69,745	314,686	76,495	335,148	74,726	332,676	292,552	1,303,983
Puttalam	35,510	121,613	35,286	122,230	36,262	127,004	33,542	124,568	140,600	495,415
Anuradhapura	38,451	166,132	35,394	167,476	40,250	175,474	36,011	172,049	150,106	681,131
Pollonnaruwa	21,351	66,656	20,680	66,962	20,985	65,151	20,529	68,054	83,545	266,823
Badulla	54,991	213,558	53,365	210,758	57,859	220,796	56,657	223,187	222,872	868,299
Moneragale	26,613	64,612	21,544	63,764	26,225	72,693	25,944	70,799	100,326	271,868
Ratnapura	65,181	218,829	59,896	204,687	71,251	219,324	70,709	208,372	267,037	851,212
Kegalle	41,323	167,827	42,655	162,963	46,659	179,585	42,668	181,131	173,305	691,506
Total	1,127,429	4,119,683	1,105,920	4,061,287	1,214,658	4,325,436	1,152,518	4,271,576	4,600,525	16,777,982

Source: Medical Statistics Unit.

Table 40. Clinic Visits by quarter, by Type of Hospitals, 2007

Hospital Type	First Quarter		Second Quarter		Third Quarter		Forth Quarter		Annual	
	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits
Teaching Hospitals	307,165	1,323,250	322,994	1,305,729	340,219	1,404,416	324,226	1,376,001	1,294,604	5,409,396
Provincial Hospitals	147,959	509,678	141,285	510,293	143,350	517,062	143,054	526,040	575,648	2,063,073
Base Hospitals	266,273	777,097	242,108	733,769	285,280	807,232	267,022	785,043	1,060,683	3,103,141
District Hospitals	149,559	601,346	146,793	602,749	174,862	633,739	175,401	636,829	646,615	2,474,663
Rural Hospitals	68,872	267,257	65,276	269,585	79,890	299,865	63,553	284,655	277,591	1,121,362
Peripheral Units	77,377	244,700	72,537	237,329	75,554	248,255	66,950	236,225	292,418	966,509
Central Dispensaries & Maternity Homes	8,252	45,208	8,604	44,882	7,310	43,529	8,353	43,904	32,519	177,523
Central Dispensaries	49,558	231,157	50,663	234,707	54,247	241,133	56,099	256,367	210,567	963,364
Other Institutes	52,414	119,990	55,660	122,244	53,946	130,205	47,860	126,512	209,880	498,951
Grand Total	1,127,429	4,119,683	1,105,920	4,061,287	1,214,658	4,325,436	1,152,518	4,271,576	4,600,525	16,777,982

Source: Medical Statistics Unit.

Table 41. Trends in Inpatient and Outpatient Attendance and Rates Per 1,000 Population, 1970 -2007

Year	Inpatients Treated		Outpatient Attendance ¹	
	Number '000	Rate	Number '000	Rate
1970	2,054	164.1	34,895	2,788.0
1975	2,146	159.0	27,654	2,049.1
1980	2,335	158.3	31,892	2,162.6
1985	2,494	157.4	29,570	1,867.1
1990 ²	2,533	174.6	28,401	2,000.5
1995 ³	2,953	179.3	32,084	1,947.7
1996 ⁴	3,339	184.5	35,348	1,953.2
1997 ⁵	3,454	191.7	38,078	2,114.0
1998	3,791	201.9	41,071	2,187.7
1999	3,825	200.9	41,323	2,170.1
2000	4,015	207.4	43,329	2,238.2
2001	4,092	218.6	43,350	2,315.6
2002	4,032	212.7	45,681	2,409.9
2003	3,993	207.4	43,765	2,273.3
2004	4,242	218.0	43,392	2,229.6
2005	4,345	220.9	42,482	2,160.0
2006	4,463	224.4	41,429	2,083.3
2007	4,609	230.3	43,073	2,152.6

Source: Medical Statistics Unit.

Excludes:

- ¹ Clinic Attendance
- ² Northern and Eastern Provinces
- ³ Jaffna, Kilinochchi, Mullaitivu and Ampara Districts
- ⁴ Kilinochchi and Mullaitivu Districts
- ⁵ Ampara District

Table 42. Maternal Services By Type of Hospital, 2007

Type of Institution	Method of Deliveries			Total Deliveries	Outcome of Delivery		
	Single	Twin	Other		Normal	Forceps	Caesarean
Teaching Hospitals	116,978	1,204	24	118,206 (33%)	79,014	1,773	37,419
Provincial Hospitals	78,190	751	12	78,953 (22%)	56,493	566	21,894
Base Hospitals	115,468	850	8	116,326 (33%)	87,657	996	27,673
District Hospitals	30,124	85	2	30,211 (8%)	29,898	63	250
Peripheral Units	5,559	25	-	5,584 (2%)	5,539	23	22
Rural Hospitals	6,595	24	-	6,619 (2%)	6,532	0	87
Maternity Homes	1,088	8	-	1,096 (0%)	1,096	-	-
Sri Lanka	354,002	2,947	46	356,995 (100%)	266,229	3,421	87,345

Source: Medical Statistics Unit

Table 43. Utilization of Medical Institutions by District, 2007

District	Teaching Hospitals			Provincial Hospitals			Base Hospitals			District Hospitals			Peripheral Units			Rural Hospitals			Maternity Homes & Central Dispensary			Other Hospitals		
	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate
Colombo	3.7	69.7	71.6				2.2	139.0	82.5	2.6	52.8	34.2	1.5	93.8	39.3	2.3	34.9	56.0			10.3	31.8	66.7	
Gampaha	3.1	105.5	93.0				2.1	125.9	72.7	2.0	73.8	36.5	1.7	77.5	34.7	1.5	51.1	106.2			46.6	10.7	47.6	
Kalutara				3.0	126.2	107.5	2.3	110.8	70.4	1.6	80.6	36.1	1.8	80.3	38.7	1.7	39.2	87.1						
Kandy	4.2	71.5	85.1				2.9	96.1	79.0	2.1	65.1	36.1	2.5	71.5	52.0	2.4	41.5	64.1			19.4	17.6	53.2	
Matale							2.2	86.0	65.9	1.0	59.7	21.9	3.3	63.5	62.2	1.8	20.8	41.2						
Nuwera Eliya							3.2	115.8	104.0	2.2	58.5	36.7	2.4	93.2	63.3	1.8	59.6	98.5						
Galle	3.5	104.0	104.0				2.9	109.8	89.0	3.3	62.2	39.6	1.6	96.6	41.3	1.6	41.6	94.7			7.6	23.8	55.4	
Matara				3.0	96.4	80.7	2.5	98.0	68.1	1.9	59.3	40.3	2.3	53.8	32.6	1.8	41.1	85.2						
Hambantota							1.9	112.4	61.1	1.2	116.4	38.7	1.1	61.4	23.5	1.5	44.9	111.7						
Jaffna	4.5	64.0	81.8				3.3	38.9	36.4	2.8	49.4	37.3	3.0	35.4	30.5	2.3	15.1	23.7			11.3	7.4	26.6	
Kilinochchi										0.9	17.1	17.6												
Mullaitivu										3.2	111.4	97.9	4.0	46.7	54.2	2.6	66.5	90.6						
Vavuniya										2.1	52.6	29.9	1.2	10.7	6.8	1.3	1.9	8.2						
Mannar							2.3	65.0	41.1	2.3	44.5	45.3	3.8	54.0	56.9									
Batticaloa							1.5	121.9	48.7	1.8	100.8	54.1				2.1	83.2	141.2			2.6	185.3	134.8	
Ampara							2.7	91.6	69.6	2.0	91.5	51.5				2.8	25.1	31.7			2.6	117.8	95.4	
Kalmunai							2.7	72.2	63.2	2.1	75.9	45.5	1.7	65.8	42.4									
Trincomalee							2.2	94.4	56.9	1.4	63.2	24.6	2.1	55.9	28.3	1.7	28.2	55.6						
Kurunegala	3.1	115.6	102.4				2.3	114.2	74.0	1.8	78.9	39.2	2.0	74.3	41.2	2.0	40.0	72.4						
Puttalam							2.6	99.6	73.1	2.2	66.0	40.9	1.7	53.5	24.4	1.8	45.4	87.1						
Anuradhapura				4.7	83.7	113.2	1.4	112.0	42.5	2.0	94.8	50.2	2.0	102.6	53.4	1.9	46.0	93.0						
Polonnaruwa				2.6	105.1	77.4	1.3	105.3	38.0	1.6	63.6	27.7	1.8	64.8	31.0	1.8	48.6	91.4						
Badulla				4.6	71.1	94.8	3.3	92.9	87.4	2.2	69.3	43.9	2.9	78.8	63.4	2.0	43.9	79.5			2.9	0.4	1.1	
Moneragala							3.0	112.5	94.7	1.9	73.0	37.8	1.0	112.3	30.3	1.7	59.6	126.4						
Ratnapura				3.1	105.9	93.6	2.3	138.9	91.7	1.9	78.0	41.3	2.0	67.9	37.6	1.9	27.2	58.3						
Kegalle	2.8	102.2	81.7				2.3	139.6	89.7	2.1	66.3	37.4	1.6	59.2	26.8	2.0	35.0	65.2			81.7	0.4	95.7	
Average	3.7	81.8	82.6	3.3	102.1	94.8	2.3	108.4	70.0	2.1	71.0	39.4	2.1	71.9	40.1	1.9	77.5	40.6	2.6	140.3	108.6	27.4	17.8	57.7

Source: Medical Statistics Unit.

Bed Turnover Rate: The number of times a hospital bed on the average changes occupants during a period of time.

District	In Government Hospitals During 2007						
	Live Births	Maternal Deaths		Still Births		Low Births ⁴	
		No.	Rate ¹	No.	Rate ²	No.	Rate ³
Colombo	49,336	13	2.6	387	7.8	7,963	16.1
Gampaha	28,103	1	0.4	201	7.1	4,129	14.7
Kalutara	17,201	3	1.7	117	6.8	2,793	16.2
Kandy	28,859	8	2.8	375	12.8	5,841	20.2
Matale	9,654	-	0.0	72	7.4	1,805	18.7
Nuwera Eliya	10,308	1	1.0	157	15.0	3,266	31.7
Galle	19,960	2	1.0	125	6.2	2,519	12.6
Matara	13,507	2	1.5	128	9.4	2,268	16.8
Hambantota	9,251	1	1.1	63	6.8	1,178	12.7
Jaffna	7,185	2	2.8	76	10.5	1,077	15.0
Kilinochchi	4,440	-	0.0	38	8.5	464	10.5
Mannar	1,338	-	0.0	6	4.5	169	12.6
Vavuniya	2,990	-	0.0	43	14.2	568	19.0
Mullativu	3,375	-	0.0	34	10.0	683	20.2
Batticaloa	8,754	1	1.1	153	17.2	1,531	17.5
Ampara ⁵	13,511	2	1.5	57	4.2	1,841	13.6
Trincomalee	7,861	1	1.3	62	7.8	1,211	15.4
Kurunegala	26,268	6	2.3	284	10.7	4,529	17.2
Puttalam	14,747	2	1.4	113	7.6	2,035	13.8
Anuradhapura	16,342	5	3.1	141	8.6	2,779	17.0
Polonnaruwa	7,523	-	0.0	45	5.9	1,403	18.6
Badulla	16,587	5	3.0	125	7.5	4,139	25.0
Moneragala	7,140	2	2.8	50	7.0	1,439	20.2
Ratnapura	20,589	4	1.9	208	10.0	3,844	18.7
Kegalle	12,023	-	0.0	124	10.2	2,413	20.1
Sri Lanka	356,852	61	1.7	3,184	8.8	61,887	17.3

¹ Per 10,000 live births.² Per 1,000 births.³ Per 100 live births.⁴ Birth weight less than 2500 grams.⁵ Includes Kalmunai DPDHS Division

Source: Medical Statistics Unit.

District	Extraction			D.A. A. Treated	Infection	Leukoplakia	Oral Carcinoma	Restoration				Scaling	Minor Surgery	Prevention (community)	Total Visits	
	Deciduous	Permanent Caries	Permanent Periodontal					Other	Temporary	Amalgam	Composite					Advanced Conservation
Colombo*	4,175	53,594	14,548	2,493	8,769	1,000	39	19	27,142	15,055	12,415	1,125	12,330	2,066	5,932	184,192
Gampaha	7,082	55,563	16,059	1,031	6,702	1,231	74	39	26,307	18,479	9,129	1,732	6,703	1,664	1,093	166,205
Kaluttra	4,218	36,884	7,903	247	4,446	931	34	8	13,526	6,598	4,904	717	3,357	576	430	97,569
Kandy	6,433	43,506	9,161	1,821	4,279	3,598	26	23	12,079	6,689	7,196	680	4,247	1,063	53	133,128
Matale	867	11,501	2,712	203	1,301	190	11	4	4,480	1,642	1,645	225	1,407	381	1,800	32,897
Nuwera Eliya	1,665	14,616	3,629	649	2,049	764	6	58	4,921	3,255	1,818	343	1,348	541	115	43,809
Galle	5,313	47,515	11,359	1,570	2,403	452	88	40	13,245	7,192	5,226	414	3,828	1,371	369	110,171
Matara	4,188	30,428	7,381	1,080	2,709	161	33	24	16,380	6,485	3,688	902	2,434	653	38	86,710
Hambantota	4,664	17,322	6,451	1,418	2,333	613	109	55	7,866	4,468	2,543	199	2,736	3,227	2	67,567
Jaffna	2,649	17,967	6,389	1,455	7,472	381	51	56	5,165	3,388	3,029	1,516	2,865	336	268	72,979
Kilinochchi	366	2,142	369	-	-	-	-	-	445	397	312	-	162	11	-	21,234
Mannar	981	3,981	1,260	209	44	21	-	-	266	126	185	34	58	19	-	8,308
Vavuniya	1,230	5,362	1,772	43	389	164	55	62	3,674	1,806	1,126	557	670	251	617	25,951
Mullaitivu	1,158	2,521	3	-	3	4	-	-	177	133	1	188	13	7	5	4,902
Batticooa	6,820	25,503	2,530	177	1,070	195	12	58	1,151	1,418	1,881	322	677	401	39	53,096
Ampara	5,010	17,960	3,705	1,211	1,111	493	17	14	3,479	2,062	2,720	146	959	469	6	46,900
Trincomale	1,193	10,339	1,635	367	1,263	226	-	-	412	229	179	308	257	126	7	19,681
Kurunegala	6,810	56,530	17,983	1,064	8,278	932	70	41	19,325	15,931	10,331	2,246	8,018	3,342	2,057	171,128
Puttalam	1,924	16,638	2,668	120	2,280	91	9	10	5,151	2,784	2,039	543	2,088	134	19	42,249
Anuradhapura	1,339	18,850	4,433	1,574	2,477	811	20	1	5,667	4,934	2,280	1,634	3,576	398	1,444	60,151
Pollanurawa	1,204	8,669	3,247	164	358	49	8	11	4,198	1,838	1,666	676	617	372	150	27,114
Badulla	5,466	30,897	5,494	435	9,218	712	39	20	10,126	8,094	4,712	1,039	6,143	1,336	782	85,148
Monaragala	2,602	16,328	3,709	192	5,638	147	13	5	8,165	4,492	2,088	1,668	2,804	855	3,644	67,582
Ratnapura	3,858	37,053	7,402	699	5,123	425	82	20	17,977	9,328	8,413	1,577	3,799	867	237	111,375
Kegalle	3,184	29,277	7,447	701	4,805	366	40	9	11,050	7,190	4,786	1,047	3,860	760	4,424	75,126
Total	84,399	610,946	149,249	18,923	84,520	13,957	836	577	222,374	134,013	94,312	19,838	74,956	21,226	23,531	1,815,172

Source: Medical Statistics Unit

* Excludes : Dental Institute, Colombo
Based on the consolidated statistics submitted by the Regional Dental Surgeons and Monthly Dental Returns

Table 46. Performance of Dental Surgeons By Type of Institution, 2007

Type of Institution	Extraction				D.A.A. Treated	Infection	Leukoplakia	Oral Carcinoma	Restoration				Scaling	Minor Surgery	Prevention (Community)
	Deciduous	Permanent Caries	Permanent Periodontal	Other					Temporary	Amalgam	Composite	Advanced Conservation			
Teaching Hospitals	9,232	52,663	14,536	3,589	7,976	4,431	99	107	18,496	9,611	9,521	1,899	6,487	2,360	130
Provincial Hospitals	2,279	24,572	4,458	240	3,863	516	11	16	18,940	8,799	4,342	1,483	2,775	818	156
Base Hospitals	20,020	115,253	24,794	4,450	19,028	1,677	307	244	40,863	24,902	16,866	5,189	7,299	6,939	950
District Hospitals	30,332	232,139	57,348	4,854	29,276	3,595	269	146	72,741	47,954	28,759	5,261	24,377	6,646	8,831
Peripheral Units	7,541	78,480	23,106	1,989	14,904	1,317	63	31	23,410	13,764	11,081	2,006	10,093	1,775	2,603
Rural Hospitals	5,897	47,929	11,531	1,457	3,088	1,125	34	9	12,603	7,344	5,404	1,202	4,480	957	396
Adolescent Dental Clinics	6,017	15,082	2,863	621	2,458	742	24	10	14,527	11,327	9,805	1,861	12,742	364	8,679
Central Dispensaries	719	9,628	2,165	54	949	96	2	0	3,725	1,181	836	142	1,321	86	545
Others	2,362	35,200	8,448	1,669	2,978	458	27	14	17,069	9,131	7,698	795	5,382	1,281	1,241
Total	84,399	610,946	149,249	18,923	84,520	13,957	836	577	222,374	134,013	94,312	19,838	74,956	21,226	23,531

Excludes : Dental Institutes, Colombo

Based on the consolidated statistics submitted by the Regional Dental Surgeons and Monthly Dental Returns

Source: Medical Statistics

