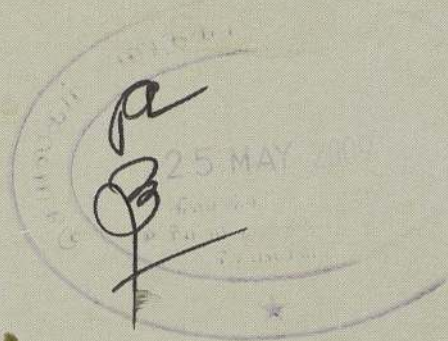


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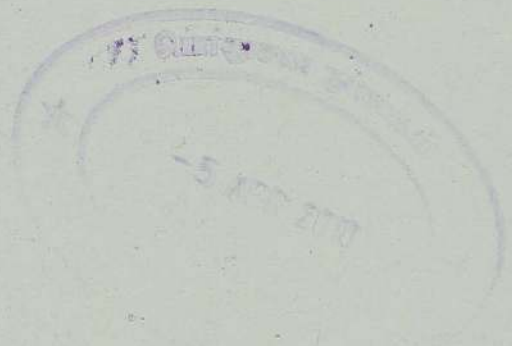
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Preface

The Annual Health Bulletin, 2003 is the 24th edition of the series, published since 1980 without a cessation.

The Bulletin is mainly confined to the public 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 2003.

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-coordinated the Bulletin since 1985 and also the UNICEF for the continued sponsorship of the preparatory work.

Dr. H.A.P.Kahandaliyanage

Director General of Health Services

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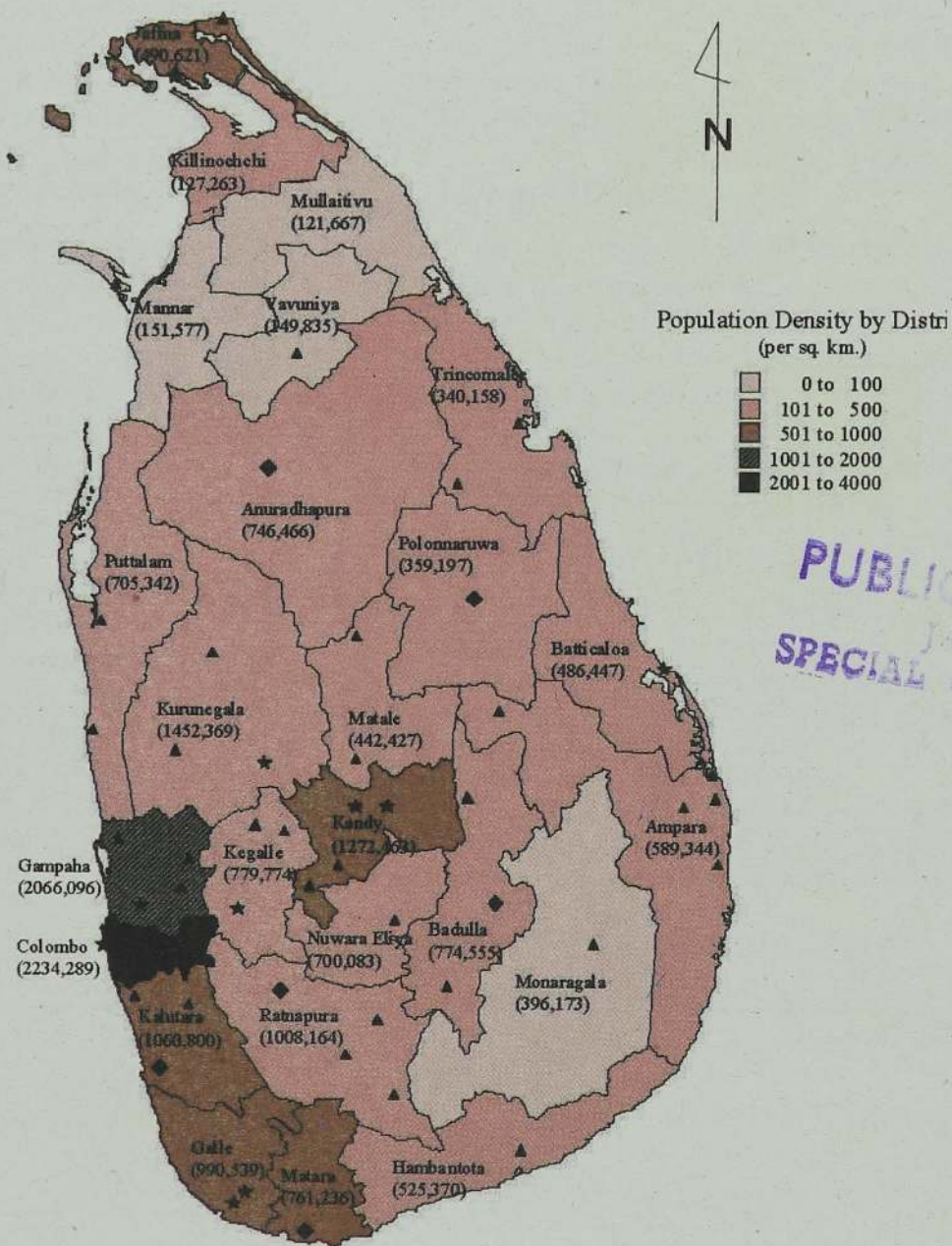
Indicator	Year	Data	Source	
Demographic Indicators				
Total population (in thousands)	2003	19,252	Registrar General's Department	
Surface area (thousands of sq. km)	1988	62,705	Survey General's Department	
Population density (persons per sq. km)	2003	307	Department of Census & Statistics	
Population growth rate (%)	2001	1.3	Department of Census & Statistics	
Crude birth rate (per 1000 population)	2003	18.9	Registrar General's Department	
Crude death rate (per 1000 population)	2003	5.9	Registrar General's Department	
Urban population (%)	2001	14.6	Department of Census & Statistics ¹	
Sex ratio (No. of males per 100 females)	2001	97.9	Department of Census & Statistics ¹	
Child population (under 5 years) %	1994	7.2	Demographic Survey 1994	
Women in the reproductive age group (15-49 years) %	1994	55.2	Demographic Survey 1994	
Average household size (Number of persons)	1994	4.7	Demographic Survey 1994	
Socio-economic Indicators				
GNP per capita at market prices (Rs)	2003	90,472	Central Bank, Annual Report 2004	
Human development index	1995	0.716	UNDP, Human Development Report 1998	
Unemployment rate	Total	2003	8.4	Labour Force Survey
	Female		13.2	Department of Census & Statistics
	Male		6.0	
Dependency ratio	Total	1994	54.0	Demographic Survey 1994
	Old-age		8.5	
	Young		45.5	
Adult literacy rate (%)	Total	1994	90.1	Demographic Survey 1994
	Female		87.9	
	Male		92.5	
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	1994	25.5	Demographic Survey 1994
	Male	1981	27.9	Population Census 1981
Health and Nutrition Indicators				
Life expectancy at birth (years)	Total	1996-2001	73.0	Department of Census and Statistics
	Female		75.4	
	Male		70.7	
Neonatal mortality rate (per 1,000 live births)	1999	10.6	Registrar General's Department	
Infant mortality rate (per 1,000 live births)	2003	11.2	Registrar General's Department	
Under-five mortality rate (per 1,000 Under 5 population)	2000	16.3	Registrar General's Department	
Total fertility rate (per woman)	1995-2000	1.9	Demographic and Health Survey 2000	
Maternal mortality rate (per 10,000 live births)	1999	1.9	Registrar General's Department	
Low-birth-weight per 100 live births in government hospitals %	2003	16.9	Medical Statistics Unit	
% of Children	Under weight (weight-for-age)	2000	29.4	Demographic and Health Survey 2000
	Acute undernutrition (weight-for-height)		14.0	
	Chronic malnutrition (height-for-age)		13.5	

¹ Based on 18 districts where the 2001 Census of Population and Housing was carried out.

Contd.

Indicator	Year	Data	Source	
Primary Health Care Coverage Indicators				
Immunization coverage (%)	DPT3/OPV3 to infants	2003	97.0	Epidemiological Unit
			98.0	
			99.0	
			84.0	
			65.0	
Percentage of pregnant women attended by trained personnel	2000	96.0	Demographic and Health Survey 2000	
Percentage of live births in government hospitals	2003	87.1	Medical Statistics Unit	
Women of childbearing age using contraceptives (%)	Modern method	2000	49.5	Demographic and Health Survey 2000
	Traditional method		20.5	
Population with access to safe water (%)	1994	68.4	Demographic Survey 1994	
Health Resources				
Government health expenditure as % of GNP	2003	1.57	Department of Health Services	
Government health expenditure as % of total government expenditure	2003	4.1	Department of Health Services	
Per capita health expenditure (Rs)	2003	1,417	Department of Health Services	
Physicians per 100,000 population	2002	50.1	Medical Statistics Unit	
Population per Physician	2002	1996	Medical Statistics Unit	
Dental Surgeons per 100,000 population	2002	4.6	Medical Statistics Unit	
Nurses per 100,000 population	2002	89.1	Medical Statistics Unit	
Public Health Midwives per 100,000 population	2002	24.6	Medical Statistics Unit	
Number of hospitals	2003	607	Medical Statistics Unit	
Number of hospital beds	2003	59,262	Medical Statistics Unit	
Hospital beds per 1,000 population	2003	3.1	Medical Statistics Unit	
Number of central dispensaries	2003	400	Medical Statistics Unit	
Number of MOH/DDHS Divisions	2003	280	Medical Statistics Unit	

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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 Divisions

For purposes of administration, Sri Lanka is divided into 8 Provinces, 25 Districts, and 322 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, is given in Table 1.

1.3 Population

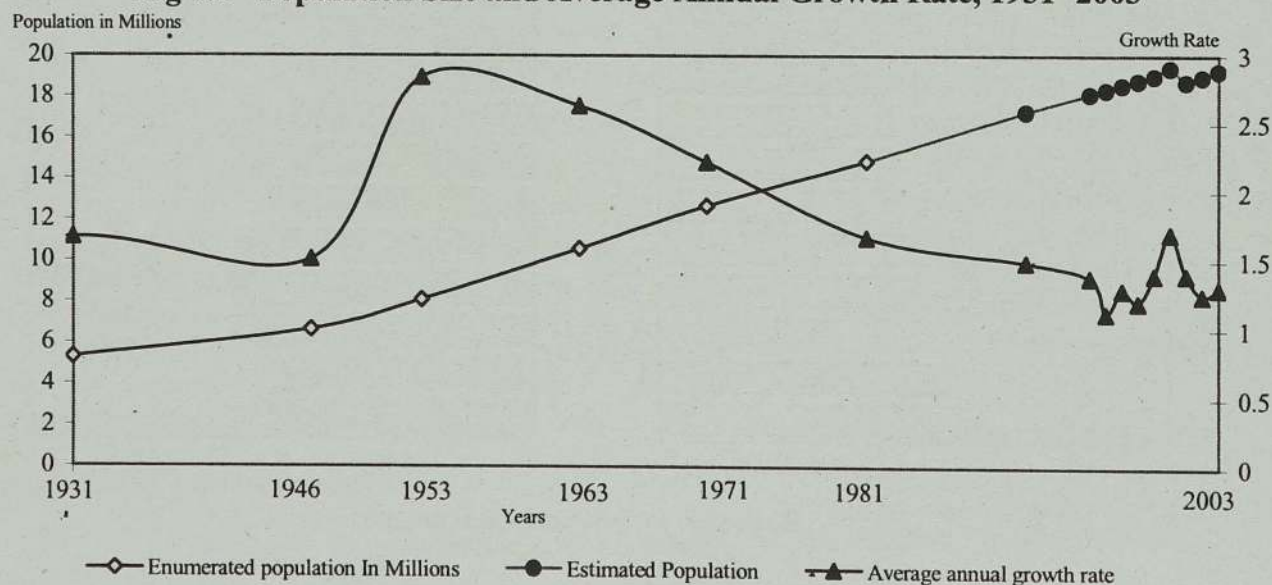
The population of Sri Lanka for the year 2003 is estimated to be 19.25 million. The average annual growth rate is recorded as 1.1 for the island. There is no significant spatial variation in the growth rate. Kandy, Nuwara Eliya, Galle, Matara, Jaffna, Kurunegala, Badulla and Kegalle have growth rates 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).

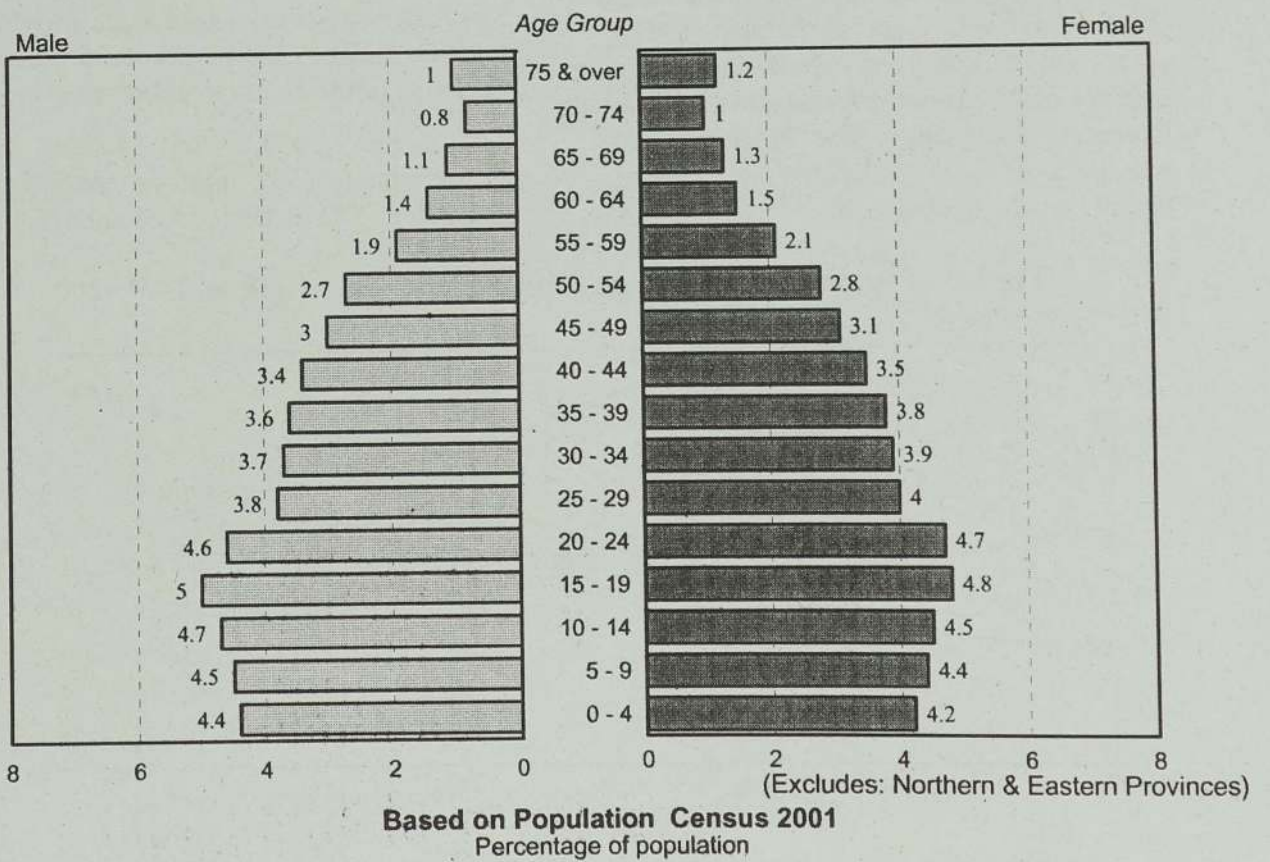
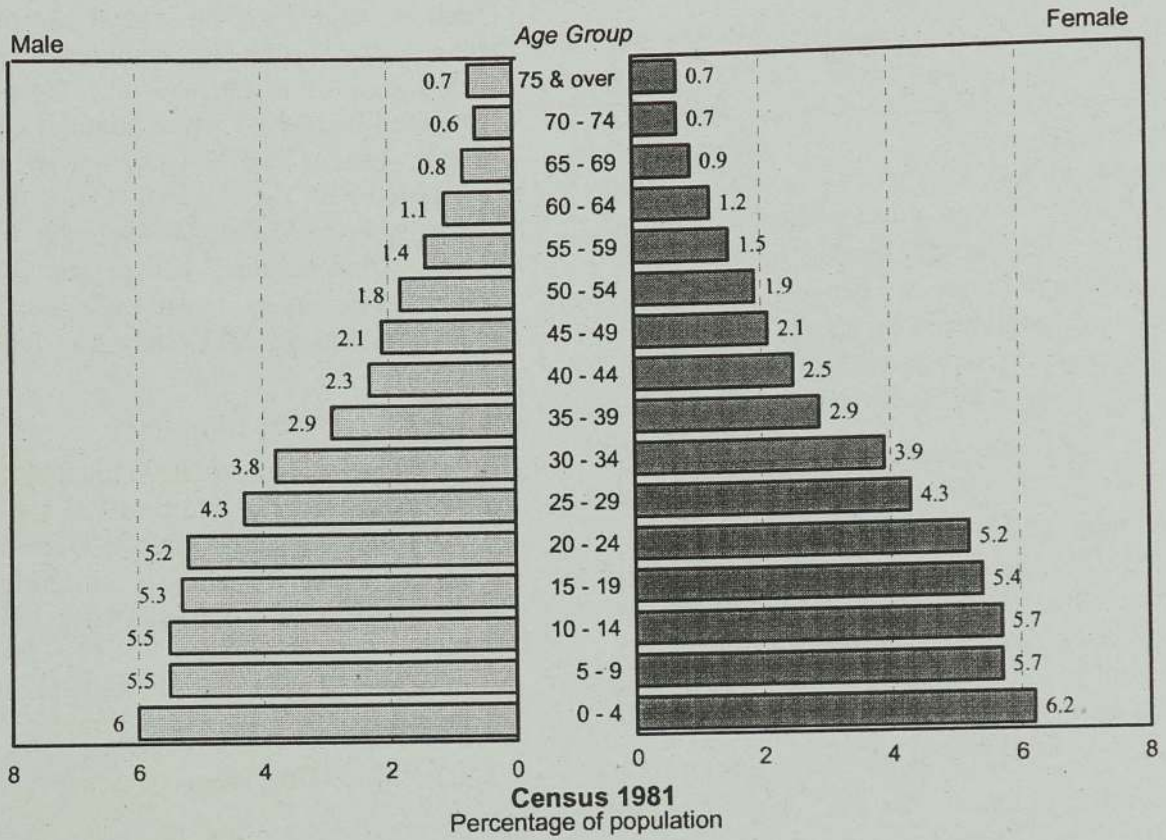
During 2003, Sri Lanka had approximately 307 persons per square kilometer. The district of Colombo has the

Fig 1.1 - Population Size and Average Annual Growth Rate, 1931 -2003



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

highest density of 3,410 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.

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.

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	113.0
1981	103.9
1994*	97.4
2001*	97.9

* Excludes Northern and Eastern Provinces

The Census of Population & Housing 2001 records a sex ratio of 97.9 for Sri Lanka, which indicates an excess of females over males. Although a steady decline in the sex ratio is observed in all the previous censuses but this ratio was above 100 denoting more 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 the resulted rise in the life expectancy.

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

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.

Table 1.3 Vital Statistics, 1945 - 2003

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	
1945	6,656	36.7	22.0	165.2	140.0	75.5
1950	7,678	40.4	12.6	55.5	82.3	49.2
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	...
2002 *	18,955	19.1	5.8	1.4	11.2	...
2003 *	19,252	18.9	5.9	...	11.2	...

*Provisional

Source: Registrar General's Department

Although there is a well organized system for the registration and compilation of vital events, there is no assurance that all the events are registered. The demographic, medical and health information which are to be stated in the respective certificates are not accurate and sometimes even missing. 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)

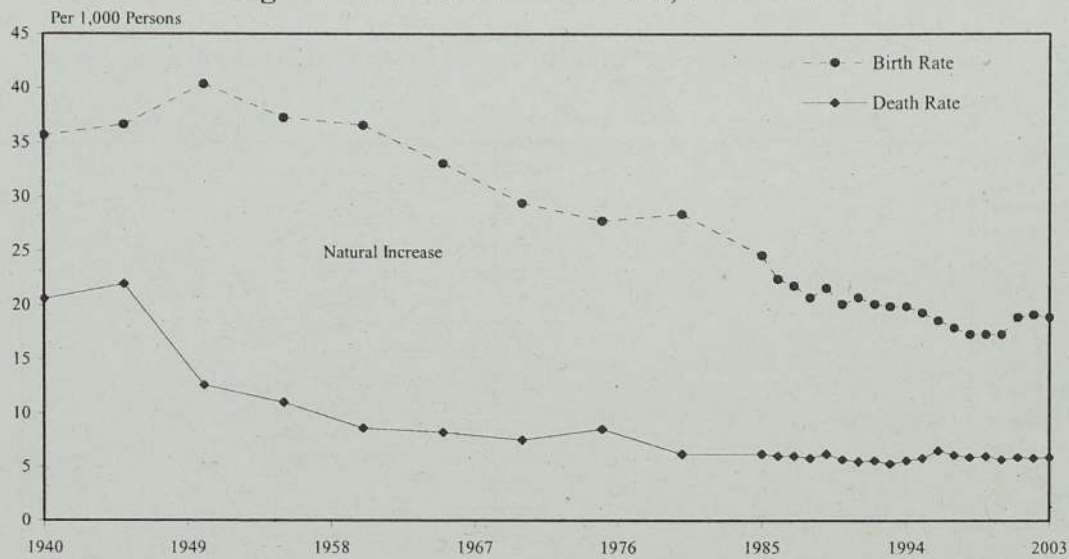
Trends in birth and death rates during the period 1945-2003 are presented in Table 1.3.

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. 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 25 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.

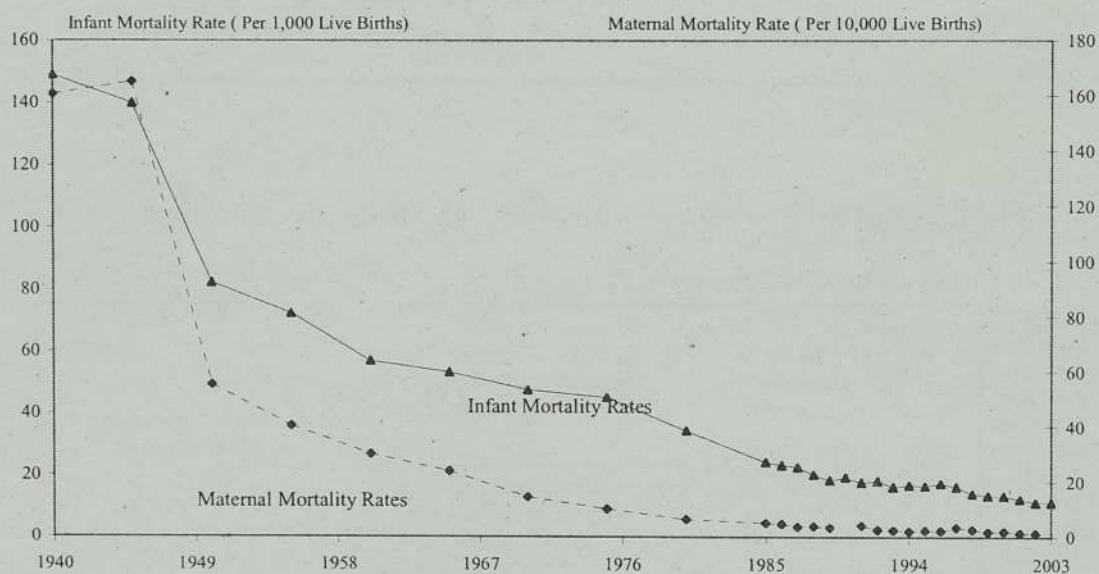
The CBR of the districts for the year 2003 is presented in Table 4. According to that data Kilinochchi district recorded the highest birth rate (29.0). The lowest rate is recorded for Kegalle (11.9). Some districts have higher rates than the national figure. District data for vital statistics needs careful reviewing. Since the events are registered according to the place of occurrence and not by place of usual

Fig 1.3 - Birth and Death Rates, 1940 - 2003



Source: Registrar General's Department

Fig 1.4 - Trends in Maternal and Infant Mortality Rates, 1940 - 2003



Source: Registrar General's Department

residence the distribution given in the table 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.

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 2003 is 5.9 per 1,000 population.

Fig 1.5 - District Variation in Crude Birth and Death Rates, 2003

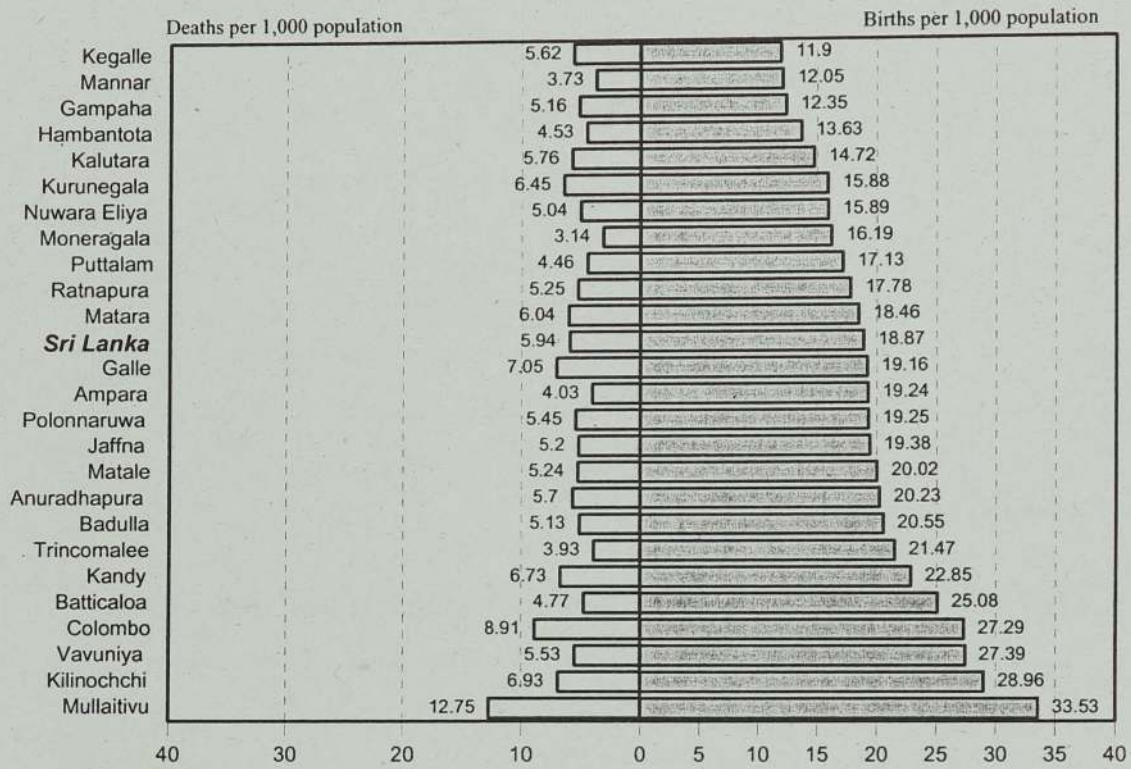
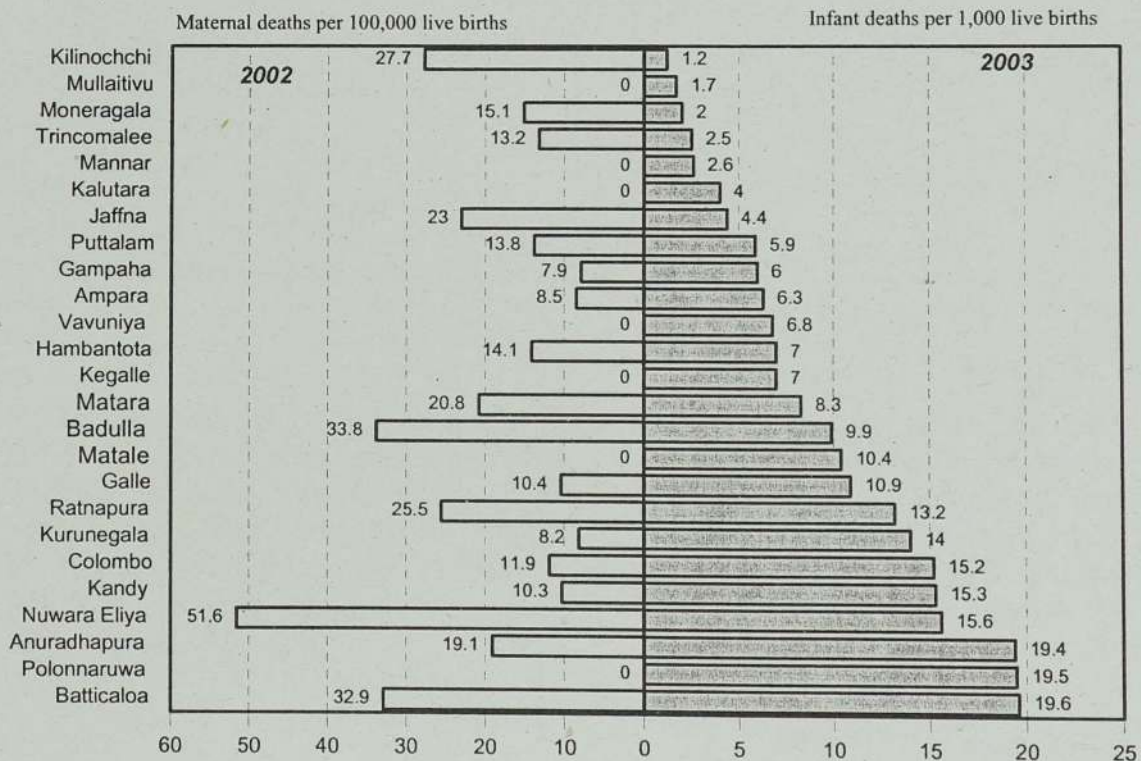


Fig 1.6 - District Variation in Infant and Maternal Mortality Rates



1 : Provisional Data

Source: Registrar General's Department

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. Between 1946 and 1949, MMR shows a general decline.

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. The most recent MMR released by the Registrar General's Department is for 1997 and the figure is 3.5 per 10,000 live births (Table 1.3). According to hospital statistics (government institutions only) the corresponding figure is 2.2 (Table 40) for the year 2003. It should be stated here that about 90 per cent of registered live births occur in government institutions. Section 5.1.1.7 also gives details of maternal deaths reported to F.H.B. during 2002.

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.

According to the Demographic and health survey 2000 child mortality levels have dropped to half during the past decade from 3 deaths per 1000 live births to single death per 1000 live births. It further reveals

that it is higher in the estate sector compared to the other two sectors. Further there is a positive relationship between mothers educational attainment and the probability of dying of the children. Mothers 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.

Table 1.4 Infant Mortality by Demographic Characteristics

Demographic Characteristic		1993	2000
Mother's Age at Birth	< 20	32.9	21.5
	20-29	26.4	20.0
	30-34	22.5	15.0
	35 +	23.4	20.7
Birth Order	1	29.7	19.8
	2-3	20.8	17.0
	4-6	29.6	24.8
	7+	*	*
Previous Birth Interval ⁽¹⁾	<2 Yrs	26.7	34.5
	2-3 Yrs	21.4	9.3
	4 Years or more	15.8	13.4
Education Level of Mothers	No Schooling	44.7	25.5
	Primary	32.3	29.9
	Secondary	22.7	17.6
	G.C.E(O/L)	18.0	13.6
	G.C.E(A/L) & Higher	18.0	13.8
Sector	Urban	20.8	14.9
	Rural	24.0	17.4
	Estate	60.6	47.5

* Fewer than 100 exposed cases

(1) Based on birth order two and higher

Source : D.H.S Survey 1993 & 2000.

According to D.H.S. Infant Mortality level has dropped during the past decade. It is the highest in the estate sector. It has a close relationship with mothers educational attainment, age of mother, birth order and birth interval

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 1999 is 10.6 per 1,000 live

births (Table 1.3). Kandy district recorded the highest NNMR of 19.0 (Table 4), a higher rate compared to the rate in 1998 (16.1). The districts of Badulla and Anuradhapura also recorded high NNMR of 18.4 and 18.9 respectively. It is noteworthy that neo-natal deaths accounted to 77.0 per cent of the infant deaths registered in 1999.

According to the observation of the D.H.S. 2000 neo-natal deaths are most likely to occur at birth and if not 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 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.

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

Perinatal Mortality Rate (Per 1000 birth)	
1991	31.4
1992	29.3
1993	27.8
1994	28.2
1995	27.8
1996	27.4
1997	26.0
1998	8.6
1999	8.6

These rates show a sustained decline during the period. The district figures show that it is very high in the district of Kandy, Badulla and Anuradhapura in the year 1999 (Table 4).

1.4.7 Total Fertility Rate

The level of fertility, measured by total fertility rate (TFR) is estimated at 2.3 for the period 1988-1993. 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-

Table 1.5 Comparisons of Age-Specific Fertility Rates, 1963-2000

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

(a) From Fernando's (1974)

Source: Demographic and Health Survey 2000

2000. It is also evident that for the first time, age-specific fertility rates have declined in all age groups.

1.4.8 Life Expectancy

Life expectancy at birth increased from 43 years in 1946, to 70 in 1981, 72 in 1991 and 73 in 1996 (estimated). The rapid increase in the average life span, together with the widening of the gap between males and females longevity, reflects a dramatic improvement in the survival of those groups that were most vulnerable and exposed to high risk of mortality, namely, infants and children in the age group 1-4 and women of the child bearing age.

Table 1.6 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

Source: Department of Census and Statistics

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 per cent in 1946 to 87.2 in 1981. Males showed a higher rate of literacy than females at all ages. Female literacy has improved at a greater speed

Table 1.7 Literacy Rate by Sex, 1881 - 1994

Year	Literacy Rate			Difference 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

than the male literacy rate reducing the difference from 26.3 in 1946 to 7.9 in 1981. The literacy rate derived from the recent census of Population and Housing 2001 excluding the Northern and Eastern provinces, is 90.7 (Table 1.7). The difference between the male and female literacy rate is very minimal (3.0). 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, too the 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 5 years and over, approximately 6.0 per cent had not been to school. Another 22 per cent had not completed the primary education (Table 1.8)

Table 1.8 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

(Excludes Northern and Eastern Provinces)

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 D.S. and 2000 DHS). Yet the percentage getting drinking water from a protected well is 50 per cent. The percentage getting water for drinking purposes from a main line is 27 per cent. Still around 17 per cent get drinking water either from an unprotected well or from such sources as river, tank or stream (Table 5). However an improvement could be seen when compare with figures of the 1994 Demographic survey and the census of 1981.

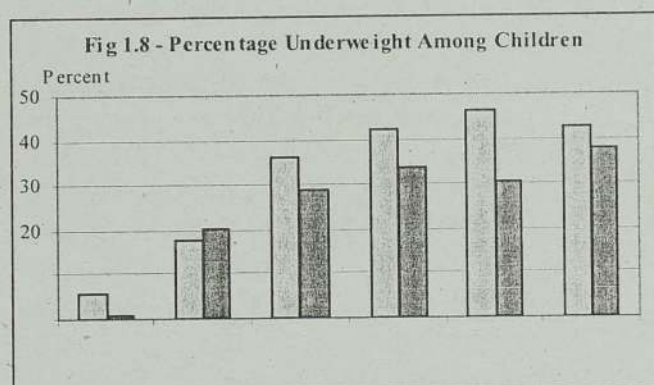
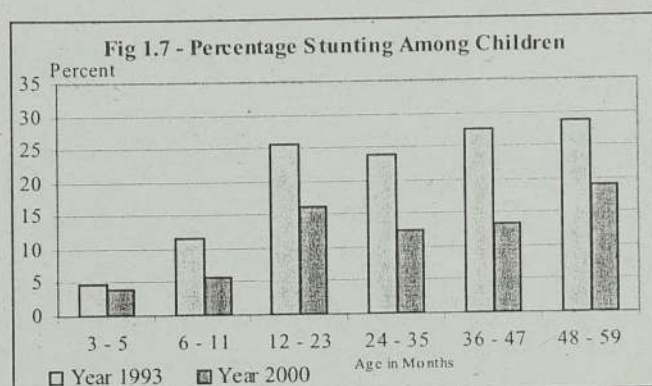
But a significant variation could be seen among sectors. According to the DHS 2000 although 95 per cent of the urban sector households have access to safe drinking water, for 67 per cent of estate sector households, the source is a river, tank or stream.

1.6.2 Toilet Facilities

In 1981, 33.5 per cent of the houses 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). 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 some districts. Ampara, Nuwara Eliya, Puttalam and Anuradhapura are the districts where the situation is much poor.

1.7 Nutritional Status of Children



The three consecutive Demographic and Health Surveys of 1987, 1993 and 2000 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. 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.

The survey finds that 23.7 per cent of the children suffer from chronic malnutrition. (Table 1.9). Even though malnourishment continues to be a health concern among children below 5 years, the results of the above three surveys show that there is a remarkable decline in the proportions overtime. Between 1987 and 1993, both categories that is percentage stunted and wasted have decreased whereas underweight percentage was on the increase. 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

Table 1.9 Nutritional Status of Children, 1993 & 2000

Background Characteristics	Height for Age		Weight for Height		Weight for Age		Number of Children	
	1993	2000	1993	2000	1993	2000	1993	2000
Sex - Male	22.7	11.9	15.6	15.1	34.8	29.0	1610	1,321
- Female	25.1	15.3	15.4	12.6	40.9	29.8	1458	1,210
<i>Child's age (in months)</i>								
03 - 05	4.9	3.9	3.1	1.3	5.8	0.7	117	152
06 - 11	11.8	5.7	6.8	10.3	17.9	20.2	375	282
12 - 23	25.7	16.2	18.2	18.2	36.3	28.8	686	549
24 - 35	23.8	12.4	15.1	13.3	42.4	34.0	585	526
36 - 47	27.5	13.4	18.2	13.9	46.7	30.7	681	531
48 - 59	28.7	19.1	17.6	15.9	43.0	37.9	622	491
<i>Sector</i>								
Colombo metro	19.7	7.4	12.2	10.1	31.2	18.2	349	336
Other urban	16.8	8.6	16.8	6.3	29.9	21.3	223	221
Rural	22.9	12.8	16.4	15.9	38.3	30.8	2,321	1,770
Estates	53.7	33.8	9.5	11.8	52.1	44.1	175	204
Total	23.8	13.5	15.5	14.0	37.7	29.4	3,067	2,531

Source: Sri Lanka Demographic and Health Survey 1993 & 2000

estate sector while underweight is prevalent in both rural and estate sectors.

2. Organization of Health Services

In Sri Lanka, both public and private sectors provide health care. The public sector provides health care for nearly 60 per cent 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 per cent of the outpatient care of the population and is largely concentrated in the urban and suburban areas. The One-day General Practice Morbidity Survey in Sri Lanka, 1998ⁱ estimated that General Practitioners in Sri Lanka handle at least 26.5 per cent of primary care consultations per year.

Ninety five per cent 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, there are service provisions especially for armed forces and police personnel, and the estate population.

Western, Ayurvedic, Unani, Siddha and Homoeopathy systems of medicine are practised in Sri Lanka. Of these, western medicine is the main sector catering to the needs of a vast majority of the people. The public sector comprises 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 health care services are available within 4.8 km of a patient's homeⁱⁱ.

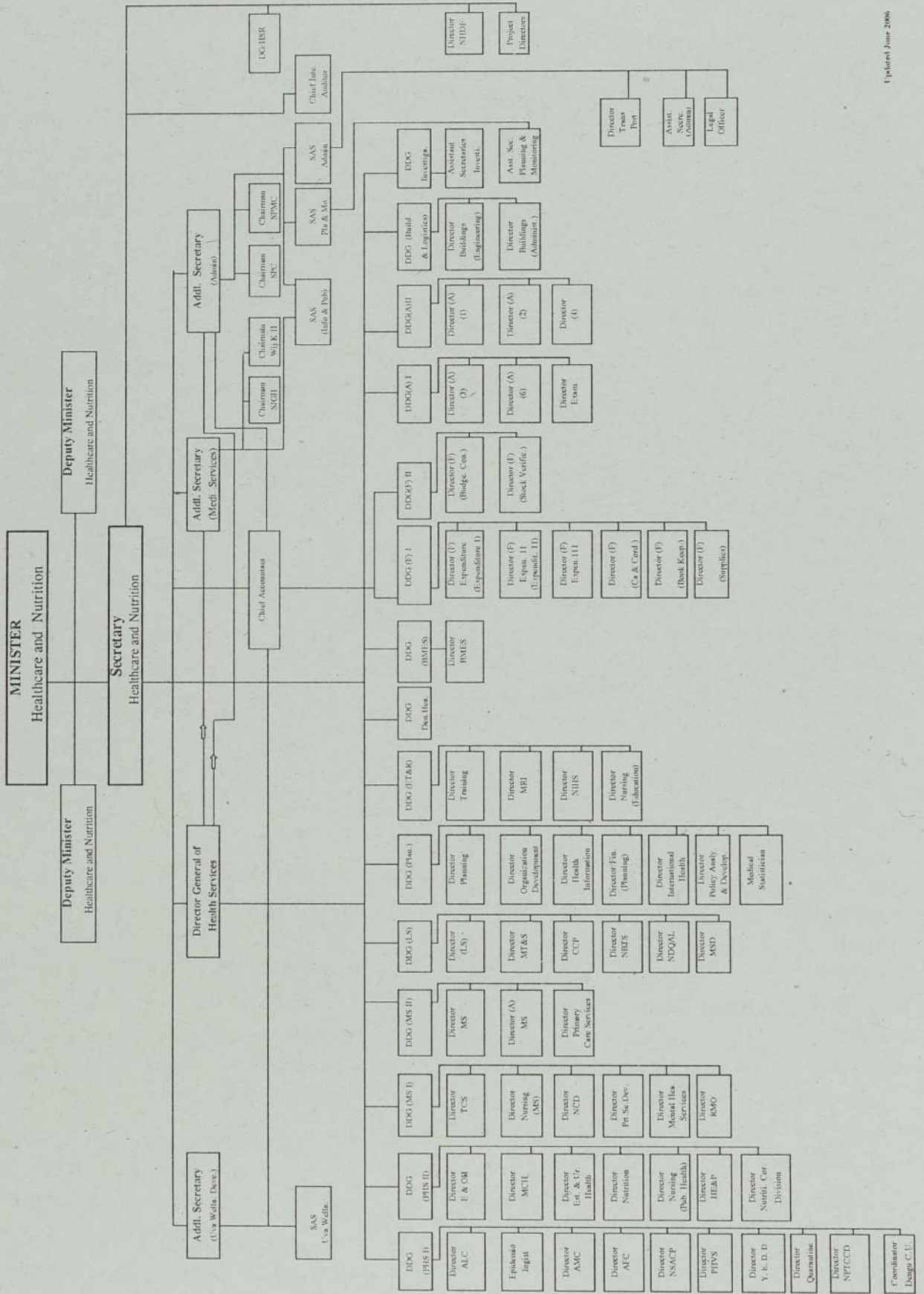
2.1 National Health Policy

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 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 Programmes.
4. Reforms 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 private and public sectors and rationalized human resources development.

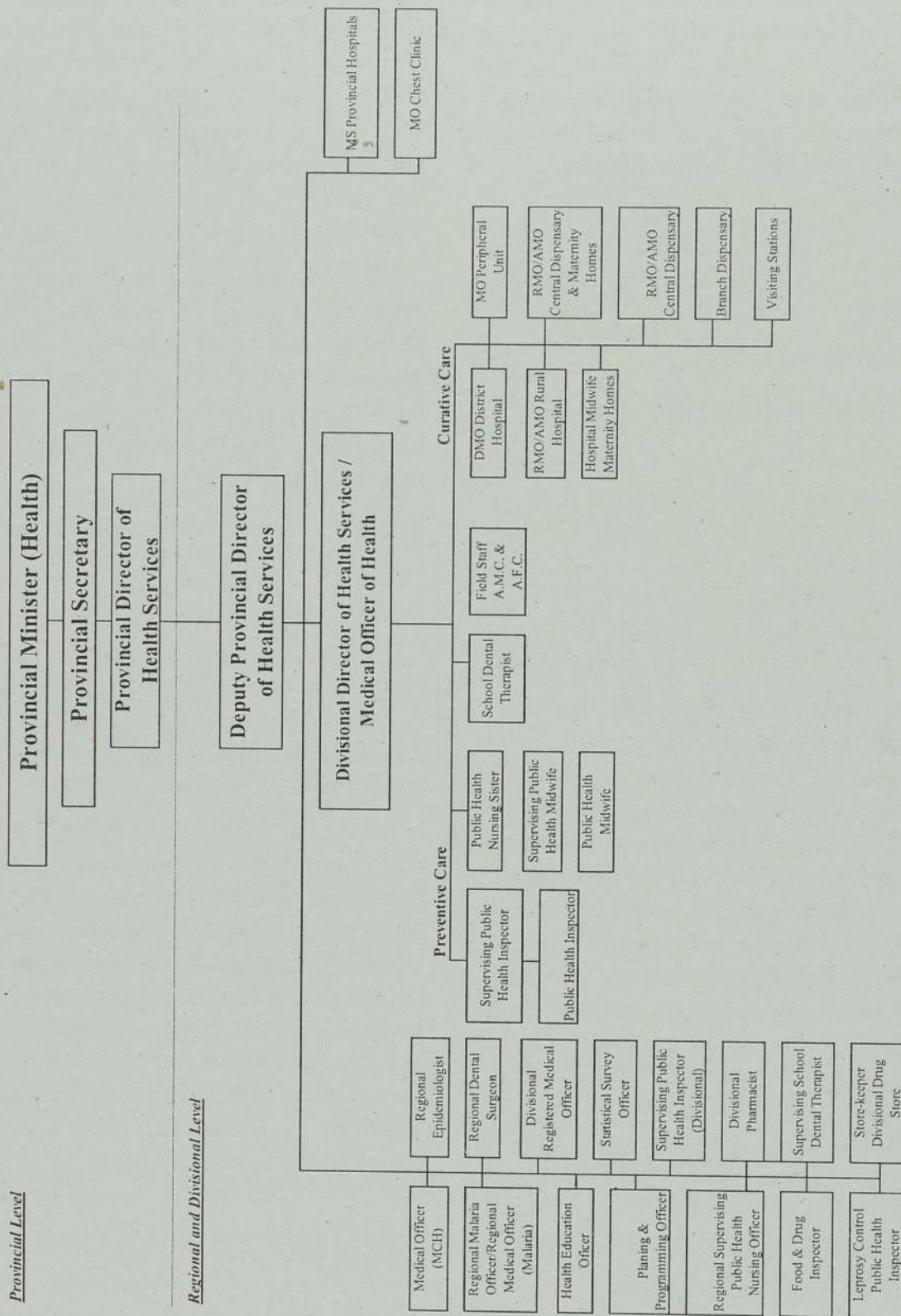
ORGANIZATION CHART - MINISTRY OF HEALTHCARE AND NUTRITION



Updated June 2006

Figure 2.2

Organization Chart for the Health Services Under Provincial Councils



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 and cost effective health services throughout the country, accessible to the needy people.

The National Health Policy sets out to achieve certain measurable goals and objectives. Health development indicators, their bench marks and targets for the year 2002 are shown in Table 7.

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 eight 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 eight 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 2003 there were twenty-six Deputy Provincial Directors of Health Services (DPDHS), to assist the eight Provincial Directors of Health Services. DPDHS areas are similar to administrative districts, except for Ampara district which is

sub-divided to form two DPDHS areas; Ampara and Kalmunai. Killinochchi DPDHS division which consisted of Killinochchi and Mannar districts, started functioning as two DPDHSS from 2002. Each DPDHS area is sub-divided into several Medical Officers of Health areas (MOH/DDHS). The MOH/DDHS 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. (Fig2.2)

According to the size of the population MOH can be grouped under five categories. There are five MOH areas with a population more than 200,000 each. About two third of the MOH areas have population above 50,000 but below 200,000. Another one third have population below 50,000.

Size of Population	Number of MOHH*
Over 600,000	2
200,000 – 600,000	4
100,000 – 200,000	43
50,000 – 100,000	95
Less than 50,000	75

*:Excluding Northern and Eastern Province and provisional

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 Directors General (DDG), each in-charge of a special programme area. They have, under their jurisdiction, a number of Directors responsible for different programmes and organizations. (Fig. 2.1) 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 ranges 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 provided. There are three levels of curative care institutions as shown below. However, patients can seek care in the 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.

As at December 2003, there were 607 medical institutions with inpatient facilities and 400 Central Dispensaries compared to 576 and 411 respectively in 2002. The number of beds in the hospitals increased from 59,144 in 2002 to 59,262 during 2003, indicating a 2 per cent increase. The national ratio of beds for inpatient care is 3.1 per 1,000 persons as for year 2002. The districts of Colombo, Kandy, Anuradhapura and Jaffna had a higher ratio of beds, 5.0, 4.0, 3.6 and 3.5 per 1,000 persons respectively (Table 8).

In total, there are 16 Teaching Hospitals with 15,444 patient beds. There are few Specialized Hospitals for the treatment of chronic diseases like tuberculosis, leprosy, mental illnesses, cancer, chronic rheumatological diseases and infectious diseases.

The National Hospital of Sri Lanka (NHSL), located in the city of Colombo, is the largest hospital in the island. In 2003, it

had 2,777 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. During the period 1987 to 2003, a total of 225 renal transplants had been performed at NHSL by this unit. Of these, 10 were performed during 2003. 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 6 in 2003. There were 38 Base Hospitals with a total of 10,240 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. 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 Units (PU) and Rural Hospitals (RH) is made on their size and the range of facilities provided. The total care available in DHs and PUs, are far superior to

Table 2.1 Number of Health Institutions and Hospital Beds, 1975 - 2003

Item	1975	1980	1985	1990 ¹	1995 ²	2000	2001	2002	2003
Hospitals ³	458	480	490	422	467	558	569	576	607
Patient Beds ³	40,761	43,389	44,861	42,079	47,665	57,027	57,946	59,144	59,262
Patient Beds per 1000 Population	3.0	2.9	2.8	2.9	2.9	2.9	3.1	3.1	3.1
Central Dispensaries	355	347	338	278	320	404	406	411	400
MOH Areas	102	105	111	110	213	252	265	261	280

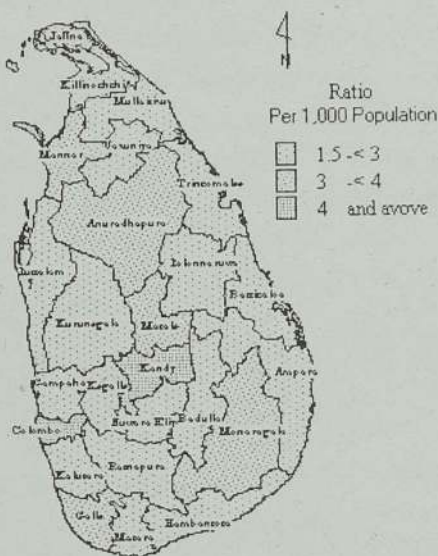
Excludes: ¹ Northern and Eastern provinces

² Jaffna, Kilinochchi, Mullativu and Ampara districts

³ Includes Maternity Homes and Central Dispensaries.

Source: Medical Statistics Unit

Fig 2.3 - Distribution of Hospital Beds By District : December 2002



Source : Medical Statistics Unit

Prepared by Medical Statistics Unit

RHs because of the availability of nursing personnel in these institutions. Among the primary health care institutions, the DHs are the largest. During 2003, there were 159 DHs of which more than 100 hospitals had less than 100 patient beds. District Hospitals 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 2003, Sri Lanka had 98 PUs with a total of 4,657 patient beds and 183 RHs with a total of 4,577 patient beds. The average size of a RH in 2003 was with 26 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 2000, approximately 70 per cent of RHs were 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. These institutions are categorized as RHs.

In keeping with the recommendations of the Presidential Task Force to provide more facilities to people with mental disorders, by the end of year 2000 Mental Health Rehabilitation Units were setup at Deltota, Dematampitiya and Meedumpitiya in the Kandy, Kegalle and Badulla districts respectively.

The smallest type of institution with inpatient facilities is the Central Dispensary and Maternity Homes (CD & MH). During 1999, Medical Offices were posted to some CD & MHs. Many of these institutions have been upgraded by providing better facilities. Hence, in 2003 there were only 80 CD & MHs compared with 88 in 1986.

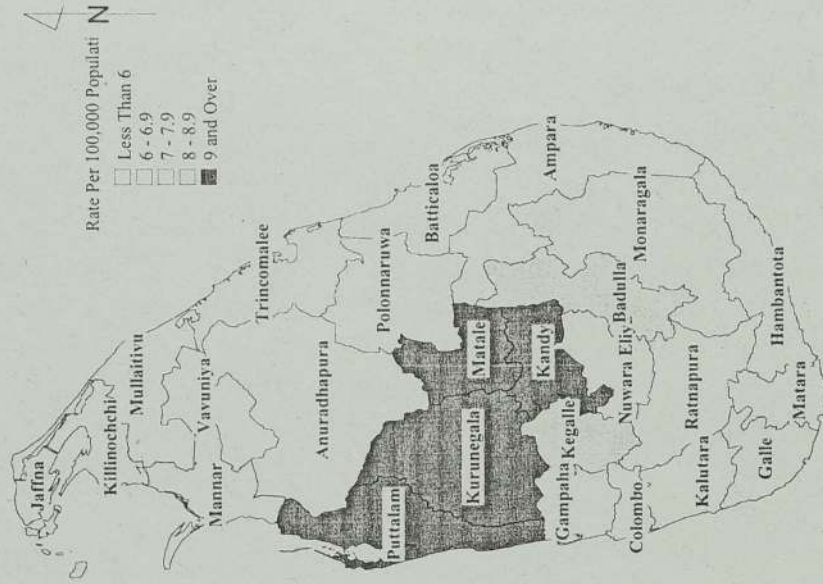
Based on the 2004 updation Two hundred and eighty (280) Health Units (MOH offices) headed by Medical Officers of Health, carry out preventive services in Sri Lanka. In 2003 the highest numbers of health units were in the districts of Kandy and Anuradhapura with 21 and 19 respectively (Table 8).

Table 2.2 Availability of Patient Beds by Type of Institution, 2003

Type of Institution	Patient Beds (Range)	Average Number of Patient Beds	Number of Hospitals Having Less Than Average Number of Patient Beds
Teaching Hospitals	399 - 2,777	965.25	10
Provincial Hospitals	351 - 1,172	770.17	3
Base Hospitals	30 - 585	269.47	21
District Hospitals	25 - 672	91.14	92
Peripheral Unit	17 - 143	48.51	53
Rural Hospital	5 - 73	25.71	103
CD & MH	2 - 62	12.29	50

Source : Medical Statistics Unit

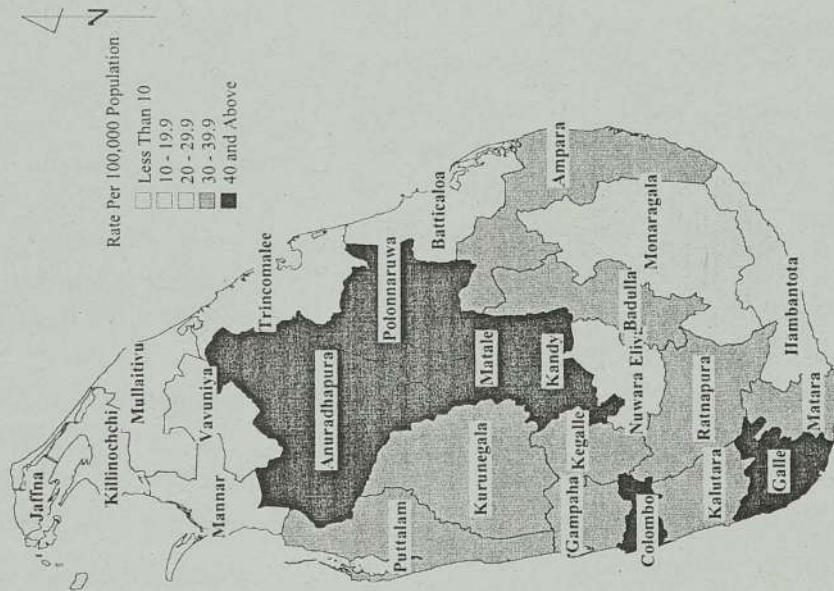
Fig 2.5 - Distribution of Registered / Assistant Medical Officers by Districts, September 2002



Prepared by Medical Statistics Unit

Source : Medical Statistics Unit.

Fig 2.4 - Distribution of Medical Officers in Curative Care Services, September 2002



Prepared by Medical Statistics Unit

Source : Medical Statistics Unit.

With the decentralization of health services in 1992, the number of Health Units almost doubled in number. The number increased from 131 in 1990 to 276 in 2004. Consequently, still many MOHs are faced with problems such as shortage of staff, buildings, vehicles, etc.

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. The total number of Medical Officers rose from 6,994 in 1999 to 9,549 in 2002. Accordingly, persons per doctor has also improved. In 2002 this figure was 1992 as compared to 2,233 in 2001. The number of Nurses per 100,000 population has increased from 76 in 2000 to 84 in 2001. This has risen to 89 in 2002. 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 (Table 11). 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 districts, too, have comparatively higher numbers of health personnel. In September 2002, the Colombo district had 113 Medical Officers and 172 Nurses per 100,000 population. 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 2002 is presented in Table 12. Of the Specialists, 35 per cent 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 districts is also noteworthy.

During 2002, the Department of Health Services recruited 253 foreign-qualified medical graduates.

2.5 National Institute of Health Sciences

The National Institute of Health Sciences (NIHS), located in the former health unit area of Kalutara was established in 1979. The mission of NIHS is to assist in accelerating, facilitating and supporting the government policy in establishing and extending an integrated PHC delivery system to serve the entire population and to mobilize community participation in this effort.

NIHS is the premier centre of the Department of Health Services in training health manpower required for the Primary Health Care programme. The NIHS carries out basic training for Assistant Medical Officers, Public Health Inspectors, Public Health Midwives, Medical Laboratory Technologists and Pharmacists. In addition, post-basic training for Public Health Nursing Sisters and Ward Sisters is also organized.

The NIHS provides continuing education courses ranging from one week to six weeks for several categories of health personnel, namely MOH, PHI, PHNS, PHM, Pharmacists and MLT. Teacher training programmes, management training for middle level supervisors of health workers, community orientation for MOH, Health system research methodology are some of the important training programmes conducted for local participants during 2002. Two training programmes were conducted for maldivians participants.

The field practice area of NIHS covers two Divisional Secretary areas namely Kalutara, and Beruwela. There are four hospitals, - a Provincial Hospital, a Rural Hospital and two Central Dispensaries - situated in the field practice area. There is a food laboratory at NIHS in addition to the service laboratory. These laboratories serve a dual function namely, service and training.

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. The training capacities of institutions as well as the output of various categories of health personnel during the period 1999-2002 are shown in Table 13.

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. Table 14 indicates the courses conducted by the Postgraduate Institute of Medicine and the output during 2003.

2.6.3 Post-Basic Training

Table 2.3 Post-Basic Training for Nurses During, 2002

Nature of Training	Number Trained
Teaching & Supervision	94
Management & Supervision	103
Midwifery	237

Source : Post Basic-School of Nursing

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. Details of programmes conducted by the PBS during 2002 are given in Table 2.3. There were no output during year 2003.

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

The health expenditure for 2003 was Rs 27,292 million, which is an increase of 6.5 per cent over the previous year. This increase is lower compared with the increase in 2002 (12 per cent) over 2001. During 2003, the proportion of public expenditure on health services was 1.57 per cent of the GNP and 4.1 per cent of the national expenditure. The per capita health expenditure was Rs. 1,417 in 2003.

The Recurrent expenditure accounted for 81 per cent of the total expenditure.

A major proportion of the health expenditure is utilized by the patient care services. In 2003, patient care services utilized 56.6 per cent of the health expenditure, while community health services utilized only 9.2 per cent. Of the balance 11.2 per cent were for general administration and 3.8 per cent were spent on training and scholarships (Table 17).

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 reports total national health expenditures in the country, including both public sector and private sector expenditures. Its framework classifies all expenditures according to the three dimensions of the International Classification for Health Accounts (ICHA), which are by source of funding, functional use of expenditures, and provider entity.

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

The private sector estimates include both household out-of-pocket expenditures, employer spending, insurance payments and non-profit institutions.

2.8.1 Total National Health Expenditures

Total Expenditure on Health (TEH) is defined to include all expenditures on personal health services, community (public health and preventive) health services and gross capital formation in health care providers. Total expenditures on health (TEH) were estimated to be Rs. 28.4 billions in 1997, with per capita spending equivalent to Rs. 1,530. This was equivalent to US \$26 per capita, or 3.2 per cent GDP (Table 18A).

2.8.2 Funding of National Health Expenditures

Public expenditures on health grew from Rs. 5.6 billion in 1990 to Rs. 14.0 billion in 1997. Private expenditures grew from an estimated Rs. 5.6 billion to 14.3 billion. Throughout the decade, government and private sources accounted for approximately 50 per cent each of total financing, or about 1.7 per cent of GDP (Table 18B).

Central government ministries and departments accounted for a growing share of total public sector expenditures during 1990-1999. The provincial councils share declined to

31 per cent. The bulk of central government expenditures are from the Ministry of Health.

Household out-of-pocket spending accounts for the largest share of private spending (43 per cent of national total). Employees and insurance expenditures account for less than 5 per cent of total national spending.

2.8.3 Expenditures by Provider and by Functional Use

Personal health services account for the largest share of total spending (78 per cent). Inpatient expenditures account for 23-25 per cent (Table 18C). Preventive and public health expenditures declined as a share of the national total from 11 per cent in 1990 to 6 per cent in 1999. The bulk of preventive health expenditures, and most inpatient expenditures are funded by the government sector. Most private expenditures are for outpatient primary care services, 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 2002, foreign aid component of the health expenditure was Rs. 1218.6 million. This accounted for 4.5 per cent of the health expenditure. There is a marked decrease over the previous year. The foreign aid component during 2002 was 10.7 of the total health expenditure.

ⁱ De Silva N and Mendis K. One-day General Practice Morbidity Survey in Sri Lanka. Family Practice 1998; 15: 323-331. Oxford University Press

ⁱⁱ Health Manpower Study 1971-1973.

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 analysed 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. Registered / Assistant Medical Officers are still utilized to do the compilation of inpatient statistics in about 70 per cent of the hospitals. 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.

The institutions noted in the footnotes of Tables 36 and 37, (except CD and MHs) did

not forward the IMMR during 2003. With regard to submission of the IMMR, a higher percent of the hospitals in the Kegalle Vavuniya, Batticaloa, Mannar, Ampara & Killinochchi DPDHS Divisions, either did not forward the IMMR or was very late in sending them.

During the year under review, 10.2 per cent of the discharges, and 22.3 per cent of the deaths in government hospitals (that reported) had not been analysed. This was pronounced in the large hospitals. The National Hospital of Sri Lanka and the Teaching Hospital Sri Jayawardenepura had analysed only 8 per cent and 56 percent of their discharges respectively. 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.

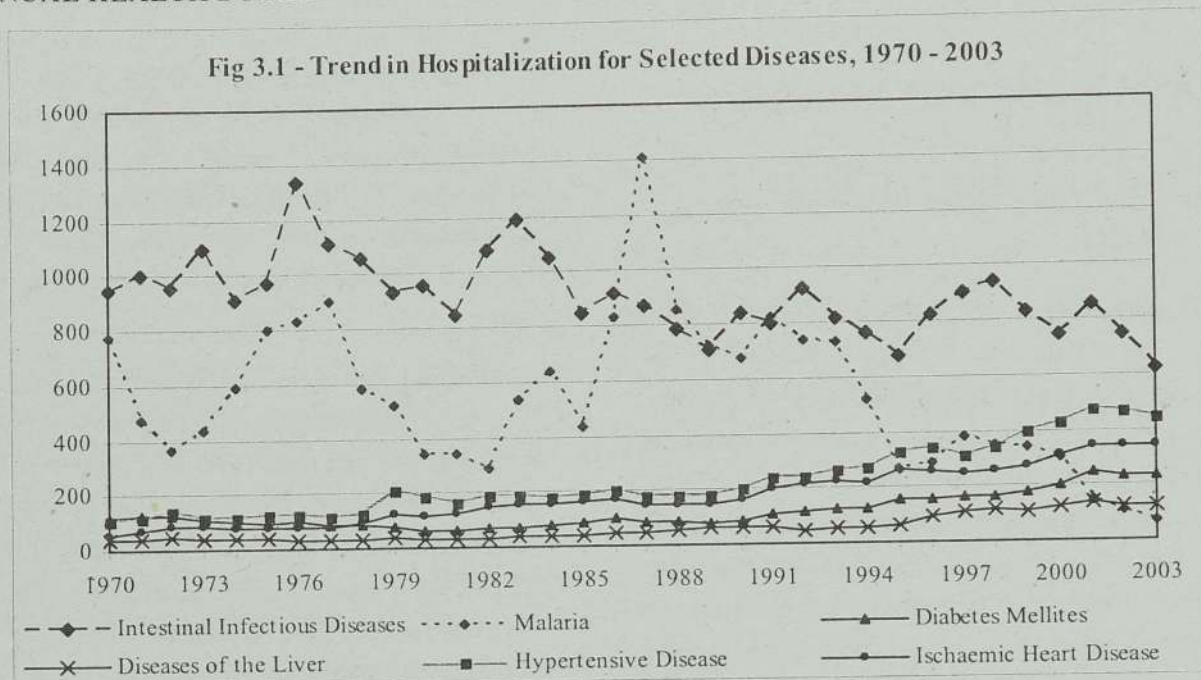
It should be noted that repeated visits, transfers and multiple admissions of the same patient for the same disease are reflected in morbidity data as additional cases. Therefore, morbidity data available in Sri Lanka should be interpreted with caution, considering the above limitations. However, data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

3.1.1 Inpatient Morbidity

Table 19 gives trends in hospital morbidity by broad disease groups of the ICD for the period 1980 – 2003.

A clear, decreasing trend is seen in hospitalization due to diseases of the blood and blood-forming organs and disorders involving the immune mechanism.

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. In fact the number of visits to hospitals to get treatment for the diseases of the digestive system, circulatory system and genitourinary system has almost doubled during the period 1980-2003. Another noteworthy feature is that the patients getting treatment for diseases of the eye and adnexa has also doubled during the last twenty years

A substantial increase is seen in hospitalization for injury and poisoning. It has increased from 1,732 cases per 100,000 population in 1980 to 3,372 in 2003.

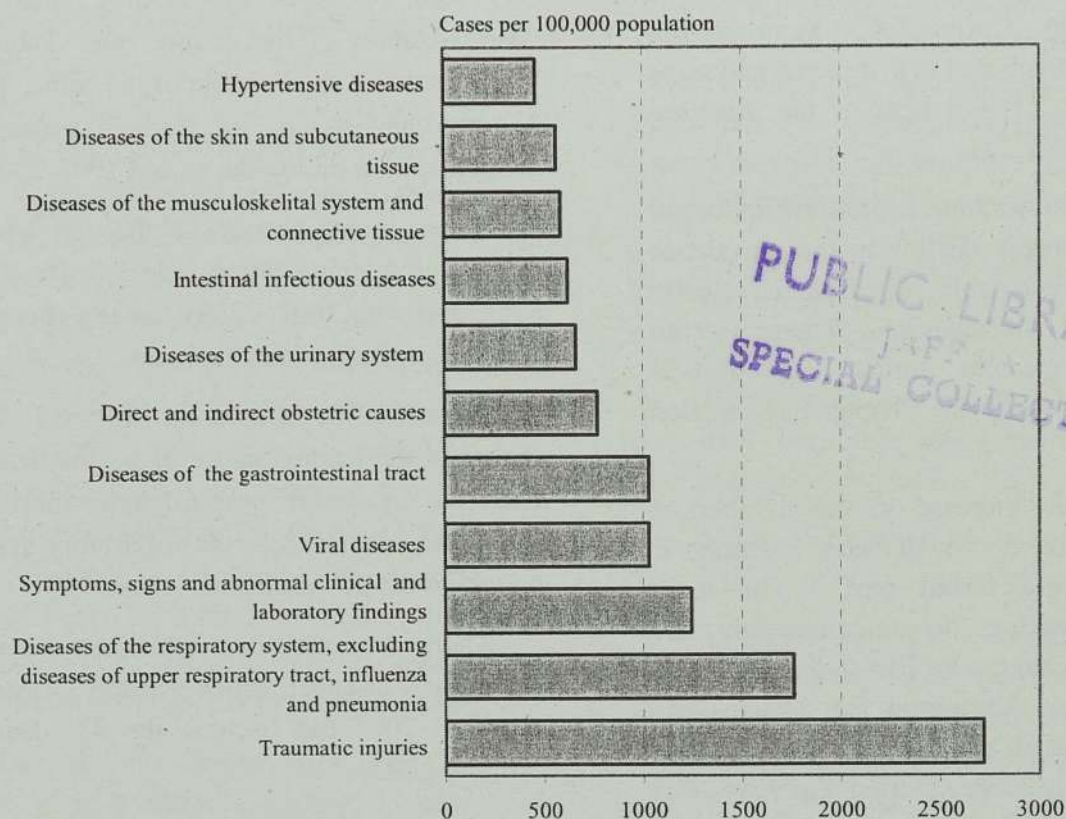
An increasing trend in hospitalization is evident since 1985 for disorders in the perinatal period and also for diseases related to pregnancy, childbirth and the puerperium. In addition to that, congenital malformations deformations and chromosomal abnormalities have also doubled during the 20 years period. The prevalence of infectious and parasitic diseases and also respiratory diseases has reduced compared with 1970's, but still fluctuates at a very high level. During 2003,

there were 1,855 and 2,353 cases hospitalized respectively.

The number of patients seeking treatment for mental disorders has increased over the years. During 1970, there had been 177 cases per 100,000 population taken treatment for mental disorders compared with 262 and 211 per 100,000 population in 1995 and 2003. 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 25 per cent of mental illnesses are alcohol related disorders. The number of cases treated for mental disorders in government hospitals by districts during 2003 is given in Table 28.

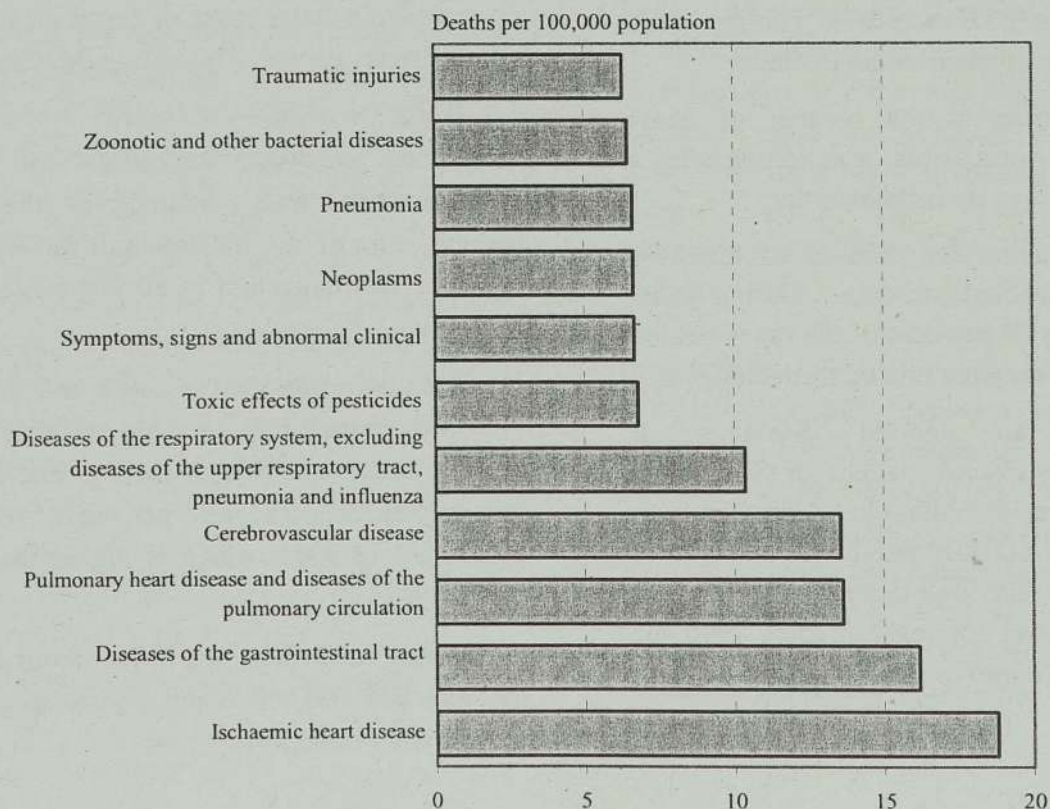
The number of cases with no specific diagnosis that are grouped as symptoms signs and abnormal clinical & laboratory findings varied between 1,078 and 1,242 per 100,000 population during the period 1980 to 2003. In spite of the effort taken to improve the quality of the final diagnosis and cause of death 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

Fig 3.2 - Leading Causes of Hospitalization, 2003



Excludes single spontaneous delivery, false labour and those admitted and discharged before delivery.

Leading Causes of Hospital Deaths, 2003



Source : Medical Statistics Unit

the delay in writing the final diagnosis on discharge of patients have mainly contributed to this situation. During 2003, the proportion of discharges attributed to symptoms and signs accounted for 7.6 per cent of the analysed discharges (Table 21).

Table 20 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 aging of population. Admission for diabetes has increased from 66 per 100,000 population in 1980 to 231 in 2003. During the year 2003 there were 44,49 inpatients visits to get treatment for diabetes.

An increased number of asthma cases are admitted each year to the government hospitals. The rate per 100,000 population for asthma during 2003 was 921. During 2003, 177,392 asthma patients were treated.

The increase in the number of cases diagnosed as septicaemia, a condition with a high case fatality rate is noteworthy.

Hospitalization for diseases of the liver shows a substantial increase. During years 2000 to 2003, 84 per cent of the cases treated for liver diseases were related to alcoholism.

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 three years.

3.1.1.1 Leading Causes of Hospitalization

Table 21 gives the leading causes of hospitalization of the country and Table 22 indicates the district profile of the same. Table 23 presents trends in leading causes of hospitalization during the period 1995-2003.

There is no change in the ten leading causes of hospitalization selected for 2003, compared with 2002, 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.

There is a decrease in viral diseases during 2002. Viral diseases, which was the 3rd leading cause in 2002 has become the 4th leading cause in 2003.

Intestinal infectious diseases are still an important cause of hospitalization. It ranked as the eighth leading cause of hospitalization and accounted for 3.8 per cent of the analysed discharges in 2003. Intestinal infectious diseases are a major cause of hospitalization in all districts except Colombo, Matara and Vavuniya.

During 2003, diseases of the gastrointestinal tract remained as the fifth leading cause of hospitalization. It was a major cause of hospitalization in all districts except Mullaitivu.

Hospitalization due to direct and indirect obstetric causes have remain as the sixth leading cause in 2003, as for the year 2002, but accounted for 4.7 per cent of the discharges in 2003, which is higher than the year 2002.

During 2003, there is a further reduction in the rate per 100,000 population hospitalized for malaria (Table 20).

Information on leading cause of hospitalization by district is given in Table 22. Traumatic injuries is the main leading cause of hospitalization in all the districts except Kilinochchi, Mullaitivu and Batticaloa. For most of the districts disease of the respiratory system ranked as the second or third major cause of hospitalization. Viral diseases and disease of the gastro intestinal tract have the rank order of 3 and 4 in 17 and 21 districts respectively. Direct and indirect obstetric causes, intestinal infectious diseases, disease of the urinary system also fell among the first ten leading causes in most of the districts. Malaria has ranked as the fourth leading cause in Kilinochchi and Mullaitivu district, and ranked as the eight leading cause in Batticaloa district. These are the only districts which have malaria in the first ten leading causes

During 2003, snake bites ranked as the eight and ninth leading cause of hospitalization in Mullaitivu and Kilinochchi districts respectively. It ranked within the first fifteen leading causes of hospitalization in Hambantota, Mannar, Moneragala, Anuradhapura, Kurunegala and Polonnaruwa districts. During the year under review, 36,648 cases of snake bites were treated in government hospitals. Similarly Mullaitivu and Kilinochchi have poisoning and toxic effects as the 5th and 10th leading cause of hospitalization.

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

3.1.2 Outpatient Morbidity

Data on outpatient attendance analysed by diseases are not collected routinely. Outpatient 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.

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

The 'One-day General Practice Morbidity Survey in Sri Lanka' 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 was similar in all 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.

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 24, 25 and 26 respectively.

In 2003, 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 analysed 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 gastrointestinal tract has ranked as the second leading cause of death since 1997. In 2003, it was the leading cause

of death in districts of Gampaha and Puttalam. Alcoholic liver disease accounted for 64 per cent of the gastrointestinal deaths in 2003.

Neoplasms ranked as the fifth or the sixth leading cause of death since 1993, but it is the eighth leading cause in 2003. It also ranked within the first ten leading causes of death in Kalutara, Kandy, Galle, Hambantota, Batticaloa, Anuradhapura, Baddula, Moneragale, Ratnapura and Kegalle districts. 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. During 2003, pesticide poisoning accounted for 4.5 per cent of the deaths and ranked as the 6th leading causes of death. *Organo-phosphate and carbamate* insecticides were the commonest groups of chemicals involved in poisoning, accounting for almost 54 per cent of the pesticide poisonings. Pesticide poisoning was the second leading cause of mortality in Mannar and Polonnaruwa districts, and third leading cause in Matale and Mullaitivu districts. Besides it was one of the leading cause of death in many agricultural districts such as Kurunegala, Matara, Badulla, Moneragala, Kegalle and Nuwara Eliya. Deaths by poisoning due to poisons other than pesticides, too, were an important cause of hospital deaths. It was a leading cause of death in many districts (Table 25). Pneumonia, zoonotic and other bacterial diseases are among the ten leading causes of 15 and 14 districts respectively. Zoonotic and other bacterial diseases is the first leading cause in Mullaitivu and third leading cause in Trincomalee.

Disorders related to short gestation, low birth weight, slow fetal growth and fetal

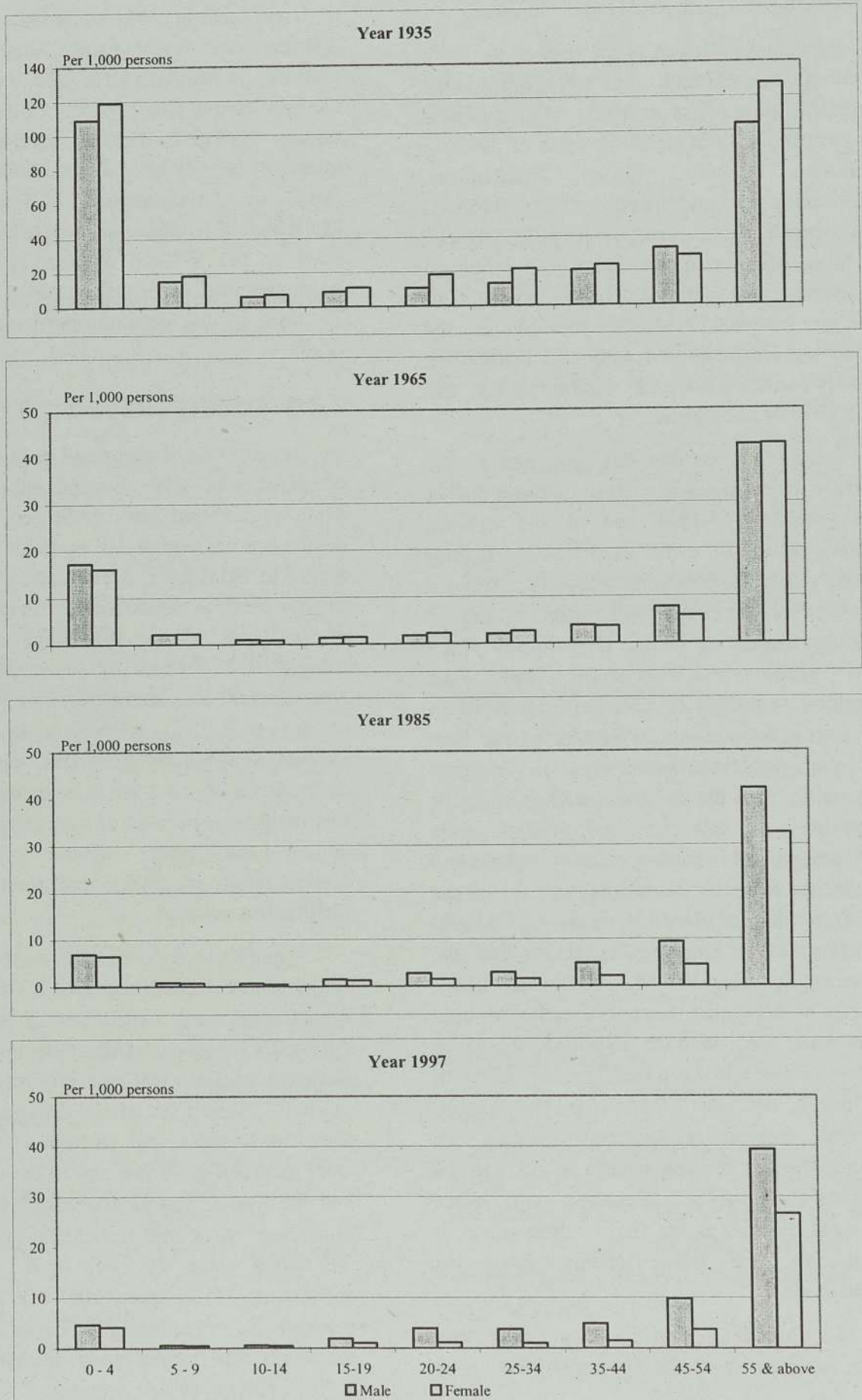
malnutrition ranked as the third leading cause of mortality in Polonnaruwa district. This is the sixth leading cause in Jaffna and Ampara districts. Malaria is the third leading cause of mortality in Mullaitivu for year 2003, but was the first leading cause in 2002. Diseases of the urinary system is the first leading cause of mortality in Vavuniya and second leading cause in Anuradhapura. Kilinochchi and Mullaitivu districts which experienced snake bites as the 9th and 8th leading causes of hospitalization, have this cause as the 5th and 7th rank in the leading causes of hospital deaths.

3.2 Mortality (Registered Deaths)

Registration of births and deaths was made compulsory in 1897. Several studies done on death registration have indicated that many deaths are not registered, particularly in rural areas. 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.

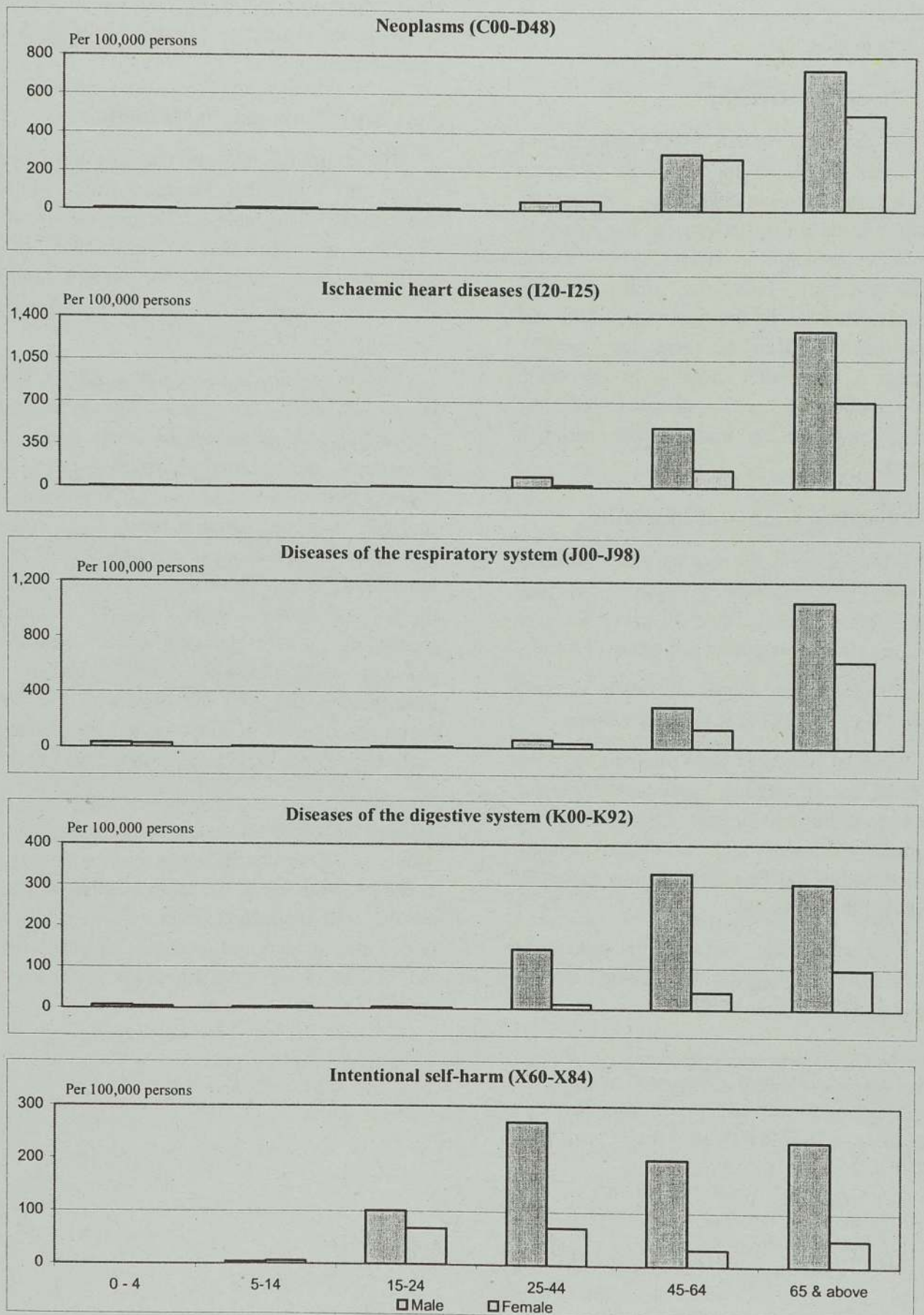
A study was done in 1986, on the accuracy of the cause of death recorded by the Medical Registrar in death certificates of the General Hospital Colombo⁵. This study revealed that the cause of death was correctly recorded only in about 38 per cent of the death certificates. Symptoms, signs and ill-defined 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

Fig 3.4 - Age and Sex Specific Death Rates, 1935 - 1997



Source : Registrar General's Department

Fig 3.5 - Age and Sex Specific Death Rates for Selected Diseases, 1997



Source : Registrar General's Department

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 29 gives the age specific mortality rates by broad disease groups of the ICD (tenth revision) and Table 30 gives the five leading causes of death by age groups for the year 1997. The cause of death is only available up to 1997 in R.G's Department

Perinatal disorders were the leading cause of death during infancy. Immaturity was the main contributory factor. Diseases of the respiratory system and circulatory system ranked within 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. During 1997, external causes were responsible for 74 per cent and 40 per cent of the deaths in the age groups 15-24 and 25-49 years respectively.

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).

The male and female death rates for 1997 were 7.8 and 4.5 per 1,000 population respectively. This shows that male death rate exceeded the female death rate by approximately 3.4 deaths per 1,000 population. In 1997, 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 1997 are shown in Table 32. Gender difference is pronounced in causes such as ischaemic heart disease, diseases of the gastrointestinal tract, diseases of the respiratory system and in deaths resulting from external causes of injury and poisoning.

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 2003 there were 44 million outpatient visits and 4 million inpatient admissions (Table 4.1). Between 2000 to 2003 inpatient admissions remained stable around 4 million while outpatient visits reduced by 4.2% in year 2003. Colombo, Anuradhapura and Polonnaruwa districts recorded the highest number of inpatients per 1000 population followed by Vavuniya, Kandy, Matale, Kurunegalle, Badulla, Galle, Moneragalle and Jaffna. These were the eleven districts which recorded higher rates than the national figure of 207 inpatients per 1,000 population (Table

37). Districts of Moneragala, Anuradhapura, Mannar, Ampara, Mullaitivu, Hambantota, Badulla, Vavuniya, Trincomalee and Polonnaruwa recorded a higher number of outpatients per 1000 population (Table 38).

The average duration of stay varies with the type of hospital and is significantly longer in the

Table 4.1 Trends in Inpatient and Outpatient Attendance and Rates Per 1,000 Population, 1960-2003

Year	Inpatients Treated		Outpatient Attendance ¹	
	Number '000	Rate	Number '000	Rate
1960	1,392	140.7	28,852	2,915.5
1965	1,642	150.4	31,258	2,866.9
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

Source : Medical Statistics Unit

Excludes:

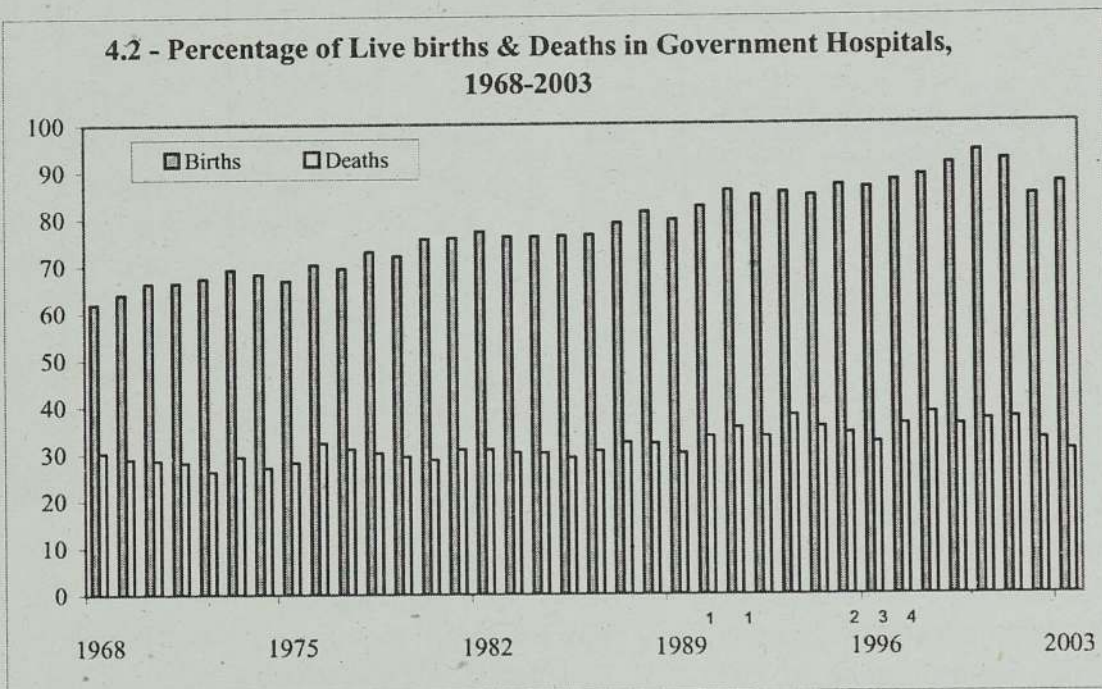
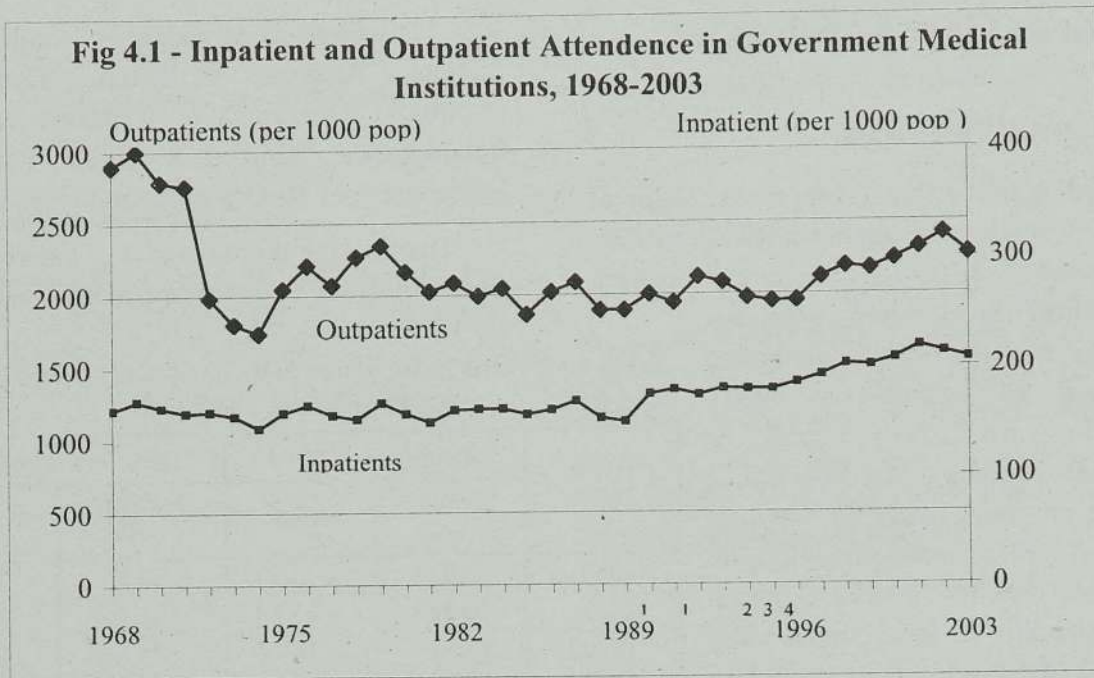
- ¹ Clinic Attendance
- ² Northern and Eastern Provinces
- ³ Jaffna, Kilinochchi, Mullaitivu and Ampara Districts
- ⁴ Kilinochchi and Mullaitivu Districts
- ⁵ Ampara District

Table 4.2 Maternal Services By Type of Hospital, 2003

Type of Institution	Method of Deliveries			Total Deliveries	Outcome of Delivery		
	Single	Twin	Other		Normal	Forceps	Caesarean
Teaching Hospitals	66,318	671	13	67,002 (21%)	46,764	1,803	18,435
Maternity Hospitals ¹	45,006	438	5	45,449 (14%)	30,645	785	14,019
Provincial Hospitals	47,386	417	2	47,805 (15%)	36,319	178	11,308
Base Hospitals	100,530	852	4	101,386 (32%)	81,479	1,274	18,633
District Hospitals	39,996	167	-	40,163 (13%)	39,110	136	917
Peripheral Units	6,765	21	-	6,786 (2%)	6,775	9	2
Rural Hospitals	6,856	15	-	6,871 (2%)	6,869	2	-
Maternity Homes	1,882	4	-	1,886 (1%)	1,886	-	-
Sri Lanka	314,739	2,585	24	317,348	249,847	4,187	63,314

¹ Includes Mahamodara Teaching Hospital

Source: Medical Statistics Unit



Source : Medical Statistics Unit

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

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 34).

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 39. Teaching hospitals, Provincial Hospitals and Base hospitals have a higher bed occupancy rates (92, 103, 83) while District hospitals, Peripheral Units and Rural hospitals have comparatively a

low figure (41, 39, 35). Kandy, Nuwara Eliya, Galle, Jaffna, Vavuniya, Ampara, Kurunegale, Anuradhapura, Pollonaruwa and Badulla are the districts with high Bed Occupancy Rates (above 100%) in Teaching hospitals, Provincial hospitals and Base hospitals. In Badulla district both Provincial and base hospitals indicate a high bed occupancy rate (178 & 108). It is also noteworthy that utilization of hospitals varies from district to district, irrespective of the type of hospitals. For instance District hospitals of Mullaitivu, Puttalam, Batticaloa and Kilinochchi have a fairly high Bed Occupancy Rate (85%, 63%, 56% and 52%) when compare with other districts. Similarly in Kilinochchi this figure is fairly high in Peripheral units and CD & MH. 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.

The most overcrowded institutions are the Cancer Hospital with a bed occupancy rate of 109.7, followed by Mental Hospital (76).

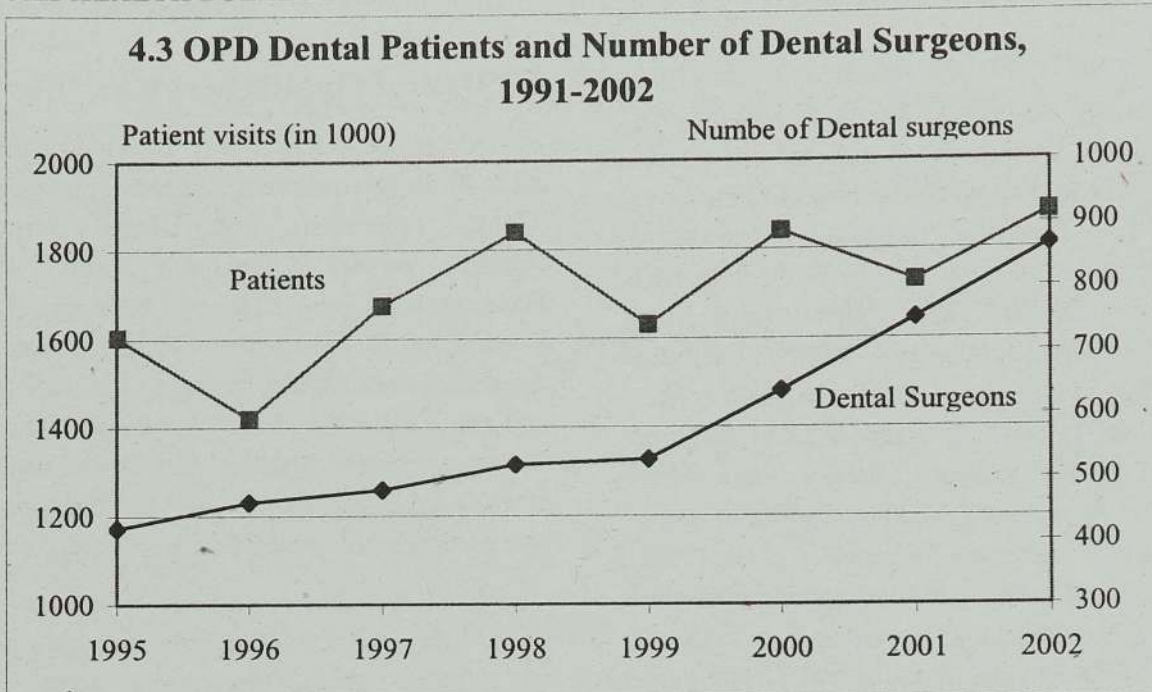
During 2003, a total of 316,465 live births and 3,558 still births took place in government hospitals. In general the population of births occurring in government hospital is increasing. The still birth rate per 1,000 births in government hospitals for 2003 is 11.1. Table 4.2 illustrates the maternal services provided by type of hospital. It is evident that the Teaching Hospitals and the three Maternity Hospitals accounted only for 35 per cent of the deliveries. An increase in the number of deliveries is observed in Maternity, Provincial, Base and Rural Hospitals when compared with 2002. Number of deliveries in 2003 for Teaching Hospitals is almost same as year 2002. The caesarean section rate was highest in the Teaching and Maternity Hospitals. Sri Jayawardenapura Teaching Hospital recorded comparatively a higher caesarean section rate of 44 per 100 deliveries. Over all, the caesarean section rate has increased in all types of institutions.

4.2 Dental Health Services

Dental Services are provided through medical infrastructure by dental professionals (Dental Specialists and Dental Surgeons), School Dental Therapists and Dental Technicians, Deputy Director General (Dental Services) at the Ministry of Health is managing the dental services according to national targets and goals from the central level and DDG (DS) is well supported by Regional Dental Surgeons at regional level. Dental Service comprised of two components, preventive service and curative service.

Curative service is mainly demand oriented and provided through network of dental clinics situated in government hospitals. At present dental clinics are available in Teaching, Provincial, General, Base Hospitals, most of the District Hospitals & Rural Hospitals and some Peripheral Units and Central Dispensaries. These clinics provide wide range of dental care, ranging from basic dental treatments through out patient dental clinics to specialized dental treatment through specialized dental clinics. Curative care is supported by dental technicians working in all dental clinics and institutions with consultant in Restorative Dentistry and Orthodontics. Dental Institute, Colombo and Dental Hospital, University of Peradeniya are considered as centres of excellence in Dentistry.

Need based preventive care service is provided mainly through School Dental Services. At present School Dental Clinics are managed by School Dental Therapists who are providing dental care for children of 3-13 years. In addition; preventive care services are further strengthened by the Dental Surgeons working in Adolescent & Community Dental Clinics (ADC & CDC). ADC provide dental services mainly to children over 13 years of age and to any complicated cases referred by School Dental Therapists, while CDC are targeted for the general public referred by the Primary Health Care Team. These programs are especially targeted to fulfil the needs of underserved communities.



The existing dental services are mostly restricted to provision of curative care, oral health surveys have shown that the strength of available preventive care is still inadequate to meet the expected oral health targets of the country.

In order to avoid these shortcomings Ministry of Health has already planned to expand carder of Dental Specialists and Dental Surgeons and also to train more dental auxiliaries. Further with the collaboration of DDG (Laboratory Services), Steps have been taken to revise the management system of equipment, drugs and materials to all the dental clinics in the country. Several studies have been conducted with the assistance of WHO to evaluate the preventive dental care of this country. Based on the findings of these studies it has been planned to strengthen the integration of preventive dental services with the available public health service by appointing Community Dental Surgeons to each Medical Officer of Health (MOH) division.

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 / Divisional Directors of Health Services (MOH/DDHS) carry out these services in Sri Lanka.

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 pre-school and school children. The Public Health Inspector is primarily responsible for environmental 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 Specialised Services executed by separate agencies in liaison with the MOH/DDHS. 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

Family Health covers a wide spectrum of services comprising of the following:-

- Maternal care - antenatal, intra-natal and postnatal.
- Infant and child care which provides for,
 - Monitoring growth and development.
 - Psychosocial development of the child including Early Childhood Care and Development (ECCD).
 - Immunization against common childhood diseases.
- Nutrition of pregnant mothers and children.
- Care of the school children.
- Adolescent reproductive health.
- Family Planning.
- Women's reproductive health.

The Family Health Bureau (FHB) is the central organization responsible for the planning coordination, direction, monitoring and evaluation of maternal and child health and family planning (MCH/FP - Reproductive Health) programmes in the country. Also, it conducts in-service training programmes to update the knowledge and

Table 5.1.1 MCH Performance, 2000 and 2003

Care by Public Health Midwives	2000	2001	2002	2003
Visits to pregnant mothers				
<i>First visits</i>	318,171	331,502	322,137	327,402
<i>Subsequent visits</i>	1,294,360	1,263,783	1,326,485	1,335,292
Post natal visits by PHM (1st visits)	233,416	230,801	301,896	312,045
Still births reported by PHM	3,155	3,592	2,906	N.A
Abortions reported by PHM	11,842	12,562	13,495	N.A
Infants registered by PHM	295,085	316,069	298,453	314,867
Care at clinics				
Visits of pregnant mothers to clinics				
<i>First visits</i>	321,798	322,330	331,339	341,711
<i>Subsequent visits</i>	1,497,133	1,642,993	1,735,978	1,846,045
Visits of infants to clinics				
<i>First visits</i>	298,125	306,896	285,105	297,015
<i>Subsequent visits</i>	1,829,433	1,689,603	1,518,705	1,460,063

Source: Family Health Bureau

Table 5.1.2 Family Planning New Acceptors by Method, 1998-2003

Method	1998	1999	2000	2001	2002	2003
Permanent methods						
Vasectomy	340	292	242	154	120	116
Tubectomy	19,186	14,894	15,499	15,063	14,949	10,940
Temporary methods						
IUD	26,174	24,706	28,832	32,498	39,385	38,608
Pill	47,476	47,690	50,212	47,627	49,972	44,961
Injectable	122,420	130,108	118,577	136,711	145,202	127,380
Implant	551	583	1,265	1,269	1,476	1,673
Total	216,147	218,273	214,627	233,322	251,104	223,678

Source: Family Health Bureau

the technical skills of relevant health staff. Providing feedback reports to the ministry of health, donor agencies and implementing authorities regarding the progress of implementation are some other important activities of FHB. This unit also involves in, conducting relevant health services research and implementation of special projects funded by international agencies to support and strengthen service delivery throughout the country. Also, the procurement and distribution of contraceptive and some of the essential equipments and supplies needed for family planning and maternal and child health activities were conducted.

In performing this role, FHB works in close collaboration with the Epidemiological Unit, Health Education Bureau, Population Division of the Department of Health Services, and provincial health authorities and other related organizations.

The Medical Information System (MIS) established in 1980s for the monitoring and evaluation of all family health activities was revised in year 2000 and was in place from January 2001.

5.1.1.1 MCH Performance

A summary of work performed by the public health staff at the periphery and attendance at MCH Clinics during 2001 and 2003 are given in Table 5.1.1.

5.1.1.2 Family Planning Performance

During the year 2003, 223,678 new acceptors were recruited by the National programme. This includes those clients

recruited by non-governmental organizations. Compared to the previous year, acceptors of intrauterine contraceptive device (IUD), pills and injectables as well as acceptors of permanent methods have shown a decrease (Table 5.1,2).

Both tubectomy and vasectomy which showed an increasing trend from 1989 to 1992, experienced a decrease since 1993 and this is more marked for vasectomy.

5.1.1.3 Clinical Services Provided at the Family Health Bureau

The Clinic Centre at the Family Health Bureau functions daily and provides contraceptive services and services for management of sub-fertility.

Laparoscopic sterilization services have been provided daily since 1983, with continuous support from Johns Hopkins Programme for International Education on Gynecology and Obstetrics (JHPIEGO). A sub-fertility clinic is conducted every Wednesday, which is attended by a large number of sub-fertile and infertile couples. Other contraceptive services such as insertion of intrauterine contraceptive devices, injecting of long acting injectables, insertion of implants, and distribution of condoms and pills are also provided at the clinic centre. In addition to the above, immunization services are also provided for infants and pre-school children at the child welfare clinic at FHB. Activities carried out at the above centre during the period 1998 to 2003 are indicated in Table 5.1.2.

5.1.1.4 Foreign Funded Projects undertaken in 2003

The foreign funded projects undertaken by the FHB during 2003 are given below.

Project Title	Funding Agency
Reproductive Health Services	UNFPA
Supply of Contraceptives	UNFPA
Child health including ECCD	UNICEF
Nutrition including Breast Feeding	UNICEF
School Health and Adolescent Health	WHO & UNICEF
Emergency obstetric care	UNICEF & JICA
Safe Motherhood	WHO & UNICEF
Well Women Clinics	UNFPA
Strengthening of family planning services	UNFPA

5.1.1.5 In-service Training Programmes

The following in service training programmes were conducted for health personnel by the FHB during 2003.

- Lactation management.
- Training on contraceptive technology.
- Revised Reproductive Health Management Information System (MIS).
- School health training for PHC Staff.
- Training on life skills for school children.
- Emergency obstetric care training.
- Training on early childhood care and development.
- Training on growth monitoring and promotion.

5.1.1.6 Well Woman Clinic Activities

Well woman clinics were incorporated into the Family Health Services with the introduction of the concept of Reproductive Health from 1996. At the end of year 2003, 349 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. These diseases are diabetes mellitus, hypertension, breast and cervical cancers. Of the 349 clinics functioning, 260 clinics provided Pap smear examination facilities. The performance in Well Woman clinics during 2003 is indicated below.

Women Screened in WWCs	46,015
Pap smear examination	32,323
Diabetes mellitus detected	1,345
Hypertension detected	3,014
Breast abnormalities detected	806
Cervical smears reported CIN positives	268

5.1.1.7 Maternal deaths reported to Family Health Bureau – 2002

In the year 2003, maternal mortality reviews for some districts could not be conducted, due to unavoidable circumstance and the data for 2002 is published here. The total number of maternal deaths reported to the Family Health Bureau during the year 2002 was 194. Out of total death reported 70.1% were direct deaths, 23.2% indirect deaths and in 6.7% of deaths the causes were unknown. For year 2002, the computed Maternal Mortality Ratio (MMR) is 53.4/100,000 live births which is higher than the reported ratio of 47/100,000 for the year 2001.

The highest MMR was reported from the district of Nuwara Eliya (102/100,000 Live births) while Anuradhapura district reported the lowest (12/100,000 Live births). The main causes of maternal death include post partum hemorrhage (18.5%), pregnancy induced hypertension and its complications (17.5%), heart disease complicating pregnancy (13.4%), septic abortion (7.7%) and post partum sepsis (7.2).

5.1.1.8 School Health Programme

The Family Health Bureau is the focal point for the school health programme and the services are delivered through PHC infrastructure.

The goals of the programme is to ensure that children are healthy, capable of promoting their own health and health of the family & community, and are able to optimally benefit from educational opportunities provided.

At present, FHB is in the process of establishing the concept of Health Promoting Schools in the country. Components of Health Promoting Schools packages are:

1. School medical services including counseling.
2. Healthy School environment.
3. Health Education and development of skills.
4. School community participation.
5. Healthy school policies.

According to School Census, 2003 there were 9,790 schools in Sri Lanka, where a population of 3.9 million school children receive education. The coverage of school medical inspection (SMI) during the year 2003, was 81.7% of the total schools. Special programmes are being conducted for the adolescent on counseling, and development of skills.

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 motivate people to consume water that is safe; usually boiled cooled water.

Public Health Inspectors (PHII), conduct routine tests for adequate chlorination of sources of drinking water during epidemics of bowel diseases and other disaster situations 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 provisions of relevant legislation related to housing. All new houses have to possess toilet

facilities in order to obtain approval from the local authorities. Assistance is provided to the poor for construction of sanitary latrines by many organizations, both state and private. In the past the Department of Health Services provided financial assistance to those without toilets and those unable to construct one with their own resources. After certification by the PHI, Rs. 3,000/- is provided to those with a monthly income less than Rs 2,500 for construction of a sanitary latrine. From 2002 this activity has been decentralized and funds were allocated to each province for this purpose.

Although the disposal of waste is the responsibility of the local authorities, disposal of healthcare waste is being given serious attention by the Department of Health Services. There is a Steering Committee on hospital waste management with representation from all the relevant stakeholders. Disinfection of waste by autoclaving is being identified for the Hospitals in Colombo Municipal area which is in process of implementation. Technical guidance and financial assistance is provided for some selected provinces as an initial step to improve the 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 being explored for implementation. Training programmes are being conducted for Teaching, Base and District Hospital staff. Steps were taken to establish a hazardous waste disposal facility with Bureau of Infrastructure Investment.

Technical guidance and awareness is provided to other Ministries, relevant agencies and general public on environmental health, in the areas of waste disposal, bio safety, water supply and sanitation, climate change, environment and health toxicology, air and water pollution, etc. Also, carrying out inter Ministerial and inter agency

collaborative activities in order to strengthen the environmental health condition in this country.

5.1.2.2 Food Safety and Hygiene

Food Safety & Hygiene activities through the Food Control Administration Unit aims at ensuring the availability of safe and wholesome food to the consumers. The Health Sector plays a major role, while many other organizations are also involved.

5.1.2.2.1 Food Control Legislation

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.

Review of all the current regulations has been completed and the following regulations were drafted, reviewed and prepared for publication.

- Bottle Water Regulation.
- Iodization of Salt Regulation.
- Irradiation Regulation.

Approved Analyst in terms of the Food Act is the Government Analyst. Additional approved Analysts are the MRI Colombo, Food Laboratory at NIHS Kalutara, City Analysts Laboratories in Colombo and Kandy Municipalities. The Anuradhapura Food Laboratory established under the concept of Provincial Laboratory has been gazetted as Approved Analyst.

5.1.2.2.2 Food Control Surveillance

The Imported Food Inspection Unit subjects all items of food imported into the country to inspection at two points of entry, namely Sea Port Colombo and Airport Katunayake. During the year 2003, imported food inspection was carried out by 7 Food and Drug Inspectors (F & DI) in the Sea Port and one Food and Drug Inspector at the Airport. During the year 15,434 consignments of food were subjected to inspection of which 26

consignments were found to be unsatisfactory and rejected.

All consignments of milk food imported into the country were inspected and sampled for analysis of radioactive contamination prior to release. A total number of 673 samples of milk food were drawn and analyzed in the laboratory of Atomic Energy Authority.

Food that did not confirm to the hygiene and standards parameters are rejected and either re-exported or destroyed under supervision. Food items that did not confirm to the provisions of the Food (Labeling & Miscellaneous) Regulations were conditionally released to consignees' for compliance by affixing supplementary labels after which final release granted

A total of 4,536 formal samples were sent by Authorized Officers from the provinces of which 1,245 were found to be unsatisfactory. A total of 1,432 prosecution were instituted under the Food Act and fines imposed totaled Rs. 7,53,100/=.

Monitoring of Iodization of salt with field test kits is continued. 18,500 of field tests kits were distributed among authorized Officers island-wide. A total of 203 consignments of imported salt consignment inspected and released.

In the Demography and Health survey Sri Lanka-2000 the availability of iodine in cooking salt was checked and found that 83 per cent of households had iodized salt with the specified concentration.

5.1.2.2.3 Special Issues

- Food labeling and advertising particularly misleading ads were under special consideration of FAC and actions were initiated to regulate these areas by drafting a new labeling and advertising regulations.
- BES (Mad Cow Disease) – A special committee to exercise vigil over the issue of BES was appointed and import of meat products from EU countries are

Table 5.1.3 Port Health Services, 2003

Source	Pratique Granted		Immunizations Given		Derating Exemption Certificate	Release of Human Remains
	Ships	Aircraft	Yellow Fever	Meningococcal meningitis		
Colombo Port	3,914	-	435	-	189	4
Assistant Port Health Office	-	-	930	784	-	-
Galle Port	193	-	-	12	3	2
Trincomlee Port	86	-	43	15	-	-
Airport Health Office	*	12,388	-	-	-	339
Total	4,193	12,388	1,408	811	192	345

* Not applicable

Source: Port Health Units

regulated on the recommendation of this committee-This activity continues.

- A new draft regulation for approval and labeling of GM food finalized.
- Bottle water- The FAC found that unregulated bottling of drinking water is taking place in the country. To ensure the safety of the bottled drinking water, regulations of register the premises of bottling water had been drafted in 2003 finalized for publication in 2004.
- A special panel to draft amendment to the Food Act and also to revise or frame new regulations was appointed in 2004-This activity continues.

5.1.2.2.4 Food Safety Education

- Four 5 day programmes on Food Safety & Hygiene for Public Health Inspector were held and 188 PHII articulated.
- A total of 444 awareness programmes were held at divisional level for food handlers and 5,031 participated.
- Awareness programmes on food hygiene were held in schools on a routine basis in which 9,336 students participated.
- Thirty seven awareness programmes were held for members of local authorities.
- New exhibits were designed and procured. They are now being displayed in various exhibitions.
- A quarterly publication of Food Safety news bulletin was launched.

5.1.3 Quarantine Services (Port Health Services)

The following units carry out the quarantine services in Sri Lanka.

- Port Health Office, Colombo Harbour.

- Office of the Assistant Port Health Officer, at the MRI (Vaccination only).
- Airport Health Office, Katunayake.
- Port Health Offices at Galle and Trincomalee.

Quarantine services are mainly concerned with the implementation of the International Health Regulations, which aim to ensure the maximum security against the international spread of diseases, with the minimum interference with world traffic and trade. The main duties of this service includes the prevention of listed infectious diseases being introduced to the Island, issuing of pratique to aircraft and ships, inspection and release of food items imported, release of human remains, ensure sanitation and maintenance of high standard of the food outlets within the airport and port, vector control and other public health activities.

5.1.3.1 Surveillance of quarantinable Diseases

Surveillance of passengers from endemic countries for yellow fever is carried out at the Airport. All passengers who do not possess a valid yellow fever vaccine certificate are isolated at the Infectious Diseases Hospital (IDH) for 6 days or deported. Although all passengers arriving from yellow fever infected countries are requested to report at the health counter some passengers are missed, as this is a voluntary check. Also,

passengers going through the VIP lounge are not checked.

The requirement for vaccination under the International Health Regulations is only for yellow fever. This is for travelers above one year of age, to and from yellow fever endemic countries in Africa and South Africa. During 2003, yellow fever vaccinations were given to 1,468 passengers.

Travelers to Mecca are provided meningococcal meningitis vaccine on request. During the year under review, 811 vaccinations were given as shown in Table 5.1.4.

5.1.3.2 Granting of Pratique

Ships and aircraft arriving in Sri Lanka are inspected and granted pratique at the Port and the Airport. In 2003, 4,193 ships and 12,388 aircraft were granted health clearance.

5.1.3.3 Rodent Control

The Health Authority inspects ships arriving in port for evidence of rodent infestation and De-ratting Exemption Certificates are granted.

5.1.3.4 Release of Dead Bodies Brought to Sri Lanka

This activity is carried out under the supervision of health authorities. In 2003, 345 dead bodies have been released.

5.1.3.5 Other Activities

The Port Health Office provides a day and night radio medical advisory service to ships at sea.

Activities such as mosquito control work, training of medical students on port health procedures, surveillance of infectious diseases and regular sanitary inspections are also carried out by the Airport Health Officer and the Port Health officers.

5.1.4 Health Education and Publicity

The Health Education Bureau (HEB) of the Ministry of Healthcare, Nutrition and Uva

Wellassa Development is the National Centre of Excellence for Health Education and Health Promotion. The sole responsibility of the HEB is to bring about improved standard of health and well being through health education/promotion.

5.1.4.1 Goal of the Health Education Bureau

Promotion of the health status of the community through Information, Education and Communication (IEC)/Advocacy, Social and Community Mobilization, Social Marketing and Capacity Building using the different health promoting setting is the goal of the HEB.

5.1.4.2 Objectives of the Health Education Bureau

The objectives of the Health Education Bureau are:-

- To provide technical support for the development of the educational component in policy formulation, health planning and programming.
- To support various health programmes of the Department of Health Services through advocacy, motivation and mobilization of communities for health action.
- To develop the required health education manpower, both within and outside the Department of Health Services.
- To educate the public on health and environmental issues, in order to enable them to play their role in promoting individual and community health.
- To promote, support and undertake research in the field of health education.

5.1.4.3 Activities carried out by the Health Education Bureau

- Capacity building programmes on health education, disease prevention and health promotion for district level health staff.
- Conducting seminars for mass media personnel on current health problems and issues.

- Publication and distribution of newsletters on Reproductive Health among media personnel and health staff.
- Conducting feature programmes, magazine programmes and quiz programmes through printed and electronic media.
- Publication and distribution of newsletters and magazine on health issues among health staff, volunteer health workers and school children.
- Conducting social marketing programmes and community mobilization programmes on major health problems.
- Conducting health exhibitions targeted at general public.
- Co-ordinating IEC and advocacy activities on reproductive health with the Ministries of Labour, National Youth Services Council, University Grant Commission and the Provincial Ministries of Health.
- Co-ordinating the School health education activities with the Family Health Bureau (FHB), National Institute of Education (NIE) Ministry of Education and Provincial Health Administration.
- Conducting programmes in collaboration with special campaigns, special units of the health and international agencies.
- Providing technical support and guidance to national non governmental organizations in Health Education manpower development and implementation of information, Education and Communication (IEC) programmes and activities.

5.1.5 Epidemiology

The Epidemiological Unit undertakes surveillance of all communicable and non-communicable diseases except malaria, filariasis, tuberculosis, leprosy, STD/AIDS and cancer, for which there are special campaigns. This unit also undertakes surveys and studies in the country on epidemiologically important subjects. In addition, the Epidemiological Unit is responsible for control of vaccine-preventable diseases, diarrhoeal diseases, acute respiratory infections, dengue fever (DF), dengue haemorrhagic fever (DHF) and Japanese

encephalitis (JE) and other emerging and re-emerging diseases

5.1.5.1 Epidemiological Surveillance

Epidemiology unit carries out epidemiological surveillance activities and co-ordinates the disease surveillance activities with other specialized units, campaigns and all health institutions in Sri Lanka.

Surveillance of notifiable diseases is a major routine activity carried out by the Epidemiology Unit. All the Medical officers of health in the country send a weekly return (Weekly Return of Communicable Diseases) containing data on notified diseases by institutions and information through field investigations of the notified cases. The data collected through this (well established properly functioning notifiable diseases surveillance) system is published in the Weekly Epidemiological Report.

The other main regular surveillance system is the collection of institutional data through the Indoor Morbidity and Mortality Register. The data thus collected is transferred through the indoor Morbidity and Mortality Return to the Medical Statistics Unit to be collated, compiled and published in the Annual Health Bulletin.

Beside these, there is one Advisory Committee on Communicable Disease. It is the highest technical committee that functions at the central level. This committee to which the Epidemiologist is the secretary, is convened on schedule. Additionally quarterly consultative meetings with the regional epidemiologist were conducted on schedule. In these meetings relevant technical discussions are carried out and work of the regional epidemiologist are assessed and monitored.

Comprehensive Assessment of National Surveillance System in Sri Lanka was conducted in March 2003 with the sponsorship of world Health organization (WHO). The report of this assessment is

published by the WHO regional office, New Delhi – SEA-HSD-269. On Implementing the recommendations of this report, a workshop was conducted to develop case definition for diseases under surveillance in November 2003.

During November-December, 2003 Acute Flaccid Paralysis (AFP) surveillance activities in Sri Lanka were reviewed by experts from WHO/SEARO, Centers for Disease Control and Prevention (CDC) along with local experts from Sri Lanka.

5.1.5.1.1 Japanese Encephalitis (JE)

In 2003, a total of 133 cases of Japanese encephalitis (J.E) were reported from medical institutions and there were 20 deaths giving a case fatality rate of 15.03 % (Table 47). The male to female ratio for JE was 1.04:1.

The outbreak situation experienced in latter part of the year 2002 in Ratnapura district continued in early months of year 2003. A total of 167 cases reported from 2002 Nov to Feb 2003. The distribution of JE cases by months is shown in Table 49.

The age distribution of JE cases is given in Table 50. More than half of the total i.e. 75 cases (54.2%) was reported in 1-24 year's age group. There are three cases in the under 1 year age.

Blood and CSF of the patients were examined for JE antibodies in the Virology Department of the Medical Research Institute of which 52 cases were positive for IgM antibodies.

Following the JE outbreak in Ratnapura district JE immunization programme was expanded in 2003 to include Ratnapura and Jaffna districts.

Japanese Encephalities immunization programme is usually conducted in June/July in the selected districts. But due to the delay of receiving JE vaccine in 2003, the programme commenced later in some districts. In Southern province the programme was conducted as usual in June/July with the 1st

consignment of 200,000 doses of single dose vials. In Western, Northwestern, North central, Eastern provinces and Ratnapura and Jaffna districts the programme was commenced in September. In Jaffna and Ratnapura districts children of 1-3 years were immunized whereas in other districts 1-10 years old children were immunized. Beijing strain vaccine from GPO Thailand were used to immunize the children. A total of over 650,000 doses of JE vaccine was distributed in 2003 programme.

A programme for immunization of pigs was also carried out in some areas by the Department of Animal Husbandry, with the assistance of the Public Health Veterinary Services Unit of the Ministry of Health Services.

The Entomology Department of the MRI and regional entomology teams in the DPDHS divisions carried out entomological surveillance activities. Health education activities were carried out by the MOH/DDHS, the Health Education Bureau and other specialised units of the Ministry of Health Services.

5.1.5.1.2 Dengue Fever (DF) and Dengue Haemorrhagic Fever (DHF)

During 2003, a total of 4,749 DF/DHF cases were reported from government institutions and there were 32 deaths, giving a case fatality rate of 0.67 per cent. Blood samples of these patients were examined for dengue antibodies at the Virology Department of the MRI and 79 were found positive.

A special sentinel surveillance system was established in 48 large hospitals, to report all suspected cases of dengue directly to the Epidemiological Unit. In addition, *Aedes* vector surveillance and control activities were done with the assistance of the Anti Malaria Campaign, Anti-Filariasis Campaign, MRI and the Regional Entomological Units to control the disease.

The distribution of DF/DHF cases by DPDHS division shows that the highest number of cases reported from Colombo (1,003). Gampaha, Kandy, Kalutara, Kurunegala and Anuradhapura were among the divisions mainly affected (Table 48).

The age distribution of DHF cases and deaths based on notifications for the year 2003 shows that 17.3 per cent of the cases was among those in the age group 20-24 years. Three Hundred and Sixty five (29.7%) were in the under 15-year age group (Table 50).

The seasonal distribution of cases reported indicates that the highest number was during January (660 cases) and the lowest number in July (18 cases).

The DF/DHF surveillance activities (disease vector and serology), health education of the community and vector control activities are being carried out by MOHs and the Epidemiological Unit assisted by the MRI and the other health personnel of the local authorities.

5.1.5.2 Expanded Programme on Immunization (EPI)

National Immunization Programme of Sri Lanka is major success story. According to the routine immunization coverage data as well as periodical surveys conducted, virtually all eligible children and women throughout the country are receiving all their scheduled vaccine at the correct time. Objectives of any immunization programme are to bring down the morbidity and mortality of vaccine preventable diseases. With the high levels of immunization coverage achieved with acceptable quality, not surprisingly the target diseases have declined to low levels and some are not being detected at all, in spite of both active and passive surveillance activities.

Polio cases have not been reported since 1993. Poliovirus transmission has probably ceased. Only two cases of neonatal tetanus were reported in 2003. Laboratory confirmed cases of Diphtheria and Pertussis were not reported during the recent past. After the

introduction of measles immunization to the EPI in 1984/85, the incidence of measles gradually decreased until the occurrence of 1999/2000 outbreak, predominantly among the adolescence and young adults who were born before and just after the initiation of measles immunizations. With the new immunization schedule introduced in 2001; all children were given the second opportunity for measles immunizations with MR at three years. A measles catch-up immunization campaign was launched for those who aged 10-14 years in 2003. The measles immunization has become an achievable target within a few years.

Introduction of Hepatitis B vaccine & AD syringes to the EPI was started in phase basis in the year 2003 and it was successfully implemented in three provinces in 2003 with GAVI support.

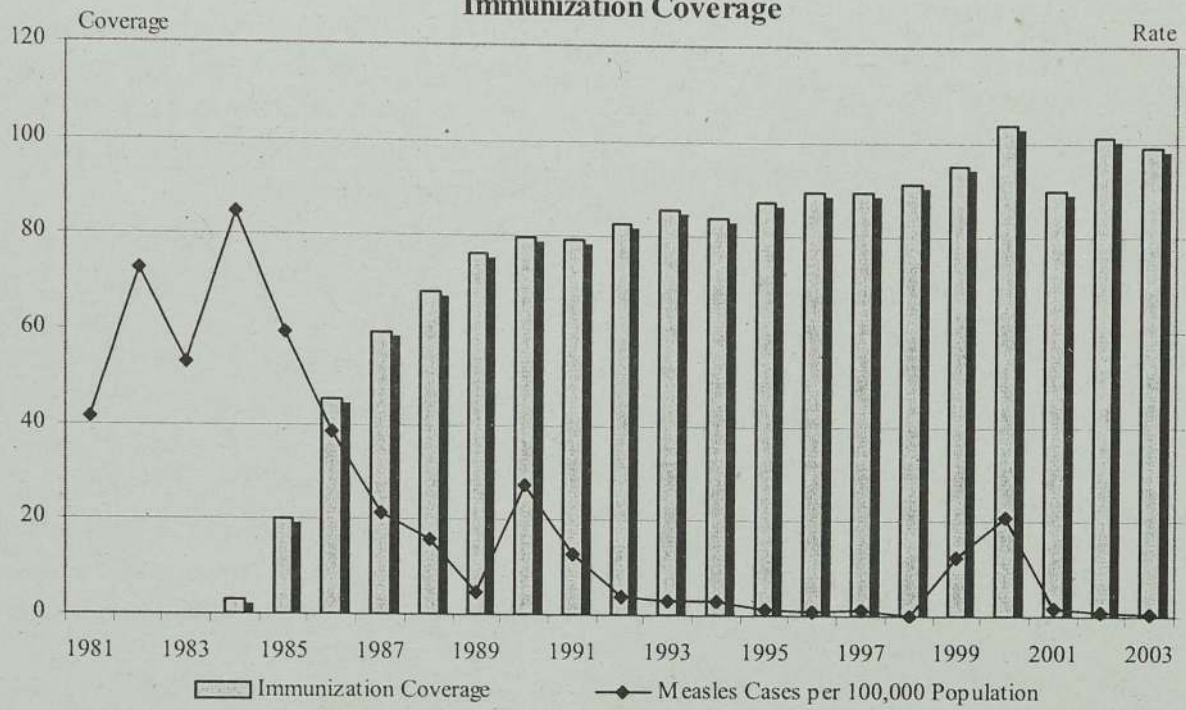
Field health staff under the supervision of divisional, regional and provincial health management with close collaboration with curative, estate and private health sector is mainly responsible for this success. Educated and well-motivated parents and medical community for immunization also an important factor in the success of immunization in Sri Lanka.

Number of cases of EPI target diseases reported in 2003 and trends over the years is given in Table 51. EPI coverage data, based on the EPI Quarterly Returns sent by Medical Officers of Health and Consolidated EPI Quarterly Returns sent by DPDHS, for 2003 are presented in Table 52.

Since the inception of the EPI in 1978, EPI coverage survey using 30-cluster methodology was carried out every year by the Epidemiology unit in selected districts and sectors. In 2003, three such surveys were done in Galle, Trincomalee and Jaffna DPDHS divisions.

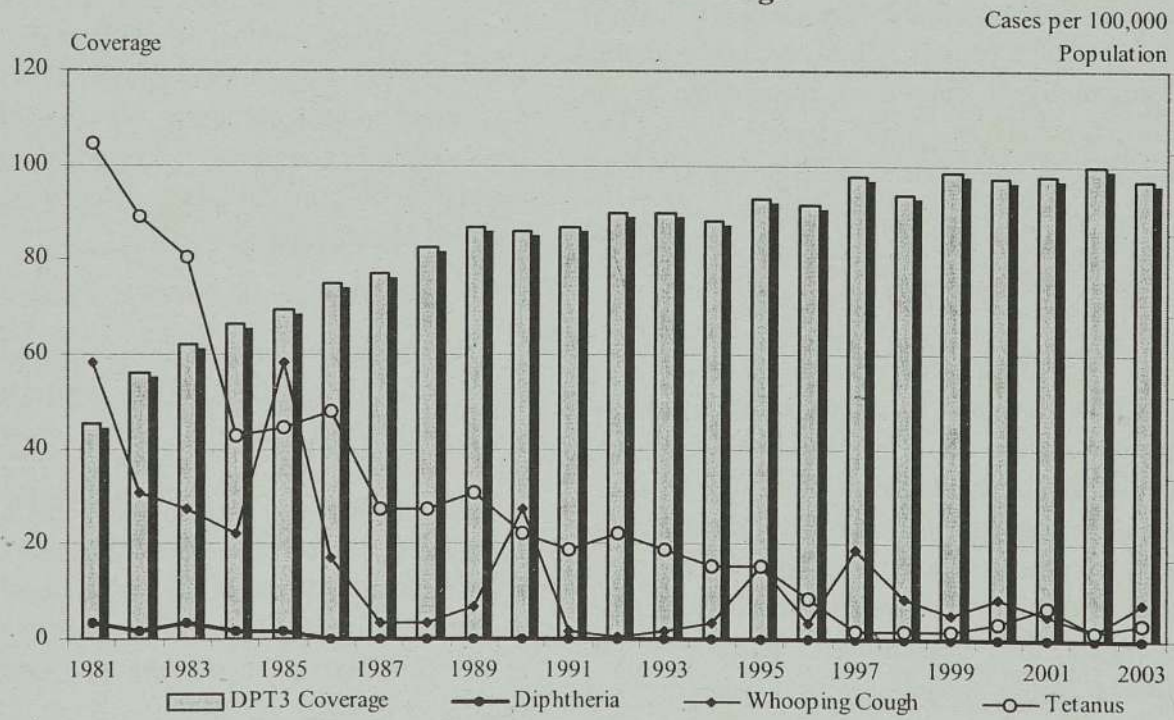
However, the coverage for antigens administered with school health programme; DT/OPV at 5 years, Rubella at 8 years and

Fig 5.1.1 Trends in Reported Measles Cases and Immunization Coverage



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Fig 5.1.2 Trends in Reported Diphtheria, Whooping Cough and Tetanus Cases and DPT3 Coverage



Source : Epidemiological Unit

at 12 years is yet to be reached the desired standard.

As Sri Lanka has achieved a higher coverage for almost all EPI antigens much is needed to be done in the sphere of improvement of the quality of the EPI programme, in the areas of cold chain, injection safety, record keeping, prevention of adverse effects following immunization etc. Several training programmes on maintenance of cold chain and surveillance of adverse events following immunization for MOOH and other public health staff were conducted in several DPDHS divisions including Northeast provinces.

In 2003 Epidemiological Unit was recognized as a global Training Center on Adverse Effects Following Immunization by the Global Training Network of the World Health Organization and 1st training programme was conducted in June 2003 at Colombo. Fifteen participants arrived from 9 countries.

Polio Eradication Initiative

To strengthen the activities of AFP surveillance in year 2003 Epidemiological Unit conducted four quarterly meetings of Polio Expert Committee (PEC), which consists of a pediatrician, a virologist and an epidemiologist. The PEC is responsible for the classification of AFP cases when the diagnoses of those cases were doubtful.

Epidemiological Unit has also conducted four meetings of National Committee for Certification of Polio Eradication at the Epidemiological Unit Colombo.

Four consultative meetings were held for paediatricians, biologists, physicians Neurologists, pathologists, hospital directors and epidemiologists to discuss the means of improving surveillance of AFP cases so that it will contribute towards eradication and facilitate the declaration of polio free Sri Lanka.

In addition Epidemiologists from Epidemiological Unit had made several field

visits to North and East as well as to the other provinces of the country.

5.1.5.2.1 Acute Flaccid Paralysis (AFP)

Acute Flaccid Paralysis (AFP) under 15 years of age or suspected poliomyelitis has been a notifiable disease since 1988. The last confirmed case of polio in Sri Lanka was detected in 1993.

The age and sex distribution of AFP cases reported during 2003 is given in Table 5.1.5 There were 94 cases of AFP reported to the Epidemiological Unit during 2003, giving an AFP rate of 1.77 per 100,000 population less than of 15 years of age. Of these cases, 24 (26 per cent) were under five year of age and 36 cases (38 per cent) were between 5 and 9 years old, while the remaining 34 (36 per cent) were in the 10-14 year age group.

The Epidemiological Unit with assistance of the Regional Epidemiologist investigated 100 per cent of the cases within 48 hours of notification. Two samples of stools were sent for virology within 14 days of onset of paralysis in 93 per cent of the cases.

The highest number of AFP cases (8) was reported from the Colombo DPDHS division. Kandy, Kurunegala, Nuwara Eliya, Galle, Matara, Gampaha, Ampara/Kalmunai and Anuradhapura DPDHS Divisions too reported higher figures.

Haemophilus Influenza Surveillance Study

Haemophilus Influenza is a leading cause of childhood infection worldwide. Clinical manifestation of severe haemophilus influenza b (Hib) infection include meningitis, pneumonia, epiglottitis and septicaemia. It is estimated that approximately 25,000 deaths and a million case of Hib disease occur annually in Asia alone. Data on Hib disease in Sri Lanka is scarce.

Table 5.1.4 Age and Sex Distribution of AFP Cases Reported During 2003

Age in Years	Male	Female	Total
>1	-	-	-
1-4	13	11	24
5-9	21	15	36
10-14	21	13	34
Total	55	39	94

Source : Epidemiological Unit

Since the availability of effective vaccines, the developed countries have almost eliminated Hib disease in children. To understand the epidemiology and estimate the burden of disease due to Hib in Sri Lanka the Epidemiology Unit has planned a population based prospective study, which will start the surveillance activities from January 2004.

Weekly Epidemiological Report (WER)

Weekly Epidemiological Report is a publication of the Epidemiological Unit. Although it is supposed to be published weekly, due to technical constraints there was a backlog of WER in 2002. However, in 2003 the Epidemiology unit was able to clear the backlog and ensure the timeliness of the Weekly Epidemiological Report.

5.1.5.2.2 Immunization Against Measles

Measles is an important childhood disease in Sri Lanka. According to hospital in-ward statistics, the annual prevalence of measles in Sri Lanka during the period from 1951 to 1960 varied from about 20-47 cases per 100,000 population. During 1961 to 1970 and 1971 to 1980, the prevalence varied from 18-38 and 12-49 cases per 100,000 population respectively. A measles outbreak in every 6 to 9 years is observed.

The measles vaccination programme was introduced on a phased basis initially in 4 DPDHS divisions in August 1984 and was extended to cover the island by 1985.

Five years after the introduction of the measles vaccine, i.e. in 1990, the overall immunization coverage had increased to 80 per cent. Over the years the coverage

gradually increased and in 2003 it reached 100 per cent.

During the year 2003, 114 cases of measles were notified to the Epidemiological Unit. However, only 69 cases were confirmed as measles. These cases were reported mainly from the district of Trincomalee (2.64 per 100,000 population) followed by Galle (2.15 per 100,000 population) and Kandy (0.68 per 100,000 population). No cases were reported mainly from Manar, Hambantota, Matara, Kilinochchi, Vavuniya, Mullaitivu, Batticola, Kalmunai and Jaffna. The age specific morbidity rate was highest among the under 1 year age group (3.56 per 100,000) population followed by the 20-24 years age group (1.08 per 100,000 population). The male to female ratio was 1:0.3. Analysis of the vaccination status of the measles cases indicates that the vaccinated were highest among the 1-4 year age group, whereas the un-vaccinated were mainly in the 20-24 age group. Ninety-five per cent of all cases had no post-measles complications and there were no deaths reported.

5.1.5.2.3 Immunization Against Rubella

Only 3 cases of rubella (two from Gampaha and one from Puttalam) to the Epidemiological Unit during the year 2003.

The rubella vaccine was introduced into the National Immunization Programme with the aim of preventing Congenital Rubella Syndrome (CRS), an epidemic which was predicted for the year 2000/2001. The programme began initially on a phased basis during 1996 and was implemented island wide in 1997. However, with the introduction of the measles/rubella (MR) vaccine to immunize all children completing 3 years of age, at the beginning of 2001, the objective of the rubella immunization programme has now been revised. The present objective of the programme is to prevent and control morbidity and mortality due to rubella infection among the general population (male and female) with special

emphasis to prevent Congenital Rubella Syndrome.

Initially the target group for rubella vaccination was females in the 11-44 years age group. The national target was to immunize over 80 per cent of females in the 11-15 year age group and 60 per cent of females in the 16-44 years age group, before the end of 1999. This target was achieved and the current emphasis is to immunize all females completing 11 years of age at school. However, in 2001 a decision was taken to immunize all children both male and female, reaching 8 years of age.

The MR vaccine was introduced as part of the new immunization schedule, which became effective on 01.04.2001. The main objective in introducing the MR vaccine is to provide a second opportunity for vaccination against measles for those who failed to sero convert after the first dose of measles vaccine at 9 months.

All children (both male and female) born after 01.04.1998 should receive this vaccine when they reach the age of 3 years. The MR vaccine coverage for year 2003 was 86.8 per cent.

5.1.5.2.4 Viral Hepatitis

Viral Hepatitis is a notifiable disease in Sri Lanka. Out breaks are experienced in every 5-6 years, but with lesser magnitude. In the year 2003, 2,984 cases (15.5 PER 100,000) of viral hepatitis were notified, to the epidemiological unit. The highest number of 334 were reported from Kandy DPDHS division. But the highest rate of 57.9 per 100,000 was notified from Matale DPDHS division, whereas the lowest of 1.4/100,000 was from Vavuniya. The other DPDHS areas where high number of viral hepatitis reported were; Colombo (163), Gampaha (251), Kalutara (191), Matale (261), Nuwera-Eliya (130), Badulla (162), Kurunegala (180), Batticaloa (216), Jaffna (116), Trincomalee (160) and Ratnapura (100). The lowest number of cases were reported from Vavuniya (2 cases) and Kilinochchi (7 cases). The

possibility of under reporting of cases in some DPDHS divisions cannot be ruled out. The high rates reported could be due to the poor sanitary conditions, particularly due to lack of safe drinking water in most of these areas.

The highest percentage of 39.7% occurred in the age group 1-14 years and there is a subsequent decline of cases with the advanced age group. No cases were reported in the children less than 1 year of age in the year under review. The analysis of confirmed cases in 2003 of viral hepatitis gives a male to female sex ratio of 3:1.

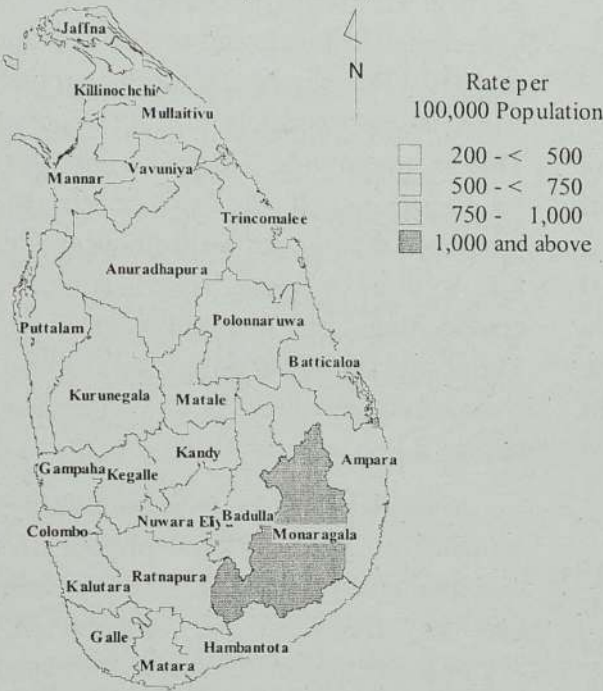
Data available at the Epidemiological Unit and the Medical Statistics Unit shows that hepatitis A is the commonest type of VH in the country; prevalence of hepatitis B and C ranges from 0.27% to 2.5% and 0.56% to 0.97% respectively.

Hepatitis B vaccine was introduced in to the EPI from 2003 in a Phased manner with the assistance from Global Alliance for vaccine and immunization (GAVI). Western, Southern and Northwestern provinces were covered in this year and subsequently by year 2005 the entire country will be covered. Hepatitis B vaccine has been introduced in to the current EPI schedule according to a 2, 4, 6 months schedule. Injection safety programme has been implemented in a phased manner, parallel to Hepatitis B vaccination and introduced to the use of Auto-disable (AD) syringes in the EPI with Hepatitis B vaccination as one of the strategies to improve quality of the immunization services.

5.1.5.3 National Programme for Control of Diarrhoeal Diseases

The National Programme for the Control of Diarrhoeal Diseases was started in Sri Lanka in 1983. Prior to the introduction of the programme, diarrhoeal diseases, especially watery diarrhoeas were mainly managed with the use of intra-venous fluid

Fig 5.1.3 - Distribution of Cases of Diarrhoeal Diseases by District, 2003



Source : Medical Statistics Unit
Prepared by Medical Statistics

practices in the management of watery diarrhoea from intravenous therapy to oral re-hydration therapy. Increased fluids and continued feeding during illness has improved management of acute watery diarrhoea.

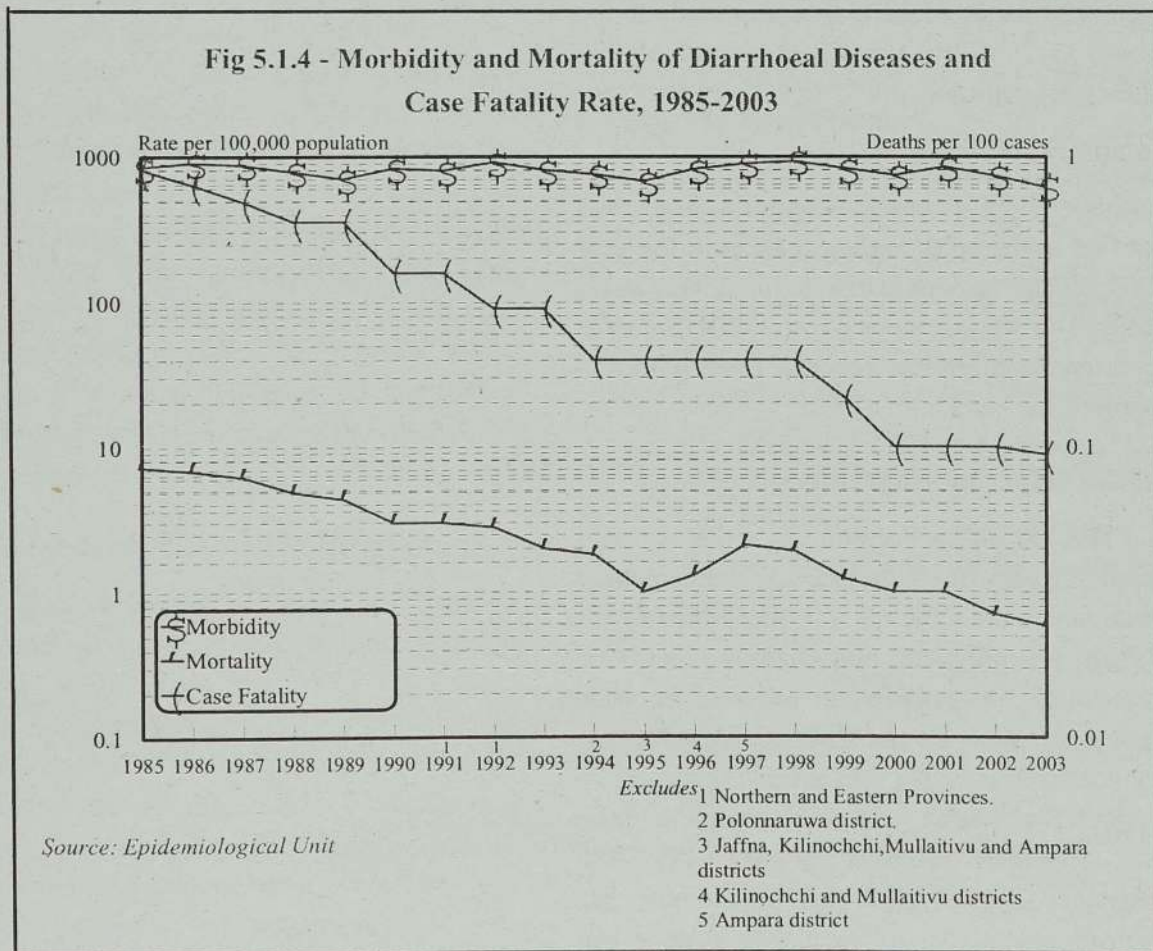
Training of hospital and field staff, establishment of diarrhoea training units, and educational activities through mass media, played a major role and has resulted in early recognition of dehydration and its correction by using *Jeevani* oral rehydration salts, by the mothers and the health personnel at all levels. All these factors led to a very significant reduction in the death rate due to diarrhoeal diseases (Table 53).

Although the mortality rate due to diarrhoeal diseases has decreased dramatically, the morbidity rate has not decreased at a similar pace.

therapy for dehydration. The activities of the programme initially directed towards changing

Admission to government hospital due to diarrhoeal diseases has been fluctuating

Fig 5.1.4 - Morbidity and Mortality of Diarrhoeal Diseases and Case Fatality Rate, 1985-2003



Source: Epidemiological Unit

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

between 676.1 and 961.3 cases per 100,000 population. During 2003 the cases treated in government hospitals for diarrhoeal diseases per 100,00 population is 622.5. It is likely that diarrhoeal diseases will continue to be an important public health problem in Sri Lanka.

Two training programmes for health personal on prevention and control of diarrhoeal diseases were carried out along with training on acute respiratory tract infection. In addition, control and prevention of diarrhoeal disease has been included in the in-services training programmes conducted of all categories of the health workers.

Dysentery Surveillance

A total of 8,073 cases of dysentery was notified to the epidemiological unit in the year of 2003. This is in comparison to 9,672 cases notified in the previous year. Karuwalagaswewa MOH area experienced an out break of dysentery in the November-December period with total of 120 cases notified in November and 45 cases notified in December 2003. In 2003 highest number of dysentery cases (1,127) was reported in the month of May. In November a total of 977 cases were reported.

Enteric Fever Surveillance

A total of 3,116 cases of enteric fever was notified to the epidemiological unit in the year 2003. This in comparison to 2,962 cases notified in the previous year. DPDHS Jaffna reported the highest number of cases with 813 reported for 2003.

5.1.6 Thriposha Programme

The Thriposha Programme is the National supplementary food programme implemented throughout the country by the Ministry of Health for pregnant and lactating mothers, infant and preschoolers, in order to improve their nutritional status. This programme was commenced in 1973 with the assistance of CARE Sri Lanka and the complete food product was imported under PL 480 assistance. Since 1991, the programme has been completely maintained with government

funds. The Ministry of Health spends about 570 Mn annually.

The Thriposha processing complex was constructed in Ja-Ela and started functioning in 1979. The annual Thriposha production target is approximately 10,440 metric tons. This is to provide Thriposha for 580,000 beneficiaries. All the raw materials are processed with government funds and tested for conformity with specifications. The composition of the final product of Thriposha is Maize 66%, Soya 30%, full cream milk powder 3% and vitamins and minerals 1%.

A medical officer is appointed by the Ministry of Health as the project officer. The main responsibilities are to maintain quality, allocation and distribution of Thriposha to the beneficiaries. The selection of beneficiaries is done by the medical authorities at the respective health centres according to the stipulated regulation of the Ministry of Health.

5.2 Specialised Public Health Programmes

5.2.1 Malaria

Malaria has been one of the most important communicable diseases in Sri Lanka with socio-economic burden to the country. In the control programme, a major event was the introduction of DDT spraying in 1946. All houses in malaria-endemic areas were covered by the spraying programme. Subsequently the Malaria Eradication Programme was launched in 1958, as per the concept recommended by the WHO at that time. This programme resulted in a near-eradication status in 1963 when only 17 cases were recorded within the country. However, due to multitude factors, resurgence of the disease occurred after a few years, which culminated in an epidemic in 1968/69. A significant technical problem subsequently seen was the first emergence of DDT-resistance in the vector mosquito in 1969 which later resulted in the change of insecticide sprayed, to malathion in August 1977. At first there was significant drop in the incidence but since 1982 there was a rise in the incidence and an epidemic occurred in 1987. The countrywide incidence showed a gradual reduction during the period 1992 to 1995, but started rising again afterwards. However, a significant reduction was seen during the year 2002 and the year 2003.

5.2.1.1 Malaria Control Programme

The activities of the Anti-Malaria Campaign (AMC) were decentralized in 1989. Since then, the AMC Directorate has been involved in the formulation of the National Malaria Control Policy, monitoring of the countrywide malaria situation, provision of technical guidance to provincial malaria control programmes, inter-provincial co-ordination, and co-

ordination of training and research activities in malaria control. The provincial malaria control programmes coming under the purview of the provincial health authorities are responsible for the planning and implementation of the malaria control in the respective provinces, within the framework of the National Malaria Control Policy. The primary responsibility for malaria control within a health areas lies with the Divisional Director of Health Services/ Medical Officers of Health.

Table 5.2.1 Percentage of Malaria Cases Reported by Province, 2000 - 2003

Province	Percentage			
	2000	2001	2002	2003
Western	1.1	1.2	0.9	1.1
Central	1.1	1.1	0.9	1.3
Southern	2.7	1.3	2.8	2.7
North Eastern	50.3	66.3	70.4	60.2
North Western	10.7	10.6	8.1	6.6
North Central	8.2	7.3	9.4	20.4
Uva	22.2	7.1	2.7	5.0
Sabaragamuwa	3.6	5.1	4.8	2.6
Total	100.0	100.0	100.0	100.0

Source : Anti Malaria Campaign

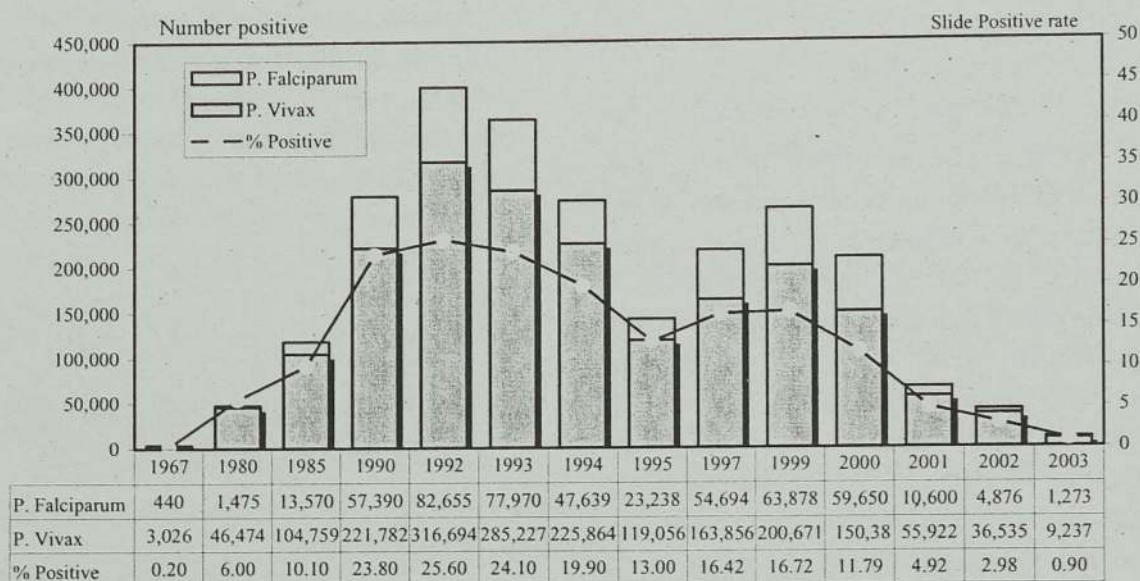
5.2.1.2 Objectives of the Malaria Control Programme

- To reduce the national Annual Parasite Index (API) by the year 2004, to level of 50% below that in 2002.
- To eliminate mortality caused by malaria by the end of year 2003.
- To reduce the nationwide morbidity due to Plasmodium falciparum to a level 50% below that in 2002 by the year 2004.
- To reduce malaria among pregnant women to a level of 50% below that in 2002 by the year 2004.
- To reduce malaria in children below 5 years to a level of 50% below that in 2002 by the year 2004.

5.2.1.3 Present Status of Malaria

During 2003, the Anti Malaria Campaign screened 1.19 million patients

Fig 5.2.1 Result of Blood Film Examination for Malaria Parasite, 1967-2003



Source : Anti Malaria Campaign

for malaria in government medical institutions. 10,510 positive patients were detected. *P.vivax* infection contributed towards 88% of the total, the balance being *P.falciparum* infections. When compared to the preceding year (2002) there has been a 75% decrease in the total number of confirmed patient detected by the Anti Malaria Campaign. *P.falciparum* infections have decreased by 74% in 2003, as compared to the preceding year.

During the year 2002 out of the total patients 70% of the total patients reported from North-East Province, this percentage has decreased to 60% during the year 2003. A total of 4 deaths due to malaria were reported to Anti Malaria Campaign Headquarters in 2003.

The prominent parasite species continued to be *P.vivax* (88% of total cases). *An.culicifacies* continued to be the principal vector. The secondary vectors (*An.subpictus*, *An.annularis*) played only an significant role in malaria transmission in the country.

5.2.1.4. Main Malaria Control Activities

Since July 1993, the Malaria Control Programme in the country has been

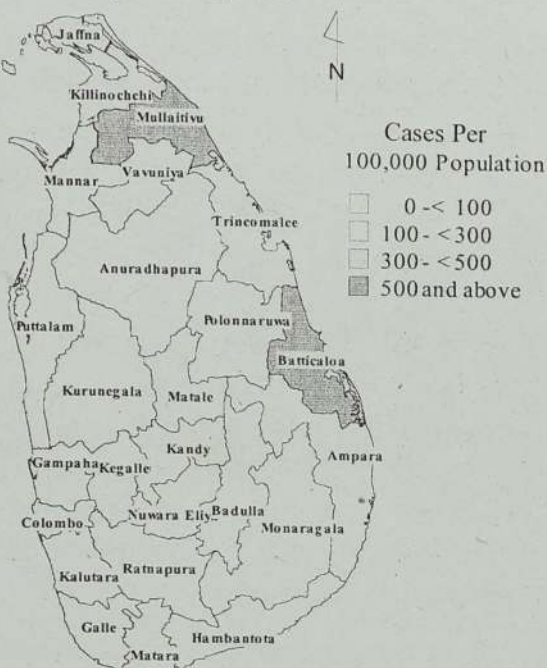
modified, keeping in line with the New Global Malaria Control Strategy, recommended by the World Health Organization. Accordingly, the four main components are: -

- Early detection and prompt treatment of cases.
- Detection and treatment of asymptomatic parasite carriers.
- Selective application of vector control measures based on the principles of integrated vector management.
- Forecasting and prevention of outbreaks.
- Early detection and containment of outbreaks
- Partnership building and community participation.

The following activities were carried out.

1. Anti-parasite measures:
 - Detection and treatment of malaria cases
 - In medical institutions.
 - In the field by visiting houses.
 - By mobile malaria clinics.
 - Chemoprophylaxis to select groups (including pregnant mothers) living in malaria endemic areas.

Fig 5.2.2 - Malaria Cases Reported by District, 2003



Source : Medical Statistics Unit
Prepared by Medical Statistics Unit

- Training in regional countries.
- Provision of critical supplies.

5.2.1.5.1 Roll Back Malaria Initiative (RBMI)

The Government of Sri Lanka is committed to the global Roll Back Malaria Initiative of the WHO which is a social movement drawing its strength by improved health sector development. The operationatization of RBM is based on six strategies, i.e., enhanced diagnosis and treatment, disease transmission control, enhanced surveillance, health sector development, community mobilization and advocacy.

The districts of Jaffna, Kilinochchi, Mullaitivu, Anuradhapura and Moneragale have been chosen for implementation of RBMI during the year 2003. Following activities were carried out under the RBMI.

2. Anti-vector measures:

- Indoor residual spraying of houses in malarious localities. The following groups of residual insecticides were used in different districts.
 - Organophosphates.
 - Synthetic pyrethroids.
- Use of bed-nets, impregnated with a synthetic pyrethroid insecticide (*Permethrin*).
- Use of chemical larvicide (*Temephos*), in selected breeding sites.
- Use of larvivorous fish (*Poecelia reticulate* and *Aplocheilus dayi* were deployed in many localities).
- Use of insect Growth Regulator (*Pyriproxyfen*) for larval control in abandoned gem pits.

5.2.1.5. External Assistance

During 2003, WHO assistance was received in the following arrears.

- Local training.

- Development and implementation of communication and advocacy strategy at the country level.
- Establishment of Community Based Organizations.
- Establishment of country inter-agency partnership.
- Support districts to expand access to early detection and prompt treatment.
- Capacity building in epidemic preparedness & response, drug resistance detection & surveillance and drug quality assurance.

The Global Fund to fight Aids, Tuberculosis and Malaria (GFATM) funded special activities carried out to enhance malaria control in districts of Anuradhapura, Polonnaruwa, Jaffna, Kilinochchi, Mannar, Vavuniya, Trincomalee and Batticaloa. These activities included:

- Conducting of malaria mobile clinics in the high risk arrears.

- Conducting of school parasite surveys.
- Enhanced supervision of malaria control activities.
- Monitoring and Evaluation of malaria control activities.
- Protection of population at risk using Long Lasting Insecticidal Nets (LLIN).
- Capacity building.
- Procurement of vehicles for malaria control activities.

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 23 district Chest Clinics and 2 Chest Hospitals 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 diseases 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 multi-drug-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 all diagnosed cases with short-course chemotherapy.
- Direct observation 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.

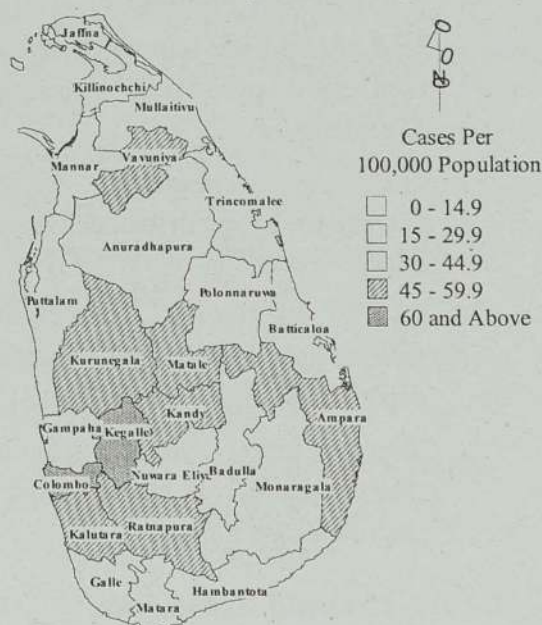
5.2.2.1 Morbidity

There has not been a significant decline in the incidence over years. Around 8,500 – 9,000 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, especially in districts where TB control activities have been inadequate in the past and also due to regularisation of referrals and improved notification.

During the year under review, 9,312 new TB cases, 339 relapses, and 35

Fig 5.2.3 - Distribution of Tuberculosis New Cases by Health Region, 2003



Source : Respiratory Disease Control Programme
Prepared by Medical Statistics Unit

Fig 5.2.4 Tuberculosis New Cases Detected 1993-2003

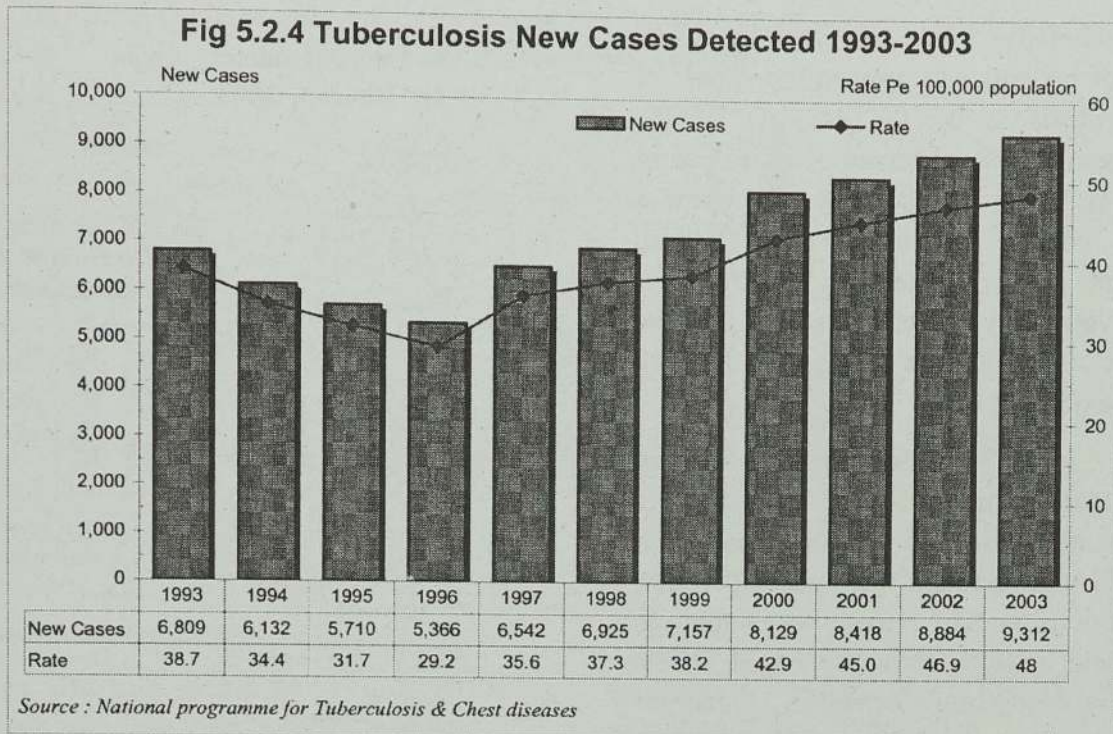
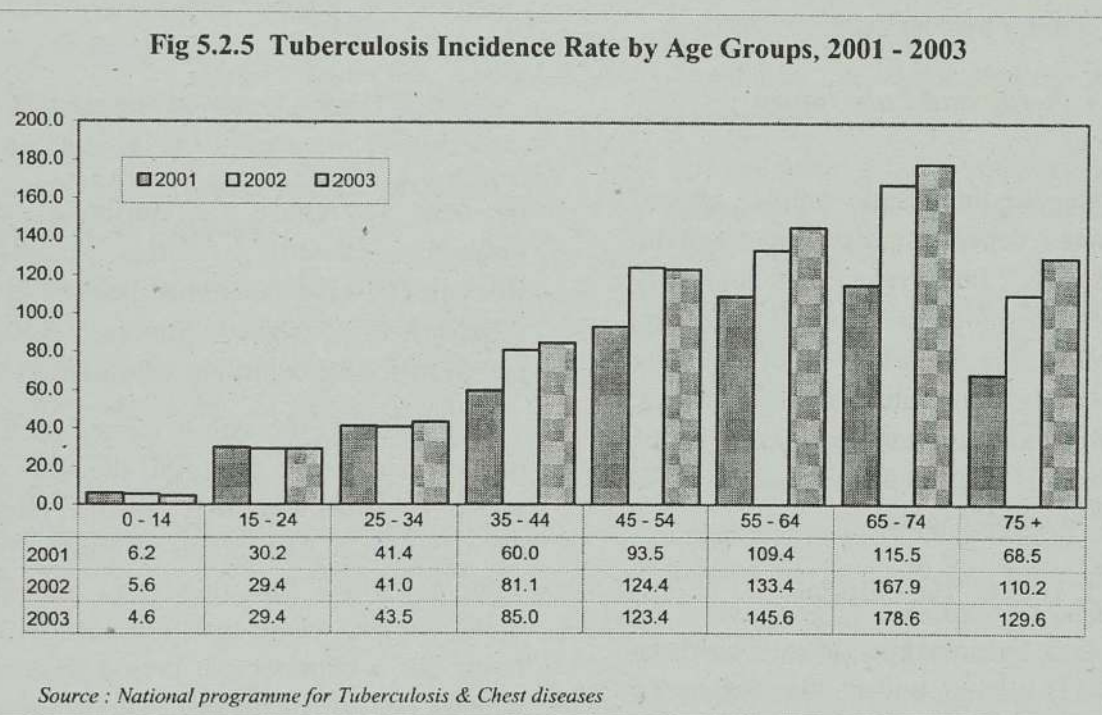


Fig 5.2.5 Tuberculosis Incidence Rate by Age Groups, 2001 - 2003



treatment failures were registered. The notification rate was 48.3 per 100,000 population. Out of the new cases, 82 per cent were cases of pulmonary TB. Colombo had the highest number of cases. Total number of deaths notified among the TB cases was 396.

5.2.2.2. Age and Sex Distribution

The lowest number of TB patients was under 14 years of age. Comparing with the other age groups, a higher number is

reported in 65-74 group. But 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 sex ratio was 2:1 as in the previous years.

5.2.2.3. Case finding and treatment

The chest clinics, branch clinics and chest hospitals are the 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 patients complete the full course of treatment.

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 being implemented in 13 districts covering approximately a population of 74 per cent. It will be extended to cover the entire country by year 2005.

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 smears negative TB and other chest diseases.

5.2.2.5. B.C.G. Vaccination

B.C.G. vaccination of all newborn babies is done under the Expanded Programme of Immunization. The Respiratory Diseases Control Programme does training of staff on the administration of B.C.G.

5.2.3 Filariasis

Lymphatic filariasis, commonly known as elephantiasis, is a painful and profoundly disfiguring disease that has a major social and economical impact in Sri Lanka, having a high morbidity with no mortality. Until recent times, little could

Fig. 5.2.6 - Filariasis Endemic Areas by District, 2003



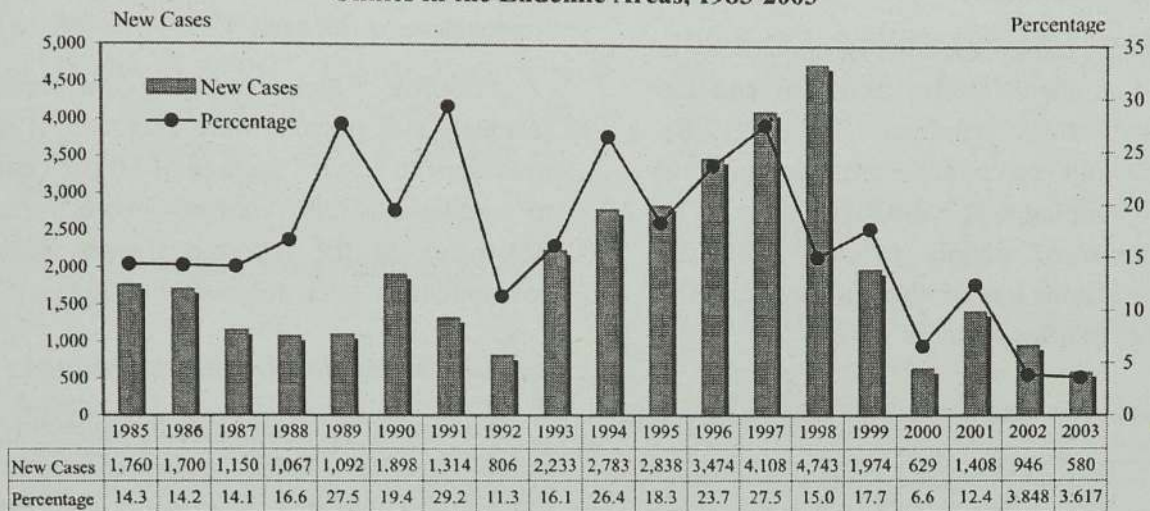
Source: Anti Filariasis Campaign
Prepared by Medical Statistics Unit

be done to relieve the suffering and disability caused by this disease. Recently, however, there had been several developments which promise better prospects for the control of the disease

Lymphatic Filariasis is caused by the parasite *wucheraria banorofti* the adult of which live usually in the lymphatic system of a person. The adults 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

Fig 5.2.7 Percentage and New Cases Among Patients With Clinical Manifestation at Clinics in the Endemic Areas, 1985-2003



Source : Anti Filariasis Campaign

drains, damaged septic tanks, and latrine pits etc, which abound in urban habitats.

5.2.3.1 Strategies and Control Methods Adopted

The aim of the Anti filariasis Campaign is to eliminate lymphatic filariasis as a public health problem, over the next 10 years.

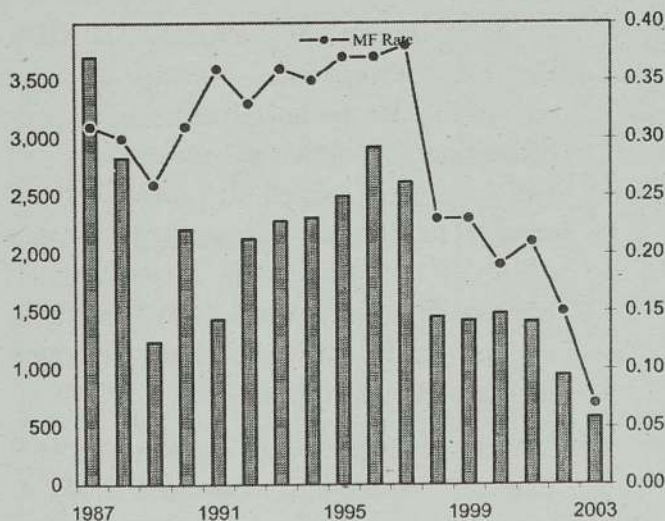
Present operational areas are confined to 3 main provinces namely Western, Southern and North Western, covering an area of approximately 16,482 sq km in extent with a population of 9.8 million at risk. In keeping with the global elimination programme, the Anti-Filariasis

Campaign has laid down the following goals and objectives.

- To stop the spread of filarial infection (i.e interrupt transmission - MDA).
- To reduce the vector density in the endemic areas.
- To alleviate the suffering and disability of affected individuals (i.e control morbidity)
- To develop a data base for monitoring and evaluation of the control programmes.

The control measures adopted by the Campaign are:

- Parasite control through screening the population annually by night blood screening and treating the positives with *Diethyl Carbamazine Citrate* (DEC), until they are free of infection.
- Single dose mass treatment to stop the spread of filarial infection (i.e. to interrupt transmission).
- Vector control by eliminating breeding sites of the vector mosquitoes.
- Morbidity control – lymphoedema management.



Source: Anti-Filariasis Campaign

5.2.3.2. Morbidity

In Sri Lanka, the highest endemicity is found in the Western, Southern and the North-Western Provinces (Figure 5.2.6). 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.

Table 5.2.2 Trends in Entomological Evaluation, 1995-2003

Year	Cx.q * 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	0.8	0.05
2003	30,125	0.4	0.05

* *Culex quinquefasciatus* Source : Anti-Filariasis Campaign

During the year under review 716,538 night blood films were examined for microfilaria by the thick blood smear technique. This includes cases screened at the night blood filming centers and by special surveys conducted in the endemic areas. 580 positive cases were detected giving a microfilaria rate of 0.07%.

In 2003 the number of patients with clinical manifestation who visited the AFC clinics are 16,034 when compared to 24,585 in 2002.

5.2.3.3 Single Dose Mass Treatment Campaign and Other Activities

The single dose mass treatment programme commenced in selected areas of Sri Lanka during 1997. A national programme was launched in October 1999. In 2001 Dec. Albendazole combination was used in Colombo District for the first time while all other 7 districts were given DEC only. 2 to 12 year of age were given 150 mg of DEC and those above 12 years were given 300 mg as a

single dose and Albendazole 400 mg irrespective of the age.

Pregnant and lactating women, seriously sick persons were excluded. It is necessary to reach coverage of 80 per cent to achieve the desired objectives. According to the reported figures 87% coverage have been achieved in 2003.

5.2.3.4 Entomological Investigations

The Entomological Unit, by collecting indoor resting *Culex quinquefasciatus* mosquitoes, detected an infection rate of 0.4 and an infective rate of 0.05 (Table 5.2.2).

5.2.3.5 Vector Control

As the vector generally rests on cloths and furniture, residual spraying of insecticides is of questionable value, and there is no alternative but to depend on larval control which can be achieved either by elimination or treating the breeding places with larvicides Baytex or Fenthion in mixed concentration. The permanent breeding places that could not be eliminated have to be treated with larvicide on weekly cycle. Temporary breeding sites consisting of empty tins, pots, spent coconuts, gutters out of alignment and old tyres etc., are eliminated after soliciting the co-operation of householders.

5.2.4 STD/AIDS Control

In Sri Lanka, the National STD/AIDS Control Programme (NSACP) is responsible for the implementation and co-ordination of activities at central and regional level, related to prevention and control of sexually transmitted diseases (STDs), including Human Immunodeficiency Virus (HIV) infection which leads to Acquired Immune Deficiency Syndrome (AIDS).

The strategies adopted by the NSACP includes screening, case detection & management, partner notification, contact

tracing, health education, counseling, condom promotion and surveillance of STD and HIV/AIDS. During 2003 there were 24 full time STD Clinics and 14 branch clinics in operation all over the country.

5.2.4.1 Sexually Transmitted Diseases (STD)

A total of 14,389 new persons were registered in the STD Clinics during the year 2003. Of these, 7,095 persons (49%) were diagnosed as having one or more sexually transmitted infections. Male to Female ratio among newly registered persons with STIs during 2003 was 1.2:1.

The number of new episodes of STIs recorded during 2003 was 8,233. This included STIs 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 STIs and the number of new episodes of STIs may not be the same. Among new episodes of STIs that were reported in 2003, 24% episodes among males and 23% among females were in the 20-39 year age group.

Candidiasis was the commonest diagnosis made among STD clinics attendance in 2003 followed by genital herpes. It is disturbing to note that the new episodes of gonorrhoea showed a marked

increase in 2003. In contrast non-gonococcal infections showed a reduction from 2002 value (Table 5.2.3). Two cases of early congenital syphilis cases were reported to the NSACP. The trends of selected STIs from 1997 to 2003 are given in Table 5.2.3.

Table 5.2.4 Antimicrobial Susceptibility of Gonococci, 2000 - 2003

Antimicrobial Agent	% of Isolates Fully Susceptible			
	2000	2001	2002	2003
Ceftriaxone	100.0	100.0	100.0	100.0
Spectinomycin	100.0
Cefuroxime	88.9	90.0	94.0	99.5
Ciprofloxacin	55.2	63.0	62.0	17.4
Penicillin	...	6.0	11.0	2.2
Tetracycline	59.5	43.7

Source: STD/AIDS Control Programme

A total of 649 new commercial sex workers (male & female) were registered in the STD clinics during the year. Of them 372 (57%) were diagnosed having one or more STIs. The number of STIs diagnosed in the new and previously registered sex workers was 557. The commonest reported STI among them was bacterial vaginosis.

All new females STD clinics attendees at the central STD clinic, Colombo undergo cervical cytology screening (PAP smear screening). During 2003, total number of 714 smears were taken and of them reports were available in 627. Of

this, 95% had normal smears, 4% had inflammatory changes, 1% reported as CIN-I or CIN-II.

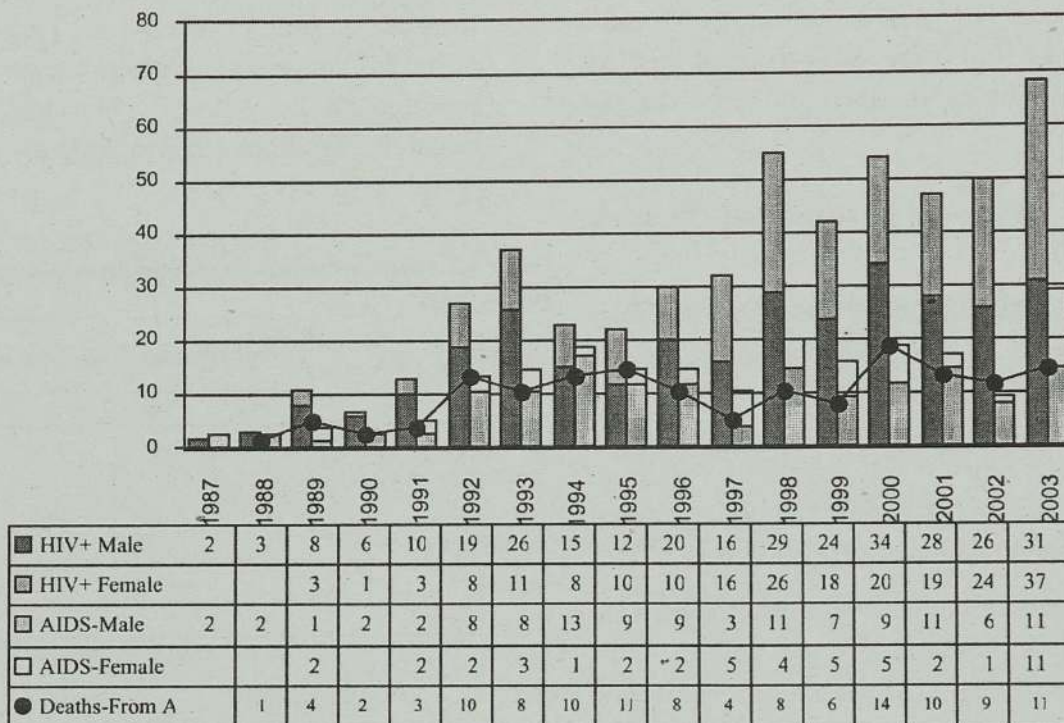
Antibiostic sensitivity monitoring of *Neisseria gonorrhoeae* is an important activity carried out by the Central STD Laboratory of the NSACP. This information is

Table 5.2.3 Percentage of Reported Episodes of Sexually Transmitted Diseases 2000 - 2003

STD	2000		2001		2002		2003	
	No.	%	No.	%	No.	%	No.	%
Infectious syphilis	274	4.3	188	2.5	203	2.6	138	1.7
Late syphilis	626	9.9	705	9.6	795	10.0	618	7.8
Congenital syphilis (Early)	8	0.1	5	0.1	5	0.1	2	0.0
Congenital syphilis (Late)	10	0.2	10	0.2	17	0.2	3	0.0
Gonorrhoea	670	10.6	532	7.2	732	9.2	955	12.0
Non-gonococcal infections	948	14.9	1,242	16.9	1,678	21.2	1,305	16.5
Trichomoniasis	200	3.2	205	2.8	187	2.4	122	1.5
Genital herpes	1,327	20.9	1,368	18.7	1,438	18.1	1,427	18.0
Genital warts	500	7.9	603	8.2	592	7.5	633	8.0
Ophthalmia neonatorum	10	0.2	7	0.1	9	0.1	20	0.3
Chancroid	50	0.8	24	0.3	18	0.2	1	0.0
Candidiasis	1,045	16.5	1,494	20.3	1,564	19.7	1,626	20.5
Bacterial vaginosis	0	0.0	650	8.8	768	9.7	618	7.8
Other Venereal	677	10.7	312	4.2	430	5.4	465	5.9
Total	6,345	100.0	7,345	100.0	8,436	106.3	7,933	100.0

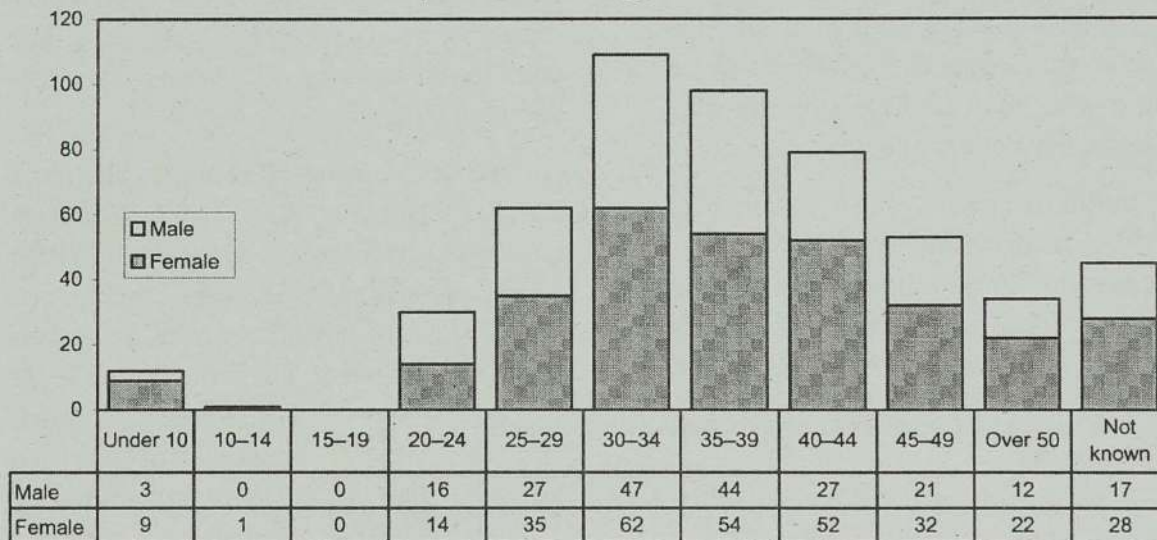
Source: STD/AIDS Control Programme

Fig 5.2.9 HIV Cases and AIDS Cases and Deaths 1987- 2003



Source: STD/AIDS Control Programme

Fig 5.2.10 Age and Sex Distribution of HIV Positive Reported During, 1987-2003



Source : STD/AIDS Control Programme

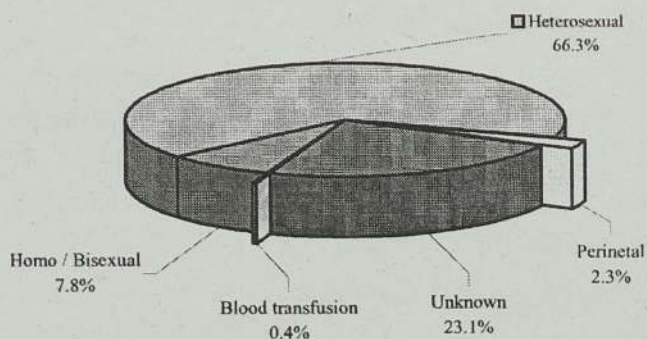
invaluable for all clinicians treating patients with gonococcal infections.

5.2.4.2 HIV Infection and AIDS

The first Sri Lanka 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 2003 was 523. Of this, 161 persons were diagnosed as having AIDS and 119 were already deceased. In addition, 51 foreigners were also reported as HIV positive during this period. UNAIDS estimated that 3500 persons were living with HIV/AIDS by end 2003. Under-diagnosis, under-

Fig 5.2.11 Reported HIV Positives During 1987-2003 by Mode of Transmission



Source: STD/AIDS Control Programme

reporting and delays in reporting probably account for the difference between the reported number and the estimated number. However, the reported data indicate an increasing trend in HIV infection.

Of the 523 reported HIV infections, the age was known in 478 (91%). Of these, 90% were in the 15-49 year age group with the majority in the 30-39 (43%). The male to female ratio by the end of year 2003 was 1.4:1.

The probable mode of transmission of reported HIV infection was available for 402 cases. Of these, 86.3% were heterosexual, and 10.2% were homosexual /bisexual. Twelve cases (3%) have been reported as perinatally transmitted while two cases were due to transmission

through blood/blood products. Transmission of HIV via the injecting use has not been reported yet.

In 2003 there were 68 HIV positive detected while 33 (48.6%) of them were from Western province. The cumulative total HIV infection by the end of 2003 was 523. The place of residence was known for 498(95%) of the reported HIV infections. Of these, majority (64%) were from the Western Province. However, HIV infections have been reported from all the other provinces.

5.2.4.2.1 Sentinel Surveillance for HIV

HIV sentinel surveillance is an ongoing activity carried out annually by the NSACP. It is carried out according to the WHO guidelines since 1993. In 2003, sentinel surveillance was carried out from 1st July to 15th October 2003 in all nine provinces. In addition to STD clinics attendees, female sex workers and patients diagnosed with tuberculosis, two new groups were included in the 2003 survey. They were armed services personnel and transport workers. All groups were surveyed on an unlinked anonymous basis. Of the 9,765 sample tested, 10 HIV positive samples were detected in the 2003 survey. Of these HIV positives, 8 were STD clinic attendees, the remaining two samples were from a female sex worker and from a TB patient.

Table 5.2.5 Tests Done by the Central and Out-station STD Laboratories During 2003

Tests	Central Lab	Outstation STD Labs
VDRL	41,826	131,845
HIV (screening)	36,484	12,512
HIV (confirmatory) test western blot	242	-
TPPA	7,558	5,227
Gonococcal culture	5,609	1,776
Hepatitis B surface antigen	1,412	-
Chlamydia ELISA	1,291	424
Syphilis IgM ELISA	417	-
HSV Ag ELISA	785	-
HSV Serology	409	-
HIV PCR (Viral load)	30	-
Pap smears (Started in Nov 2003)	86	-
Total	96,149	151,784

Source : STD/AIDS Programme

5.2.4.2.2 HIV Sero-prevalence

A total of 256,435 HIV antibody tests were carried out and reported to the NSCAP in 2003. 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% during 2003.

5.2.5 Leprosy

Of all the diseases that continue to plague humanity, leprosy has the most notorious history as a cause of deformity, disability, loathing and fear. From ancient times until the recent past, the disease was considered both highly contagious and impossible to cure. Victims were universally shunned; their physical suffering compounded by the misery of being treated or social outcast. Even at the medical level the sole option for control was the isolation of patients in colonial or leprosaria.

Invention and subsequent expansion of Multi Drug Therapy (MDT) by World Health Organization (WHO) in 1981, was a dawn of new era in the path towards elimination of Leprosy. Well tolerance, effectiveness and high acceptance of MDT by patients led the way to the rapid cure of patients and interruption of further transmission of the disease. This invariably was the stepping-stone to the WHO resolution to eliminate leprosy as a public health problem by the year 2000. With MDT and highly successful Social Marketing Campaign (SMC) which was launched in 1990, Sri Lanka reached the elimination target at national level in 1995, well ahead of the targeted year set by WHO. Just prior to dawn of the new millennium, Sri Lanka embarked upon integration of leprosy services into General Health Services, the final push towards the elimination of leprosy.

The field programme of leprosy is jointly funded by the Swiss Emmaus, Novarits Foundation for Sustainable Development (NFSD) from Switzerland and WHO. The SMC, training of health workers on integration and field monitoring activities including the Management System are exclusively funded by NFSD.

Vision of the programme

To reduce the leprosy and related distress by reducing the reservoir of

leprosy sustainable and by improving the quality of life of people affected by leprosy.

General Objective

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

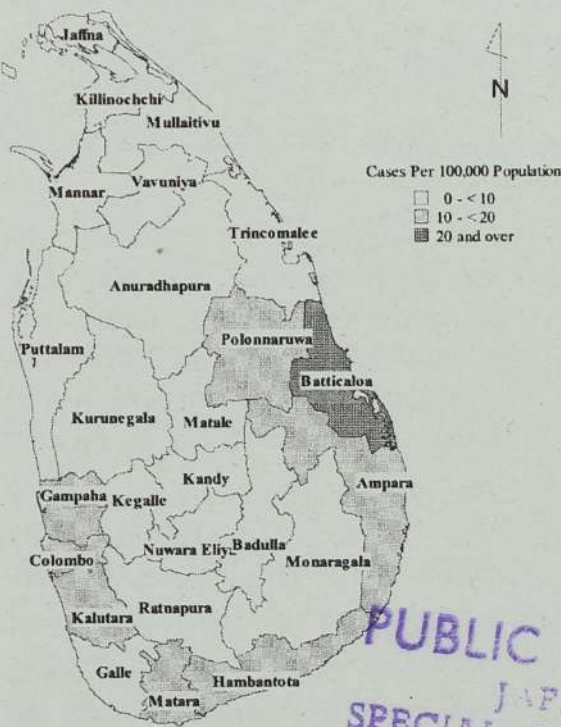
Specified Objectives

- 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 Epidemiologist (RE), Medical Officer of Health - (MOH) and the staff attached to those officers in the epidemiological assessment of leprosy at local level (Capacity Building –MOO and other staff attached to the preventive sector).
- 3 To develop simplified records, registers and software on leprosy management information system (LMIS) to facilitate the monitoring of leprosy situation and maintenance of the surveillance both at local and central levels. (Monitoring and Evaluation).
- 4 To conduct awareness programme for general public to reduce the stigma and to inform 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 of MDT).
- 6 To provide rehabilitative care for 'cured' patients with disabilities.

5.2.5.1 Current Status of Leprosy

Though the new case detection increased with the integration of leprosy services to the General Health Services in 2001, since then there has been a decline

Fig. 5.2.12 - Distribution of New Leprosy Cases (New Case Detection Rate) by District, 2003



5.2.13 - Distribution of Active Leprosy Cases (Prevalence) by District, 2003



Source : Anti Leprosy Campaign Prepared by Medical Statistics Unit

Source : Anti Leprosy Campaign Prepared by Medical Statistics Unit

in new cases. At the end of 2003, three years after the integration , 1,925 new cases have been detected showing further decline in new cases. The new case detection rate has been shifted to 1/10,000 from 1.16/10,000 in 2002).

Prevalence of leprosy has also decreased from 0.85/10,000 in 2002 to 0.68/10,000 in 2003. However, prevalence in six districts namely Colombo, Kalutara, Hambantota, Polonnaruwa, Batticaloa and Ampara/Kalmunai were above the elimination target of 1/10,000. Percentage of MB cases among the newly detected cases has increased from 35.% in 2002 to 37% in 2003. Deformity rate has shown further decline trend (From 8.6% in 2002 to 8.2% in 2003) suggesting the detection of patients at early stages. Increased child rates witnessed in traditionally high endemic areas like Western province, Matara and Hambantota in the Southern

province and Eastern province are indicative of the still continuing transmission.

5.2.5.2 Infrastructure

The two Leprosy Hospitals at Hendala and Mantivu and the Central Leprosy Clinic (Room 21, National Hospital Sri Lanka) function under the administration of the Anti-Leprosy Campaign (ALC). The Central Leprosy Clinic is the main referral centre for patients with complications and for those who need specialized services for deformities. It also functions as the main operational centre for field activities of the country. Maintenance of the register of leprosy patients, dissemination of leprosy statistics and other information are carried out by the CLC. A field staff of 25 PHII/Leprosy assist Regional Epidemiologists to

implement the programme at district level. ALC co-ordinates all field activities.

Admission to the two Leprosy Hospitals has been completely stopped since the introduction of MDT in 1982. However, patients who have been admitted two decades ago still remain in these hospitals. The Government policy as practised in other countries is to look after these 'ex-patients' for the rest of their lives as they have been admitted against their will by legal measures. Since 1980, several attempts have been made to transfer the remaining patients in Mantivu to Hendala hospital, but this did not materialize until year 2001, when patients for the first time agreed to do so. Policy decision has to be taken about the closure of these two hospitals as the number is declining rapidly. Steps have been initiated to prepare the cabinet memorandum to repeal the obsolete lepers' ordinance and to delete the section on medical leave for leprosy patients in the establishment code.

5.2.5.3 Intergration of Leprosy Services into the General Health Services

To sustain the achievements gained so far, the entire health service, in this low endemic situation needs to be on the alert to detect remaining new patients. In Sri Lanka, the vertical structure (ALC) has achieved its maximum. Integration is an important part of the WHO strategy of leprosy elimination. WHO strongly recommends that low endemic countries such as Sri Lanka should integrate the services, as continuing the vertical programme is no more cost effective. Hence preliminary discussions by way of focus group discussions with new stakeholders were initiated in 1998 for the integration of leprosy services into the general health services.

The overall goal of this project is to eliminate leprosy at sub-national level

(DDHS/MOH) and to integrate leprosy services with the general health services. It took about two years to prepare a comprehensive plan of action for the integration and also for the strengthening of the infrastructure for the integration.

The major achievements for the year 2003 are given below.

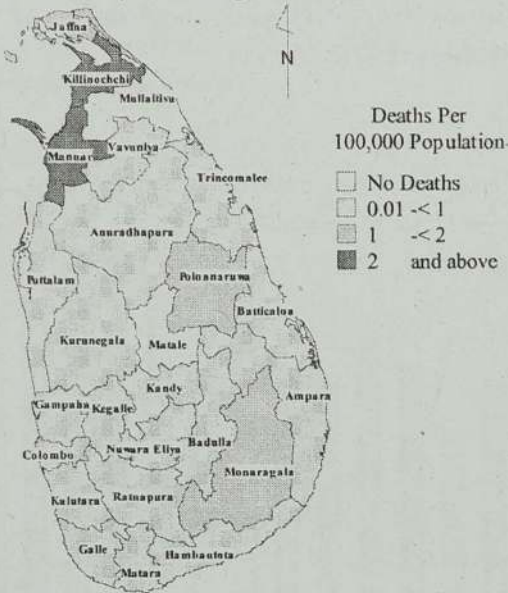
- Training programmes for MOO, who are newly recruited and previously untrained, General Practitioners and Medical Students on diagnosis, management and epidemiological assistance of leprosy were completed.
- Currently existing forms and registers were revised and RE/PHI were updated on the revision with the view to improve quality of data.
- Integration of MDT distribution was completed by handing over the distribution of MDT to the MSD.
- A comprehensive plan of action was prepared to intensify leprosy elimination activities in the North and East. Presentation of the plan to the administrators, training of MOO, PHC staff on leprosy, Provision of software programme of the leprosy MIS, review of MDT situation and preparation of IEC materials in Tamil were carried out under this plan.
- Epidemiological situation of the leprosy was assessed quarterly and annually with the district leprosy elimination terms.
- All child cases and deformity cases were investigated in depth to identify areas at risk.

5.2.6 Public Health Veterinary Services

5.2.6.1 Status of Human Rabies

Rabies control measures launched in Sri Lanka since 1975 have had a tremendous effect on the incidence of

Fig 5.2.14 - Distribution of Rabies Deaths by Health Region, 2003



Source : Medical Statistics Unit
Prepared by Medical Statistics Unit

rabies. The number of rabies deaths declined from 377 in 1973 to 154 in 1990 and 124 in 1995, and 109 in 2000. These reported numbers of deaths were annually declined gradually, and during the year 2003, 76 human rabies were reported.

5.2.6.2 Animal Rabies

The dog is the main reservoir as well as the transmitter of rabies in Sri Lanka. A dog ecology study conducted in the past has revealed a dog to human population of 1:8. Study conducted in 1980s and Survey during 1997, in Mirigama, a recently urbanized area reveals an increased dog population of 1:4.6. Further, study indicates that 20% per cent of the dogs were ownerless.

During 2003, 89.5% of animal rabies was reported among dogs. The reported positive cases were, 479 dogs (67.75%), 28 cats(21.8%), 11 cattle, 1 pole cat, 2 mongoose, 1 fox and 2 rock squirrels.

5.2.6.3 Strategies of Rabies Control

- Immunization of domestic dogs against rabies.
- Immunization of community dogs and stray dogs against rabies, with the auto injector and oral rabies vaccine.

- Controlling the growth of the stray dog population.
- Destruction of stray dogs suspected of incubating the rabies virus.
- Promotion of responsible dog ownership and birth control for dogs.
- Prevention of human rabies among suspected dog bite victims.
- Surveillance of rabies.
- Training and Health Education.
- Enforcement of rabies control legislation.
- Promotion of multi-sectoral co-operation and community participation.

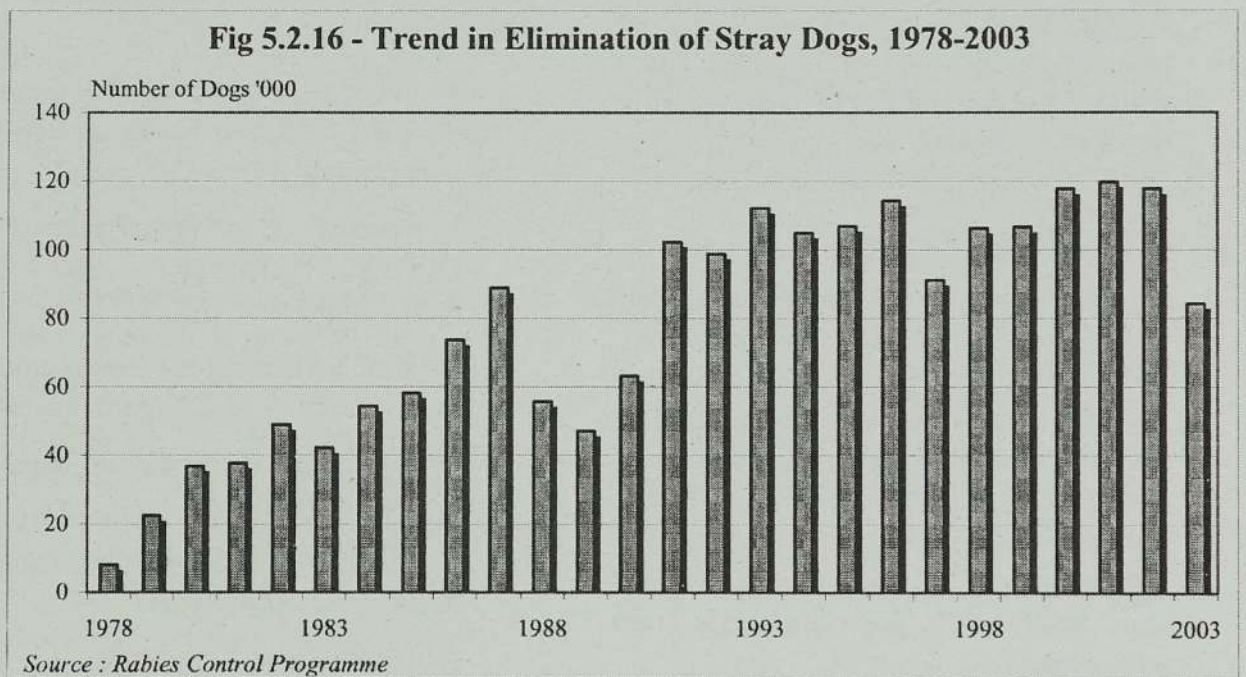
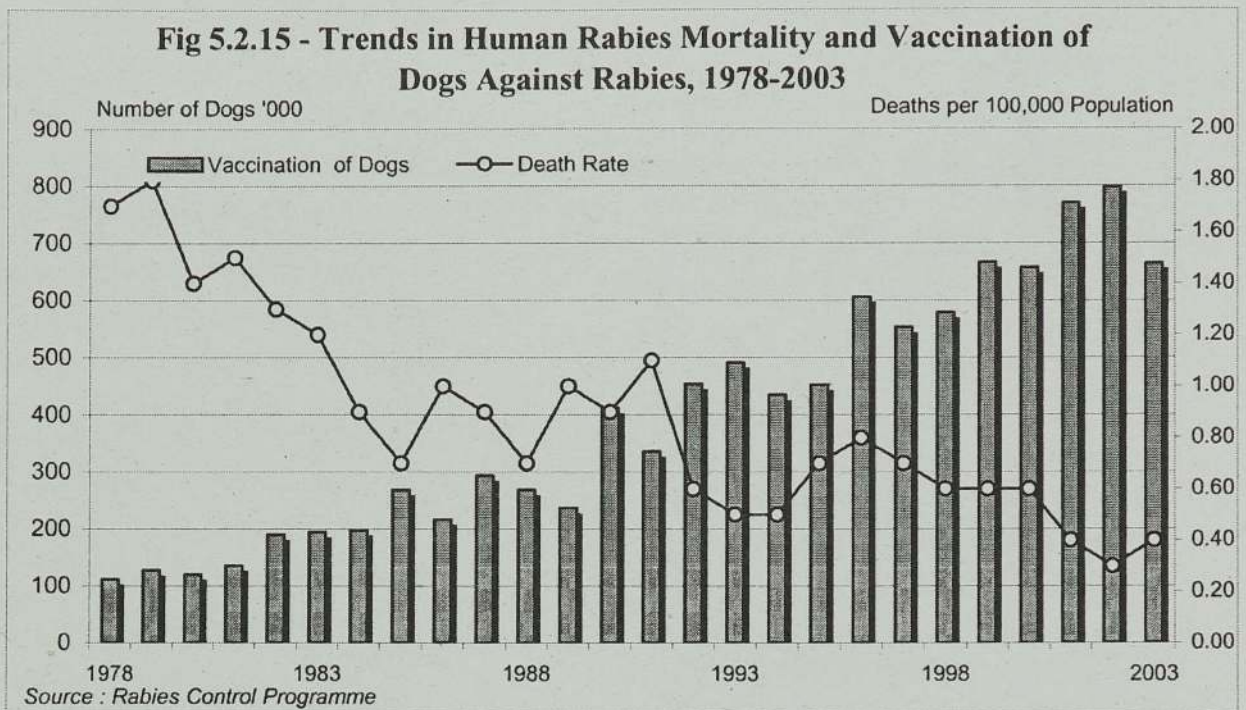
5.2.6.4.1 Training Programs and Health Education

Training was provided for primary Health Care Staff and Curative Staff on following teams.

1. Economical & prompt Rabies Post Exposure treatment – for 142 participants.
2. Divisional Planning implementation of rabies control – for 131 participants.
3. Oral Rabies vaccination of dogs-for 529 participants.
4. Vaccination of domestic free roaming dogs – for 24 participants.
5. National level monitoring and facilitating – for 27 participants.

Also the following health education activities were carried out during year 2003.

1. Thirty minutes Cartoon film was telecast -6 telecasts.
2. Creating awareness through exhibitions – 35,000 people were participated.



5.2.6.4.2 Special Activities

Pilot project was conducted in 2003 in the Puttalam district, an area of 2,882 sq km with a human population of 725,000, to assess feasibility of achieving the herd immunity against rabies among dogs.

Routine Parenteral Vaccination Programme was carried out for domestic dogs and marked with collars. A house to house survey identified the residual non-vaccinated dog in the selected area. Oral

vaccine was offered to the non-vaccinated domestic dogs and marked, as third step free roaming community dogs without marks were vaccinated with parenteral cell culture rabies vaccine. 13,757 (12%) non vaccinated dogs in the households selected and vaccinated orally with Vaccinia recombinant lycoprotein oral rabies vaccine containing bait Total vaccination coverage achieved was 76%.

Two Three-Wheelers were issued to Amapra district with the support of WHO

country programme to establish a vaccination programme for free roaming dogs and vaccination programme for domestic dogs.

Quarterly meetings were held. Feed back were provided through production of Quality Statistical Bulletin of Rabies Control to Provincial and District Authorities.

5.2.6.4.3 Control of Japanese Encephalitis

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 the year under review, 70,000 doses of J.E. swine vaccine was supplied to all provinces except to the Central, North Eastern and Uva provinces. Funds were supplied by Provincial health services and, department of Animal Production & Health provided the human resources.

5.2.7 Unit of Youth, Elderly, Disabled and Displaced Persons

The overall vision of the programme is to improve the quality of life of Youth, Elderly, Disabled & Displaced Persons through improvement of the health facilities, disease prevention & health promotion.

5.2.7.1 Vision, objective and activities for Youths.

Vision:

A Healthy & productive adolescent & youth population.

General Objectives

To improve the life skills (life competencies) among school & out of school children as a means of reducing adolescent & youth problems & to improve their well being.

Specific objectives:

1. Improve the capacity of the health & education staff on promoting life skills among school & out of school adolescent & youth.
2. To identify the context and the methodology for improving life skills education through school curriculum, teacher training and through education of parents & community leaders.

Activities:

1. Training Peripheral Health & Education Dept. staff to conduct LS program on pilot scale.
2. Conducting workshops & lecture discussions of LSE by trainers at divisional level (MOH, HEO, Master teachers of LS, LS teachers).
3. Conducting evaluation meetings with trainers.
4. Develop Health Learning Materials (HLM) to train the trainers.
5. Conducting Steering Committee & Task Force meetings on adolescent health to prepare adolescent health policy.
6. Training of teacher counselors on reproductive health counseling in collaboration with NIE.
7. Training of peer communicators on LSE in collaboration with NIE.
8. Training of adolescents & their guardians in Children's villages on reproductive health, life skills & on parenting skills.
9. Training of child care officers on National Child Protection Authority on life skills.
10. Training of Girl Guide leaders on adolescent health.
11. Training of under graduate & post graduate students on Adolescent Health including LSE.

5.2.7.2 Vision, objective and activities for Elderly.*Vision:*

Healthy active productive elderly population.

General Objectives

1. To improve the physical, mental & Social well beings of the present elders.
2. To achieve a healthier more active, more productive, elderly population in future.

Specific Objectives

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

As a means of achieving the above objectives, the programme of Promotion of Active Ageing through Community Health Care for Elderly was established in another 25 MOH areas this year (This programme which was launched in year 2000 has covered 139 MOH areas by now).

Activities:

1. Regional level meetings in selected districts for trainers.
2. Training of PHC & institutional staff.
3. Preliminary level meetings for improving inter-sectoral coordination at MOH level.
4. Needs Assessment of elderly in the community by a survey.

5. Printing & distribution of screening clinic cards and distribution of gluco meters.
6. Training of health volunteers in Moneragala District on elderly care.
7. Fact finding visits to existing day care centers & review progress of activities.
8. Meetings of Monitoring & Follow-up.
9. Training of undergraduate & post graduate students of Medicine on Care of Elderly. Adolescent Health & on health of the disabled.

5.2.7.3 Vision, objective and activities for Disabled.*Vision*

To improve the quality of life of disabled persons

General Objectives

To improve the health services for disabled persons

Specific Objectives

1. To improve the early detection referral & treatment of cataract among older persons.
2. To improve awareness among members of the community regarding prevention of disability.

Activities:

1. Training MOOH & selected trainers at divisional level on minimizing disability among members of the community during old age through physical exercise.
2. Conducting mobile cataract camps for reducing disability in old age.

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

Planning, co-ordination, implementation and monitoring of Education, training and research activities listed below, in the Ministry of Health are carried out by the Education, Training and Research Unit headed by a Deputy Director General.

- All basic and inservice (continuing) para-medical training of human resources for health (H.R.H) for the needs of the health care delivery services.
- All educational activities relevant to training and research.
- All research activities assisted by the Ministry of Health.

6.1 Basic Training

The ET & R unit is responsible for the basic training of following categories.

- i. Nurses.
- ii. Medical Laboratory Technologists.
- iii. Physiotherapists.
- iv. Occupational Therapists.
- v. Radiographers.
- vi. Pharmacists.
- vii. Public Health Inspectors.
- viii. Midwives (Public Health & Hospital).
- ix. Ophthalmic Technologists.
- x. Public Health Laboratory Technician.
- xi. Cardiographers (E.C.G Technicians).
- xii. E.E.G.Technicians.
- xiii. Entomological assistants.
- xiv. Speech and Language Therapists.
- xv. Orthopaedic Technicians.
- xvi. Public Health Field Assistants.
- xvii. Dispensers.
- xviii. School Dental Therapists.
- xix. Dental Technicians.
- xx. Medical Physicists (trained at PGIS)
- xxi. Audiology Technicians.
- xxii. Hospital Attendants.

In the year 2003 several categories of trainees were recruited to training schools (Table 13).

6.2 In-service /Continuing Education

6.2.1 Post Basic School of Nursing – Colombo

The inservice / continuing education programmes for nurses conducted at the post basic school of nursing is listed below.

- i. Paediatric Nursing.
- ii. Intensive care Unit training.
- iii. Surgical theatre training.
- iv. Psychiatric training.
- v. Management and Supervision training.
- vi. Tutor training.
- vii. Management training.
- viii. Midwifery training.
- ix. Orthopaedic training.
- x. Pain management training.

In the year 2003 in-service training for nurses was done in most of the above programmes.

6.2.2 National Institute of Health Sciences (NIHS) Kalutara

At the NIHS, in-service training programmes were carried out for the following categories during the year 2003.

- i. Medical Laboratory Technologists.
- ii. Pharmacists.
- iii. Public Health Inspectors.
- iv. Public Health Midwives

6.2.3 E.T.&R Unit, Ministry of Health

Special in-services training programmes were conducted for ambulance drivers during 2003.

6.3 Educational Activities

The E.T & R Unit is responsible for preparing relevant educational materials for training (both basic and in-service/continuing) programmes. The following curricula were revised as competency based during the year 2003.

- i. Radiography .
- ii. Cardiography.
- iii. Nursing.

6.4 Health Research Activities

Health research is an essential pre-requisite to the overall development of any country. The contribution health research can make towards the identification of cost-effective solutions to many problems faced by developing countries like Sri Lanka, is very significant. However, due to numerous constraints existing in these countries, health research has not developed to the extent evident in the more developed countries. Lack of a research culture among health personnel and the inadequate availability of accurate data on morbidity and mortality adversely affect the promotion of health research. There is little or no mechanism to promote and direct health research and disseminate relevant information to decision makers for use in health system development. Research is undertaken mostly for academic reasons or for personal interest. Inadequacies in research capabilities, absence of adequate incentives for research and near absence of a multidisciplinary and intersectoral approach to research are other major problems.

In spite of these constraints, Sri Lanka has achieved impressive results in affording better health status for its people. There is scope for further improvement in the area of Health Research for Development.

6.4.1 Research Activities in the Year 2003

The Education Training and Research (E.T&R) Unit of the Department of Health Services funded many research projects. Financing was done from the World Health Organization (WHO) regular country budget. In the year 2003 funds for research were not made available from the consolidated fund.

6.4.2.1 The National Institute of Health Science has carried out Health System Research Methodology training programmes for interested researchers. Similar programmes were conducted for nursing and paramedical personnel. The outcome of these programmes is the development of research proposals by the participants. Some of the proposals developed were carried out by the researchers.

6.4.2.2 The Medical Research Institute (MRI) conducts research in different areas of health sector, specially in biomedical and applied

health. It also conducts training programmes for undergraduates and postgraduates in medicine, medical laboratory technologists, nurses, public health inspectors, entomological assistants etc. Also surveys in various fields, particularly on nutrition and epidemiology of non-communicable diseases are also carried out. The MRI in addition to being the premier biomedical research institute in the country, provides services to all hospitals in Sri Lanka with special diagnostic laboratory tests. It functions as a laboratory diagnostic centre and as a reference laboratory to poliomyelitis diagnosis.

6.4.2.3 The coordinating committee for research in Reproductive Health (HRP) established in 1989, for the promotion of research in reproductive health has representatives from all medical faculties, and the Ministry of Health and the Sri Lanka Family Planning Association. The research activities are implemented through task forces established at the universities of Colombo, Ruhuna, Peradeniya and Jaffna. Funding for research activities and institutional development comes from the special programme on HRP, WHO Geneva.

In the year 2003 the HRP committee through its task forces has funded many research projects, carried out workshops, seminars in the field of Human Reproductive Health. Several research training grants have been awarded to researchers to develop their knowledge and skills in relevant fields.

6.4.2.4 The Postgraduate Institute of Medicine promotes health research as a part of its postgraduate training. PGIM trainees have undertaken many research studies during the year 2003. Though these research studies were mostly academic in nature, some of the recommendations have been of significant use to policy makers in arriving at decisions to improve health services.

6.4.2.5 Faculties of Medicine of Universities and the Teaching Hospitals have also conducted research during the year 2003. They were mainly biomedical or clinical in nature. Some other governmental and non-governmental research organizations such as the National Science Foundation

(NSF) have supported many health related research activities.

6.4.2.6. Certain selected units of department of health services such as the Epidemiological Unit, Family Health Bureau and specialised Disease Control Programmes have undertaken research studies in their relevant fields.

6.4.2.7. During the year 2003 many individual researchers in both curative and preventive fields have contributed scientific knowledge through the Sri Lanka Medical Association for the Advancement of Science and other Professional Associations.

6.4.2 National Health Research Council

The National Health Research Council (NHRC) has identified the priority areas of research in Sri Lanka. In 2003, NHRC conducted a research management workshop. It also got the services of a WHO consultant to draft an act for the NHRC. The preparation of the draft act is over and awaiting final legal formalities.

The council also scrutinized several research proposals for funding and funds were given through WHO country budget. Regular monthly meetings were held to review the progress in research activities.

6.4.3 Health Literature Library and information Services (HeLLIS)

The HeLLIS resource-sharing network is one of the activities co-ordinated by office of the ET & R Unit from 1997 to date. The HeLLIS was inaugurated in 1979 at a consultative meeting of the WHO Regional Committee with an aim to fulfil the information needs of the health professionals in the South East Asian (SEA) region. HeLLIS is designed and operated as a library network both at national and at regional levels.

The WHO promotes, supports and provides funds for all activities of the HeLLIS to achieve its objectives. The SEARO library in New Delhi is the regional co-ordinator of the regional network. Sri Lanka had the membership from the inception of the regional network. HeLLIS Sri Lanka comprises 22 health libraries representing almost all the health related organizations in the country. Medical Faculty

Library of the University of Colombo act as the national focal point of the country network.

HeLLIS network members are committed to cater to anybody who requires health or health related information. National network bridges the gap between information and the user through its member libraries around the island by forming a well-established communication protocol. At present HeLLIS plays a significant role in providing access to health literature, specially to the research community in the country. The national network continue to enhance its members, to serve their user communities and make them ready to run Information Technology (IT) activities in several ways, such as :-

- Material support for development of library collection.
- Document delivery system and inter-library loan facilities.
- Training library personnel in IT skills.
- Sharing technical expertise in modern information management systems in the online environment.
- Establishment of new communication channels and necessary equipment to maintain an efficient information exchange within the country and the region.
- Compilation of bibliographic tools for locally generated information.

To keep up with the fast moving and ever changing health information sector in the world, HeLLIS is preparing ground work in order to move to online information exchange connecting our user to very current information with the support of the WHO.

Detailed Tables

PUBLIC LIBRARY
SPECIAL COLLECTION

Symbol employed

The following symbol has been used throughout the Detailed Tables

- Nil

Table 5 Health

Year			
1995			
2000			
2001			
2002			
2003			

Public Library
of the City of
New York

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	18	-	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	19	-	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	322	6	14,013	256	38,259	18	37

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 1988 ¹	Percentage Land Area	2003			Average Annual Growth Rate 1981- 2001	Population ² 2004 in '000
			Estimated Mid-year Population ²	Percentage Distribution of Population	Density (Person per Sq.Km)		
Sri Lanka	62,705	100	19,251,998	100.0	307	1.1	19,462
Western Province	3,593	5.73	5,471,653	28.4	1,523		5,526
Colombo	676	1.08	2,304,997	12.0	3,410	1.3	2,342
Gampaha	1,341	2.14	2,089,478	10.9	1,558	1.9	2,099
Kalutara	1,576	2.51	1,077,178	5.6	683	1.2	1,085
Central Province	5,575	8.89	2,474,443	12.9	444		2,506
Kandy	1,917	3.06	1,307,089	6.8	682	1.0	1,325
Matale	1,952	3.11	453,307	2.4	232	1.1	459
Nuwara Eliya	1,706	2.72	714,047	3.7	419	0.7	722
Southern Province	5,383	8.58	2,323,827	12.1	432		2,346
Galle	1,617	2.58	1,010,692	5.2	625	1.0	1,020
Matara	1,270	2.03	779,821	4.1	614	0.8	788
Hambantota	2,496	3.98	533,314	2.8	214	1.1	538
Northern Province	8,290	13.22	1,106,032	5.7	133		1,122
Jaffna	929	1.48	589,038	3.1	634	-2.0	596
Kilinochchi	1,205	1.92	140,145	0.7	116	1.6	143
Mannar	1,880	3.00	96,834	0.5	52	1.7	97
Vavuniya	1,861	2.97	139,230	0.7	75	2.2	142
Mullaitivu	2,415	3.85	140,785	0.7	58	2.2	144
Eastern Province	9,361	14.93	1,516,989	7.9	162		1,540
Batticaloa	2,610	4.16	535,688	2.8	205	1.9	544
Ampara	4,222	6.73	604,686	3.1	143	2.0	613
Trincomalee	2,529	4.03	376,615	2.0	149	1.4	383
North-Western Province	7,506	11.97	2,196,205	11.4	293		2,214
Kurunegala	4,624	7.37	1,474,696	7.7	319	0.9	1,486
Puttalam	2,882	4.60	721,509	3.7	250	1.8	728
North Central Province	9,741	15.53	1,131,939	5.9	116		1,145
Anuradhapura	6,664	10.63	764,352	4.0	115	1.2	773
Polonnaruwa	3,077	4.91	367,587	1.9	119	1.6	372
Uva Province	8,335	13.29	1,206,586	6.3	145		1,223
Badulla	2,827	4.51	801,202	4.2	283	0.9	813
Moneragala	5,508	8.78	405,384	2.1	74	1.8	410
Sabaragamuwa Province	4,921	7.85	1,824,324	9.5	371		1,840
Ratnapura	3,236	5.16	1,035,560	5.4	320	1.2	1,049
Kegalle	1,685	2.69	788,764	4.1	468	0.6	791

Source : ¹ Survey General's Department² Registrar General's Department

Table 3. Population by Five Year Age Groups and Sex, 1981 and 2001

Age Group	Year 1981*						Year 2001 **					
	Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
All ages	12,762,095	100.00	6,496,751	100.00	6,265,344	100.00	16,867,681	100.00	8,344,842	100.00	8,522,839	100.00
0 - 4	1,558,498	12.21	793,926	12.22	764,572	12.20	1,457,653	8.64	745,084	8.93	712,570	8.36
5 - 9	1,420,071	11.13	722,484	11.12	697,587	11.13	1,501,027	8.90	762,013	9.13	739,014	8.67
10 - 14	1,434,268	11.24	731,625	11.26	702,643	11.21	1,536,126	9.11	785,155	9.41	750,972	8.81
15 - 19	1,367,856	10.72	692,867	10.66	674,989	10.77	1,647,319	9.77	838,164	10.04	809,154	9.49
20 - 24	1,318,096	10.33	660,010	10.16	658,086	10.50	1,561,563	9.26	772,831	9.26	788,732	9.25
25 - 29	1,107,544	8.68	553,283	8.52	554,261	8.85	1,318,902	7.82	638,297	7.65	680,605	7.99
30 - 34	981,304	7.69	495,386	7.63	485,918	7.76	1,270,065	7.53	620,140	7.43	649,925	7.63
35 - 39	733,244	5.75	367,757	5.66	365,487	5.83	1,243,602	7.37	606,609	7.27	636,993	7.47
40 - 44	608,058	4.76	312,942	4.82	295,116	4.71	1,157,605	6.86	568,927	6.82	588,677	6.91
45 - 49	530,943	4.16	268,111	4.13	262,832	4.20	1,015,078	6.02	500,036	5.99	515,042	6.04
50 - 54	472,562	3.70	248,741	3.83	223,821	3.57	916,270	5.43	448,524	5.37	467,747	5.49
55 - 59	370,112	2.90	194,059	2.99	176,053	2.81	669,045	3.97	322,094	3.86	346,950	4.07
60 - 64	295,696	2.32	158,897	2.45	136,799	2.18	500,769	2.97	240,931	2.89	259,837	3.05
65 - 69	221,040	1.73	116,269	1.79	104,771	1.67	408,502	2.42	191,271	2.29	217,230	2.55
70 - 74	158,135	1.24	84,817	1.31	73,318	1.17	303,234	1.80	139,347	1.67	163,887	1.92
75 & over	184,668	1.45	95,577	1.47	89,091	1.42	360,922	2.14	165,417	1.98	195,505	2.29

Source: * Population Census 1981

** Based on Population

Census 2001 sample estimates

Year 2001 Population Excludes :

Jaffna, Mannar, Vavuniya, Mullaitivu, Kilinochchi,

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

District	Crude Birth Rate	Crude Death Rate	Maternal Mortality Rate	Infant Mortality Rate	Neo-Natal Mortality Rate		Perinatal Mortality Rate	
	2003 ¹	2003 ¹	2002 ¹	2003 ¹	1998	1999	1998	1999
	Per 1,000 Population		Per 100,000 Live Birth's	Per 1,000 Live Birth's				
Colombo	27.3	8.9	11.9	15.2	12.6	13.4	10.2	10.3
Gampaha	12.4	5.2	7.9	6.0	6.3	5.6	5.9	4.7
Kalutara	14.7	5.8	0.0	4.0	2.9	4.9	2.3	4.7
Kandy	22.9	6.7	10.3	15.3	16.1	19.0	13.1	16.0
Matale	20.0	5.2	0.0	10.4	9.4	5.5	7.5	4.4
Nuwara Eliya	15.9	5.0	51.6	15.6	10.4	13.0	8.0	9.6
Galle	19.2	7.1	10.4	10.9	6.4	10.4	4.2	7.1
Matara	18.5	6.0	20.8	8.3	15.2	10.1	13.2	8.9
Hambantota	13.6	4.5	14.1	7.0	2.7	1.4	1.9	0.9
Jaffna	19.4	5.2	23.0	4.4	3.4	2.5	2.5	1.9
Kilinochchi	29.0	6.9	27.7	1.2	3.9	6.9	3.5	4.6
Mannar	12.1	3.7	0.0	2.6	5.5	0.6	3.8	0.6
Vavuniya	27.4	5.5	0.0	6.8	5.6	2.9	4.4	1.6
Mullaitivu	33.5	12.8	0.0	1.7	3.7	4.6	2.6	4.2
Batticaloa	25.1	4.8	32.9	19.6	8.9	12.8	7.6	11.5
Ampara	19.2	4.0	8.5	6.3	1.6	3.4	1.2	2.7
Trincomalee	21.5	3.9	13.2	2.5	2.4	0.7	1.7	0.7
Kurunegala	15.9	6.5	8.2	14.0	11.9	12.5	9.6	10.8
Puttalam	17.1	4.5	13.8	5.9	8.0	9.9	6.6	7.7
Anuradhapura	20.2	5.7	19.1	19.4	13.2	18.9	10.1	14.3
Polonnaruwa	19.3	5.5	0.0	19.5	5.0	3.4	4.6	2.6
Badulla	20.6	5.1	33.8	9.9	27.6	18.4	22.4	14.9
Moneragala	16.2	3.1	15.1	2.0	2.9	1.4	1.8	1.2
Ratnapura	17.8	5.3	25.5	13.2	15.3	10.9	12.8	9.2
Kegalle	11.9	5.6	0.0	7.0	14.2	12.6	12.8	11.2
Sri Lanka	18.9	5.9	14.3	11.2	10.5	10.6	8.6	8.6

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
<i>Sri Lanka</i>	100.0	66.5	13.6	12.0	0.4	1.0	4.3	2.2
<i>Western Province</i>								
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
<i>Central Province</i>								
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
<i>Southern Province</i>								
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
<i>North Western Province</i>								
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
<i>North Central Province</i>								
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
<i>Uva Province</i>								
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
<i>Sabaragamuwa Province</i>								
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 7. Health Development Targets to be Achieved by Year 2002

Indicator	Benchmark		Current		Target for year 2002
Infant mortality rate (per 1000 live births)	19.5	1990	12.2	2001	15.0
Neo-natal mortality rate (per 1000 live births)	13.0	1989	12.9	1996	7.5
Maternal mortality rate (per 1,000 live births)	0.4	1991	0.2	1996	0.3
Life expectancy at birth (years)	67.8 (M) 71.7 (F)	1981	70.7 (M) 75.4 (F)	1996	73 (M) 75 (F)
Percentage of newborns with birth weight less than 2500 gm	22.8	1990	16.1	2001	18.0
Crude birth rate (per 1,000 population)	19.9	1990	18.9	2001 ¹	16.0
Neo-natal tetanus cases (per 100,000 live births)	4.7	1990	0.3	2000	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 vicinity %	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

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Table 8. Distribution of Government Medical Institutions and Beds¹ by Districts, December 2003

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/DDHS Areas *
	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds			
Colombo	7	6,555	-	-	2	755	4	918	5	324	1	18	-	-	7	2,924	26	11,494	5.0	27	12
Gampaha	1	1,218	-	-	3	1,558	6	806	3	180	6	178	9	74	5	1,341	33	5,355	2.6	37	14
Kalutara	-	-	1	685	2	782	7	617	4	211	6	160	1	6	1	0	22	2,461	2.3	8	10
Kandy	2	2,594	-	-	2	626	14	974	6	242	26	743	-	-	5	100	55	5,279	4.0	25	21
Matale	-	-	-	-	2	776	3	219	4	219	12	175	2	35	-	-	23	1,424	3.1	11	10
Nuwara Eliya	-	-	-	-	1	289	13	1,044	2	84	7	169	5	72	-	-	28	1,658	2.3	20	7
Galle	2	1,571	-	-	-	-	9	982	9	335	4	96	4	46	1	10	29	3,040	3.0	22	16
Matara	-	-	-	955	-	-	5	628	4	292	9	236	3	35	-	-	23	2,144	2.7	11	14
Hambantota	-	-	-	-	1	309	6	632	4	202	8	274	3	33	-	-	22	1,452	2.7	8	10
Jaffna	1	920	-	-	1	264	6	406	6	276	4	37	8	91	1	40	27	2,034	3.5	15	11
Kilinochchi	-	-	-	-	-	-	1	92	3	109	-	-	5	46	-	-	9	247	1.8	3	4
Mannar	-	-	-	-	1	200	3	90	1	28	1	0	2	6	-	-	8	324	3.3	4	4
Vavuniya	-	-	-	-	1	224	-	-	1	0	1	73	2	24	-	-	5	321	2.3	3	4
Mullaitivu	-	-	-	-	-	-	1	132	1	143	-	-	3	16	-	-	5	291	2.1	3	2
Batticaloa	1	689	-	-	-	-	6	394	-	-	3	92	2	17	4	60	16	1,252	2.3	10	9
Ampara ⁴	-	-	-	-	5	870	8	475	5	199	1	30	7	153	-	-	26	1,727	2.9	27	17
Trincomalee	-	-	-	-	2	430	2	160	3	134	5	126	3	38	-	-	15	888	2.4	12	11
Kurunegala	1	1,206	-	-	2	544	16	1,576	12	506	14	274	3	25	-	-	48	4,131	2.8	49	18
Puttalam	-	-	-	-	2	786	4	522	4	165	5	128	6	107	-	-	21	1,708	2.4	19	9
Anuradhapura	-	-	-	-	2	155	5	484	5	289	22	607	2	17	1	14	38	2,738	3.6	23	19
Polonnaruwa	-	-	-	-	1	109	1	131	4	212	5	204	2	0	-	-	14	1,007	2.7	9	8
Badulla	-	-	-	-	2	393	14	905	1	30	15	358	1	5	1	20	35	2,262	2.8	16	15
Moneragala	-	-	-	-	1	322	9	728	1	38	7	159	2	16	-	-	20	1,263	3.1	10	10
Ratnapura	-	-	-	-	3	513	10	786	9	382	11	204	-	-	-	-	34	2,792	2.7	12	15
Kegalle	1	691	-	-	2	335	6	608	1	57	10	236	4	23	1	20	25	1,970	2.5	16	10
Total	16	15,444	6	4,621	38	10,240	159	14,309	98	4,657	183	4,577	80	885	27	4,529	607	59,262	3.1	400	280

Source: Medical Statistics Unit

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.

⁴ Kalmunai DPDHS Division.

* : Provisional and 2005 List for North and Eastern province.

Table 9. Beds by Speciality and District, December 2003

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	661	2,054	1,984	979	641	122	-	648	-	2,564	206	84	114	123	-	56	598	137	74	-	-	449	11,494
Gampaha	306	1,283	849	491	557	-	410	-	-	527	7	-	4	117	127	50	-	-	-	236	-	391	5,355
Kalutara	268	784	396	285	385	-	63	-	-	-	-	-	4	31	25	14	-	-	-	-	-	206	2,461
Kandy	613	1,310	589	939	611	-	70	82	-	176	88	87	45	58	203	40	134	-	-	34	36	164	5,279
Matale	177	432	165	323	207	-	28	-	-	12	-	-	-	5	46	-	-	-	-	-	-	29	1,424
Nuwara Eliya	317	469	207	221	187	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	241	1,658
Galle	453	601	688	403	374	-	47	78	-	79	24	18	19	39	44	37	60	-	-	-	23	53	3,040
Matara	278	487	262	530	335	-	-	-	-	-	6	-	-	26	39	62	23	-	-	-	25	71	2,144
Hambantota	371	287	170	254	224	-	-	-	-	-	-	27	-	-	16	-	-	-	-	-	-	103	1,452
Jaffna	186	511	347	433	226	-	66	-	-	74	-	-	-	80	49	26	-	-	-	-	-	31	2,034
Kilinochchi	74	49	12	19	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	247
Mannar	76	84	45	66	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	324
Vavuniya	52	67	56	84	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	321
Mullaitivu	67	89	41	63	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	291
Batticaloa	103	347	202	179	179	-	60	14	60	22	-	-	-	22	47	-	-	-	-	-	-	17	1,252
Ampara ⁴	146	675	209	259	287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151	1,727
Trincomalee	16	415	78	193	166	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	888
Kurunegala	690	1,296	284	699	596	-	-	-	-	40	28	4	86	56	75	39	57	54	-	23	30	92	4,131
Puttalam	225	379	289	413	288	-	-	-	-	48	-	-	-	18	30	-	29	-	-	-	-	31	1,708
Anuradhapura	731	537	263	591	314	-	26	48	-	-	-	-	-	-	42	-	-	-	-	-	-	0	2,738
Polonnaruwa	301	216	14	251	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1,007
Badulla	488	551	310	489	383	-	-	-	-	-	-	-	-	-	-	11	-	-	-	20	-	10	2,262
Moneragala	117	470	128	64	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	242	1,263
Ratnapura	541	603	410	387	395	-	38	-	-	29	-	-	-	23	40	-	28	-	-	-	-	298	2,792
Kegalle	316	506	282	301	303	-	-	-	-	20	-	-	-	38	39	20	-	-	-	-	-	145	1,970
Total	7,573	14,502	8,280	8,916	7,233	193	827	870	60	3,591	359	220	272	636	891	355	929	191	74	313	114	2,863	59,262

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. 54.2% of the beds were supported by services of Paediatricians.
- ³ Mixed wards with beds for obstetrics, psychiatry, skin, ENT, eye, dental, neurology, surgery, tuberculosis and hematology.
- ⁴ Includes Kalmunai DPDHS Division.

Table 10. Key Health Personnel, 1980-2002

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
1980	2,055	13.9	218	1.5	1,018	6.9	6,123	41.5	213	1.4	913	6.2	1,817	12.3	1,533	10.4
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

Rate per 100,000 Population

Source : Medical Statistics Unit

¹ All Medical Officers in curative, administrative and preventive services including Specialists and Interns

² Includes Regional and Consultant Dental Surgeons

³ Excludes the Northern Province

Table 11. Distribution of Health Personnel by District and the Rate Per 100,000 Population, September 2002

District	Medical Officers Curative Services ¹	Medical Officers Administrative & Preventive Services	Medical Officers of Health	Total (Medical Officers)	Dental Surgeons ²		Registered/ Assistant Medical Officers		Nurses		Public Health Nursing Sisters		Public Health Inspectors		Public Health Midwives		
	No.	No.	No.	No.	No.	Rate	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Colombo	2,523	16	23	2,562	113.1	257	11.3	95	4.2	3,899	172.1	44	1.9	75	3.3	285	12.6
Gampaha	671	6	26	703	33.8	50	2.4	101	4.9	1,125	54.2	43	2.1	97	4.7	402	19.4
Kalutara	375	10	23	408	38.5	37	3.5	52	4.9	589	55.5	44	4.1	68	6.4	370	34.9
Kandy	1,180	10	35	1,225	95.1	88	6.8	205	15.9	1,955	151.8	8	0.6	72	5.6	388	30.1
Matale	183	5	17	205	45.8	19	4.2	48	10.7	296	66.1	9	2.0	32	7.1	143	31.9
Nuwara Eliya	113	4	8	125	17.7	18	2.5	36	5.1	201	28.4	7	1.0	21	3.0	125	17.7
Galle	536	12	23	571	57.1	39	3.9	73	7.3	1,094	109.4	17	1.7	73	7.3	283	28.3
Matara	242	8	23	273	35.5	25	3.2	49	6.4	528	68.6	8	1.0	80	10.4	265	34.4
Hambantota	109	3	13	125	23.6	17	3.2	36	6.8	235	44.4	4	-	59	11.2	209	39.5
Jaffna	118	5	2	125	23.5	15	2.8	40	7.5	323	60.7	-	-	71	13.3	66	12.4
Kilinochchi ³	5	-	2	7	2.2	2	0.6	16	5.0	26	8.2	-	-	17	5.3	17	5.3
Mannar	12	-	1	13	13.3	1	1.0	0	0.0	37	37.8	-	-	15	15.3	17	17.3
Vavuniya	33	2	2	37	25.3	6	4.1	7	4.8	72	49.3	-	-	15	10.3	22	15.1
Batticaloa	98	6	7	111	21.3	15	2.9	24	4.6	344	65.9	4	0.8	63	12.1	131	-
Anpara ⁴	96	4	13	113	19.0	11	1.8	17	2.9	204	34.2	1	0.2	91	15.3	100	16.8
Trincomalee	84	5	5	94	26.3	10	2.8	17	4.7	139	38.8	-	-	39	10.9	81	22.6
Kurunegala	400	8	32	440	30.1	55	3.8	150	10.3	1,191	81.5	39	2.7	113	7.7	438	30.0
Puttalam	205	2	11	218	30.6	23	3.2	42	5.9	321	45.0	7	1.0	49	6.9	169	23.7
Anuradhapura	367	8	26	401	53.2	35	4.6	58	7.7	968	128.4	9	1.2	75	9.9	283	37.5
Polonnaruwa	179	6	10	195	53.7	13	3.6	23	6.3	200	55.1	5	1.4	37	10.2	104	28.7
Badulla	262	10	27	299	38.0	35	4.4	69	8.8	634	80.6	10	1.3	57	7.2	223	28.3
Moneragala	90	1	17	108	26.9	12	3.0	27	6.7	192	47.9	6	1.5	38	9.5	153	38.2
Ratnapura	305	6	25	336	32.9	37	3.6	62	6.1	694	68.0	15	1.5	103	10.1	297	29.1
Kegalle	220	5	17	242	30.9	18	2.3	66	8.4	523	66.7	14	1.8	66	8.4	248	31.6
Central Government	252	102	0	354	1.9	29	0.2	13	0.1	727	3.8	16	0.1	44	0.2	-	-
Total	8,658	244	388	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

Rate per 100,000 population.
Includes:

- ¹ Specialists and Interns
- ² Regional Dental Surgeons and Consultant Dental Surgeons
- ³ Mullaitivu District
- ⁴ Kalmunai DPDHS Division

Source: Medical Statistics Unit
Contd.

Contd.

Table 11. Distribution of Health Personnel by District and the Rate Per 100,000 Population, September 2002

District	Hospital Midwives		Pharmacists		Dispensers		Medical Laboratory Technologists		Radiographers		Physiotherapists		ECG Recordists		EEG Recordists		Supervising/Dental Therapists	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Colombo	295	13.0	200	8.8	63	2.8	207	9.1	134	5.9	87	3.8	56	2.5	14	0.6	76	3.4
Gampaha	175	8.4	67	3.2	61	2.9	69	3.3	20	1.0	27	1.3	12	0.6	2	0.1	1	0.0
Kalutara	106	10.0	41	3.9	28	2.6	40	3.8	7	0.7	9	0.8	5	0.5	-	-	43	4.1
Kandy	253	19.6	68	5.3	76	5.9	63	4.9	44	3.4	18	1.4	15	1.2	4	0.3	2	0.2
Matale	88	19.6	16	3.6	34	7.6	11	2.5	4	0.9	2	0.4	2	0.4	-	-	14	3.1
Nuwara Eliya	94	13.3	6	0.8	28	4.0	4	0.6	2	0.3	1	-	1	0.1	-	-	7	1.0
Galle	193	19.3	53	5.3	57	5.7	45	4.5	21	2.1	13	1.3	13	1.3	2	0.2	9	0.9
Matara	148	19.2	26	3.4	36	4.7	22	2.9	6	0.8	3	0.4	6	0.8	-	-	24	3.1
Hambantota	104	19.7	10	1.9	25	4.7	9	1.7	3	0.6	-	-	1	0.2	-	-	13	2.5
Jaffna	60	11.3	43	8.1	27	5.1	13	2.4	8	1.5	2	0.4	4	0.8	3	0.6	8	1.5
Kilinochchi ³	24	7.5	3	0.9	10	3.1	2	0.6	-	-	-	-	-	-	-	-	1	0.3
Mannar	21	21.4	5	5.1	4	4.1	2	2.0	1	1.0	1	1.0	-	-	-	-	-	-
Vavuniya	13	8.9	11	7.5	4	2.7	4	2.7	2	1.4	-	-	-	-	-	-	-	-
Batticaloa	61	11.7	23	4.4	15	2.9	15	2.9	3	0.6	3	0.6	1	0.2	2	0.4	3	0.6
Ampara ⁴	110	18.5	21	3.5	19	3.2	9	1.5	2	0.3	-	-	-	0.0	3	0.5	8	1.3
Trincomalee	34	9.5	13	3.6	24	6.7	8	2.2	1	0.3	1	0.3	1	0.3	-	-	3	0.8
Kurunegala	276	18.9	48	3.3	97	6.6	58	4.0	14	1.0	8	0.5	9	0.6	2	0.1	33	2.3
Puttalam	90	12.6	24	3.4	37	5.2	24	3.4	4	0.6	3	0.4	4	0.6	-	-	9	1.3
Anuradhapura	153	20.3	45	6.0	56	7.4	44	5.8	21	2.8	12	1.6	8	1.1	-	-	17	2.3
Polonnaruwa	45	12.4	12	3.3	15	4.1	7	1.9	4	1.1	3	0.8	4	1.1	-	-	7	1.9
Badulla	124	15.8	29	3.7	56	7.1	29	3.7	10	1.3	5	0.6	5	0.6	1	-	1	0.1
Moneragala	64	16.0	10	2.5	29	7.2	11	2.7	3	0.7	-	-	1	0.2	-	-	8	2.0
Ratnapura	144	14.1	37	3.6	44	4.3	27	2.6	11	1.1	7	0.7	7	0.7	1	0.1	22	2.2
Kegalle	119	15.2	30	3.8	41	5.2	15	1.9	5	0.6	2	0.3	3	0.4	-	-	18	2.3
Central Government	-	-	70	0.4	6	0.0	133	0.7	12	0.1	12	0.0	-	-	3	0.0	5	9.0
Total	2,794	14.7	911	4.8	892	4.7	871	4.6	342	1.8	219	1.2	158	0.8	37	0.2	332	1.7

Source : Medical Statistics Unit.

Rate per 100,000 population.

Includes:

³ Mullaitivu District⁴ Kalmunai DPDHS Division

Table 12. Distribution of Specialists in Curative Care Services¹ by District, September 2002

Districts	General Physicians	General Surgeons	Obstetricians & Gynaecologists	Cardiologists	Neurologists	Dermatologists	Rheumatologists	Psychiatrists	Paediatricians	TB & Chest Physicians	ENT Surgeons	Eye Surgeons	Paediatric Surgeons	Orthopaedic Surgeons	Plastic Surgeons	Genito Urinary Surgeons	Neuro Surgeons	Thoracic Surgeons	Anaesthesiologists	Pathologists	Bacteriologists/Microbiologists	Radiotherapists/Oncologists	Radiologists	Others ²	Total
Colombo	17	16	18	5	4	3	4	-	14	1	6	12	5	6	3	3	2	5	24	8	7	13	6	13	195
Gampaha	9	8	10	1	1	-	-	3	9	4	1	3	-	1	-	1	-	2	8	4	1	3	-	2	71
Kalutara	4	4	5	-	-	2	1	-	4	1	1	2	-	-	-	-	-	-	2	2	2	1	-	-	29
Kandy	11	10	9	3	2	1	1	4	8	1	3	3	1	2	1	1	2	-	8	3	2	2	5	4	87
Matale	2	2	3	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	2	-	-	1	1	15
Nuwara Eliya	1	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5
Galle	8	6	8	7	1	1	1	6	13	1	1	1	1	1	-	1	-	-	4	3	3	1	2	2	69
Matara	1	2	2	1	1	1	-	1	2	-	1	1	-	1	-	-	-	-	1	-	-	-	1	1	17
Hambantota	1	1	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Jaffna	5	4	3	-	1	-	1	1	1	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	19
Kilinochchi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mannar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vavuniya	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Mullaitivu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Batticaloa	1	1	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Ampara ³	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Trincomalee	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Kurunegala	4	3	5	1	1	1	1	1	3	-	1	2	-	1	1	1	-	-	2	1	-	2	1	1	31
Puttalam	3	3	3	-	-	-	-	-	3	-	-	2	-	-	-	-	-	-	1	-	-	1	-	-	16
Anuradhapura	2	2	3	-	-	-	-	1	2	-	1	1	-	-	-	-	-	-	2	1	-	1	1	2	19
Polonnaruwa	1	2	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Badulla	3	4	4	1	1	-	-	1	4	1	1	1	-	1	-	-	1	-	3	-	-	-	-	-	27
Moneragala	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	5
Ratnapura	2	2	4	1	2	1	-	1	6	-	1	1	-	-	-	-	1	-	1	1	1	1	-	-	25
Kegalle	1	2	3	-	-	1	-	-	3	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	13
Sri Lanka	78	76	90	20	14	11	9	20	82	9	19	31	6	13	4	7	6	7	61	26	13	23	18	26	669

Includes: ¹ Specialists of the Faculties of Medicine working in Teaching Hospitals and ² MSF Consultants in the North and East of Sri Lanka. ³ Haematologists, Virologists, Mycologists, Venereologists, Consultant JMO's, Pharmacologists, Immunologists, Parasitologists, Nephrologists, Neonatologists & Oncology Surgeons.

Excludes: Anit filaria Campiagin (Colombo), Blood Bank (Colombo), Faculty Staff (Colombo), Faculty Staff Colombo South (Colombo), Fever Hospital (Colombo), Mental Hospital Angoda (Colombo), Rehabilitation Hospital, Ragama (Gampaha), N.I.H.S. Kalutara (Kalutara), STD Clinic - Kanagasotta (Kandy), B.H. Kalmunai South (Ampara), B.H. Dehiakandiyam (Ampara), D.H. Madirigiriya (Polonnaruwa), B.H. Nikawaratiya (Kurunegala)

Table 13. Health Manpower Training, 2000 - 2003

Category	Duration of Training (Years)	Training Institution	Annual Intake				Annual Output			
			2000	2001	2002	2003	2000	2001	2002	2003
Doctors	5	Medical Faculty:								
		Colombo	193	387	193	209	202	149	165	190
		Peradeniya	174	351	176	181	197	192	172	190
		Jaffna	171	71	206	89	92	62	126	108
		Ruhuna	130	130	134	137	118	117	101	115
		Kelaniya	164	-	322	169	192	-	178	150
Jayawardenapura	150	150	158	160	135	90	119	136		
Dental Surgeons	5	Faculty of Dental Science, University of Peradeniya	74	-	71	N/A	77	-	75	N/A
Nurses	3	Nurses Training School:								
		Colombo	115	362	136	367	315	156	164	112
		Kandy	145	570	147	-	464	220	180	135
		Galle	114	-	135	-	184	124	135	101
		Ratnapura	67	259	94	214	160	-	66	76
		Kurunegala	107	-	139	-	272	-	138	99
		Anuradhapura	78	195	96	-	144	111	111	74
		Jaffna	-	39	107	39	33	1	61	4
		Batticaloa	34	107	144	-	152	57	63	32
		Badulla	82	369	176	249	154	108	117	76
		Kandana	68	-	131	N/A	48	-	124	N/A
		Mulleriyawa	-	N/A	1,799	1,930	N/A	N/A	1,799	1,930
Sri Jayawardenapura	N/A	N/A	N/A	281	N/A	N/A	N/A	80		
Pharmacists	2	Medical Faculty, Colombo	41	-	36	-	46	32	6	7
		NIHS Kalutara	46	47	29	29	46	-	-	23
Physiotherapists	2	School of Physiotherapy	-	-	17	-	8	14	13	-
Occupational Therapists	2	- do -	-	-	5	-	36	2	1	-
Radiographers	2	School of Radiography, NHSL	22	-	69	-	-	48	39	-
Medical Laboratory Technologists	2	Medical Research Institute	36	-	37	-	29	-	36	-
		NIHS Kalutara	40	39	39	32	-	-	23	32
		School of MLT, TH Peradeniya	40	-	36	-	32	34	23	5
Assistant Medical Officers	3	NIHS Kalutara	60	-	-	75	-	-	-	47
Public Health Inspectors	18 months	NIHS Kalutara	55	96	58	56	-	-	-	56
		Regional Training Centres	41	-	130	193	-	-	-	132
Dental Therapists	2	Dental Therapist's Training School, Maharagama	-	-	-	-	-	-	-	-
Family Health Workers	1	Nurses Training School:								
		Colombo	-	-	39	-	-	-	-	14
		Kandy	59	-	23	-	-	56	-	9
		Galle	-	-	50	-	-	-	-	18
		Ratnapura	-	-	-	-	-	-	-	-
		Kurunegala	-	-	-	-	-	-	-	-
		Anuradhapura	-	-	44	-	-	-	-	19
		Jaffna	12	-	-	-	23	11	-	-
		Batticaloa	91	-	-	-	-	91	-	-
		Badulla	29	-	43	45	-	24	-	45
Kandana	-	-	29	N/A	-	-	-	N/A		
Sri Jayawardenapura	N/A	N/A	N/A	-	N/A	N/A	N/A	-		

Based on information received from the training institutions.

Source: Medical Statistics Unit

Table 14. Courses Conducted by the Postgraduate Institute of Medicine, 2003

Course	Degree	Duration (years)	Output during 2003	Board Certification After Completion of Part II
Family Medicine	Dip	1	48	-
	MD	2-5	-	After registration for MD and submission of research thesis and acceptance of same
Community Medicine	M.Sc.	1	28	-
	MD	3	4	Within a period of 3 years from the date of completion of Part I and submission of thesis and acceptance of same
Community Dentistry	M.Sc.	1	3	-
	MD	3	1	Within a period of 3 years from the date of completion of Part I and submission of thesis and acceptance of same
Medical Administration	M.Sc.	1	18	-
Health Education	M.Sc.	1 ½	-	-
Surgery	MS	3 ½	17	-
General Surgery				2 years
Gastro enterology *				3 years
Paediatric				"
Plastic				"
Orthopaedic				"
Thoracic				"
Genito Urinary				"
Vascular				"
Cancer				"
Cardiac thoracic				4 years
Nuro surgery				4 years
Obstetrics and Gynaecology	MS	2 ½	10	2 years
Ophthalmology	Dip.	1	-	-
	MD	2 ½	8	2 years
Oral Surgery	MS	2	3	2 years
Restorative Dentistry	MS	2	1	2 years
Orthodontics	MS	2	-	2 years
General Dental Practice	Dip.	1	12	-
Medicine	MD	2 7/12	32	-
General				2 years
Nephrology				4 years
Dermatology			7	3 years
Endocrinology				3 years
Gastroenterology				3 years
Respiratory				3 years
Rheumatology				3 years
Neurology				3 years
Cardiology				4 years
Paediatrics	MD	3	6	2 years
Clinical Oncology	MD	3	-	2 years
Anaesthesiology	MD	2 ½	17	2 years
Radiology	MD	3	8	2 years
Psychiatry	Dip.	1	10	2 years
	MD	3	6	-
Pathology	Dip.	2	19	-
Histopathology	MD	2	8	2 year
Haematology	MD	2	-	2 year
Chemical Pathology	MD	2	2	2 year
Transfusion Medicine	Dip.	1	4	-
Legal Medicine	Dip.	1	6	-
Forensic Medicine	MD	2	5	1 year
Medical Microbiology	Dip.	1 ¼	8	-
	MD	2	2	2 year
Medical Parasitology	MD	2	1	2 years
Otorhinolaryngology	MS	2 ½	1	2 years
TB and Chest Diseases	Dip.	1	-	-
Child Health	Dip.	1	31	-

* No examination held during the year

Source: Postgraduate Institute of Medicine

Table 15. National Expenditure, Health Expenditure and GNP, 1998-2003

Item	1998	1999	2000	2001	2002	2003
National Expenditure (Rs million)	328,817	323,452	415,313	464,954	589,622	663,217
Health Expenditure (Rs million)	15,943	18,018	19,055	22,899	25,631	27,292
Health Expenditure as a % of National Expenditure	4.8	5.6	4.2	4.9	4.6	4.1
Per Capita Health Expenditure (Rs)	891	990	1,036	1,222	1,419	1,417
GNP(Rs billion)	1,002	1,090	1,233	1,377	1,560	1,737
Health Expenditure as a % of GNP	1.59	1.65	1.55	1.60	1.73	1.57

Table 16. Summary of Health Expenditure and Source of Fund, 1998-2003

(Rs in 000)

Item	1998	1999	2000	2001	2002	2003
Health Expenditure						
Recurrent Expenditure	11,503,766	14,225,620	16,048,540	18,461,641	21,704,144	22,192,487
Capital Expenditure	4,438,811	3,792,360	3,588,170	4,437,325	3,987,021	5,100,336
	15,942,577	18,017,980	19,636,710	22,898,966	25,691,165	27,292,823
Source of Fund						
Consolidated Fund	14,434,665	17,119,447	18,994,348	22,397,912	22,953,551	26,074,242
Foreign Aid	1,507,912	898,533	642,362	501,054	2,737,614	1,218,581
	15,942,577	18,017,980	19,636,710	22,898,966	25,691,165	27,292,823

Table 17. Summary of Health Expenditure by Programme and Source of Fund, 2003

Programme	Health Expenditure 2003			
	Ministry of Health	Department of Health Services	Provincial Ministries of Health	Total
Recurrent Expenditure				
Civil Administration				
1.Minister's Office	25,517,963			25,517,963
2.Ministry Administration	55,781,217			55,781,217
Human Resource Development				
1.General Administration		2,643,219,146	423,090,000	3,066,309,146
2.Training and Scholarships		1,047,959,859		1,047,959,859
3.Community Health Services		643,730,281	1,861,330,000	2,505,060,281
4.Patient Care Services		9,556,695,933	5,891,190,000	15,447,885,933
5.Indigenous Medicine		43,972,247		43,972,247
6.Promotion of Indigenous Medicine				
Total	81,299,180	13,935,577,466	8,175,610,000	22,192,486,646
Capital Expenditure				
Civil Administration				
1.Minister's Office	7,338,332			7,338,332
2.Ministry Administration	5,886,924			5,886,924
Human Resource Development				
1.General Administration		483,301,660		483,301,660
2.Training and Scholarships		43,560,763		43,560,763
3.Community Health Services		18,944,637	1,000,000	19,944,637
4.Patient Care Services		2,703,586,969	9,590,000	2,713,176,969
5.Indigenous Medicine		31,189,878		31,189,878
6.World bank Development Project				
7.Development of Ratnapura Hospital (JICA)		136,314,613		136,314,613
8.Development of Blood Bank		26,195,467		26,195,467
9.Other foreign funded project		931,995,493		931,995,493
10.Medical Plant Project		71,915,911		71,915,911
11.Nuro Truma Unit at National Hospital Colombo (Saudi Assistance)		2,495,826		2,495,826
*.Provincial Specific Development Grant			627,020,000	627,020,000
Total	13,225,256	4,449,501,217	637,610,000	5,100,336,473
Total Health Expenditure				
Civil Administration				
1.Minister's Office	32,856,295			32,856,295
2.Ministry Administration	61,668,141			61,668,141
Human Resource Development				
1.General Administration		3,126,520,806	423,090,000	3,549,610,806
2.Training and Scholarships		1,091,520,622		1,091,520,622
3.Community Health Services		662,674,918	1,862,330,000	2,525,004,918
4.Patient Care Services		12,260,282,902	5,900,780,000	18,161,062,902
5.Indigenous Medicine		75,162,125		75,162,125
6.World bank Development Project				
7.Development of Ratnapura Hospital (JICA)		136,314,613		136,314,613
8.Development of Blood Bank		26,195,467		26,195,467
9.Other foreign funded project		931,995,493		931,995,493
10.Medical Plant Project		71,915,911		71,915,911
11.Nuro Truma Unit at National Hospital Colombo (Saudi Assistance)		2,495,826		2,495,826
*.Provincial Specific Development Grant			627,020,000	627,020,000
Total	94,524,436	18,385,078,683	8,813,220,000	27,292,823,119

* This grant was given directly to provinces from Treasury

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

Table 18. Indoor Morbidity Statistics by Broad Disease Groups, 2003

Disease Group	Total	Live Discharges (%)									
		Sex		Age Group						70 & above	Not Known
		Male	Female	under 1	1-4	5-16	17-49	50-69			
1 Intestinal infectious diseases (A00-A09)	119,721	50.5	49.5	13.0	22.8	16.4	29.1	12.6	5.7	0.4	
2 Tuberculosis (A15-A18)	7,773	64.6	35.4	0.4	1.0	3.8	42.9	38.4	13.2	0.4	
3 Other bacterial diseases (A20-A49)	8,977	71.0	29.0	15.9	5.4	9.1	47.2	16.3	5.1	1.1	
4 Infections with sexual mode of transmission (A50-A64)	447	50.8	49.2	16.3	-	8.5	55.9	15.4	1.1	2.7	
5 Viral diseases (A80-B34)	198,224	54.9	45.1	6.1	14.3	20.5	41.3	12.4	4.9	0.5	
6 Malaria (B50-B54)	13,149	56.5	43.5	2.8	10.2	22.5	47.5	13.2	3.0	0.7	
7 Helminthiasis (B76,B77,B79,B80)	1,264	50.2	49.8	4.0	24.9	31.5	24.0	10.1	5.4	0.1	
8 Other infectious and parasitic diseases	5,771	54.9	45.1	5.2	14.7	21.4	36.2	15.1	6.4	1.0	
9 Neoplasms (C00-D48)	51,895	43.6	56.4	0.4	2.3	5.6	36.4	40.8	14.1	0.3	
10 Iron deficiency anaemias (D50)	5,624	38.3	61.7	1.0	4.1	9.1	41.3	30.9	13.4	0.3	
11 Haem. con. and other diseases of blood and ... (D51-D89)	9,578	48.6	51.4	3.6	11.9	28.1	29.5	16.1	8.8	2.0	
12 Diabetes mellitus (E10-E14)	43,935	45.6	54.4	0.1	0.1	1.2	30.4	49.7	17.8	0.7	
13 Malnutrition and vitamin deficiencies (E40-E46,E50-E56)	2,077	49.9	50.1	3.5	12.9	18.0	26.0	27.3	12.1	0.1	
14 Oth eno, nutr and metabo... (E00-E07,E15-E34,E58-E89)	13,463	37.6	62.4	2.0	2.6	10.1	48.7	26.9	9.1	0.6	
15 Mental and behavioural disorders (F00-F99)	40,680	60.6	39.4	0.0	0.2	4.7	67.4	20.7	4.5	2.4	
16 Diseases of the nervous system (G00-G98)	49,092	50.9	49.1	2.8	6.7	15.7	45.0	19.8	8.4	1.5	
17 Diseases of the eye and adnexa	70,544	50.6	49.4	1.0	3.1	7.6	26.7	38.7	22.3	0.6	
18 Dis of the ear.. (H60-H61,H65-H74,H80-H83,H90-H95)	16,150	51.4	48.6	5.6	15.1	23.1	37.3	12.9	5.2	0.8	
19 Rheum. fever and rheum. heart dis. (I00-I02,I05-I09)	6,262	41.9	58.1	0.2	3.5	27.4	41.9	19.6	7.2	0.2	
20 Hypertensive diseases (I10-I15)	88,522	43.9	56.1	0.0	0.4	1.1	23.5	46.8	27.1	1.1	
21 Ischaemic heart disease (I20-I25)	62,168	55.9	44.1	0.0	0.1	0.8	23.8	49.6	25.0	0.7	
22 Other heart diseases (I26-I51)	22,848	52.5	47.5	1.3	1.6	6.4	26.2	37.4	26.4	0.5	
23 Cerebrovascular disease (I60-I69)	18,660	59.3	40.7	0.1	0.2	1.0	14.5	43.0	40.4	0.8	
24 Other diseases of the circulatory system (I70-I84)	24,177	64.5	35.5	0.4	1.3	4.0	46.6	35.2	12.0	0.4	
25 Influenza (J10-J11)	3,233	55.8	44.2	7.6	15.3	23.3	34.7	14.3	4.8	0.0	
26 Pneumonia (J12-J18)	22,815	55.2	44.8	13.6	20.0	15.5	24.6	17.1	8.8	0.3	
27 Other dise. of the upper respir. tract (J00-J06,J30-J39)	86,259	51.1	48.9	10.3	18.9	20.5	31.2	12.8	5.6	0.6	
28 Diseases of the resp. system exclu... (J20-J22, K40-J98)	337,297	51.7	48.3	7.9	12.7	12.8	27.6	25.3	13.3	0.5	
29 Diseases of teeth and supporting structure (K00-K014)	12,641	56.3	43.7	0.5	11.4	23.9	43.3	14.8	4.9	1.1	
30 Diseases of the gastrointestinal tract (K20-K92)	195,157	60.9	39.1	1.3	3.2	10.3	53.6	23.6	7.7	0.4	
31 Diseases,of skin ad subcutaneous tissue (L00-L08,L10-L98)	109,049	58.9	41.1	2.9	8.1	13.0	44.2	23.0	8.6	0.3	
32 Disorders of the musculoskeletal system (M00-M99)	113,022	52.5	47.5	0.3	1.7	9.2	48.1	28.6	11.7	0.3	
33 Diseases of the urinary system (N00-N39)	126,726	52.3	47.7	2.5	5.6	9.2	53.2	20.5	8.6	0.4	
34 Diseases of the male genital organs (N40-N50)	19,812	100.0	-	2.1	8.2	12.0	35.4	22.7	18.9	0.8	
35 Disor. of female genito-urinary sys. (N70-N98, N99.2, N99.3)	68,965	-	100.0	0.1	0.2	1.9	75.7	18.8	3.1	0.1	
36 Abortions (O00-O08)	41,403	-	100.0	-	-	1.1	96.8	1.9	-	0.2	
37 False labour and those admitted... (O47)	50,253	-	100.0	-	-	1.1	97.8	0.9	0.0	0.3	
38 Other obstetric conditions	148,096	-	100.0	-	-	0.6	99.1	0.1	0.0	0.2	
39 Single spontaneous delivery (O80)	224,386	-	100.0	-	-	0.6	99.0	0.2	0.0	0.2	
40 Slow fetal growth, fetal malnutrition and... (P05-P07)	8,712	46.7	53.3	100.0	-	-	-	-	-	-	
41 Other conditions originating in the perinatal period	24,670	49.3	50.7	100.0	-	-	-	-	-	-	
42 Congenital malformations deformations... (Q00-Q99)	10,563	54.4	45.6	34.9	25.9	20.5	15.2	2.4	0.5	0.5	
43 Signs, symptoms and abnormal clinical findings (R00-R99)	237,856	52.5	47.5	5.4	11.1	15.1	42.5	17.8	7.9	0.3	
44 Traumatic injuries (S00-T19)	522,050	67.4	32.6	0.8	6.8	19.5	52.8	14.9	4.7	0.4	
45 Burns and corrosion (T20-T32)	12,966	56.7	43.3	2.9	18.2	17.7	47.6	10.3	2.9	0.5	
46 Toxic effects of pesticides (T60.0,T60.1-T60.9)	17,745	63.4	36.6	0.3	2.7	9.3	73.4	11.1	2.4	0.8	
47 Snake bites (T63.0)	36,740	62.5	37.5	0.4	2.5	13.5	62.5	17.5	3.3	0.3	
48 Tox. effe. of ot. sub. oth tha.. (T36-T59,T61-T62,T63.1-T65)	32,751	50.1	49.9	1.2	10.1	14.6	63.0	9.0	1.8	0.4	
49 Effects of unspecified external causes... (T33-T35,T66-T79)	17,718	57.4	42.6	1.5	7.0	18.3	49.4	16.9	6.1	0.7	
50 Complications of surgical and medical care... (T80-T88)	4,078	51.3	48.7	2.7	7.1	12.1	52.8	16.4	8.3	0.7	
51 Sequelae of injuries, poisoning and of other... (T90-T98)	1,651	56.3	43.7	1.8	4.9	15.4	54.4	17.9	4.9	0.7	
52 Persons encountering health services... (Z00-Z13,Z40-Z54)	138,018	52.5	47.5	6.0	10.2	17.0	41.0	17.5	7.8	0.5	
53 Sterilizations (Z30.2)	7,753	16.0	84.0	-	-	11.6	81.4	5.3	1.3	0.4	
54 Undiagnosed/Uncoded (245)	399,093	49.6	50.4	2.4	3.8	8.2	44.6	21.9	8.4	10.6	
Total	3,912,479	47.7	52.3	4.0	6.8	11.4	49.3	19.0	8.0	1.5	

Source: Medical Statistics Unit

Table 19. Trends in Hospital Morbidity and Mortality by Broad Disease Groups, 1980 - 2003

International Classification of Diseases (10th Revision)	Cases per 100,000 Population										Deaths per 100,000 Population									
	1980	1985	1990 ³	1995 ⁴	2000	2001	2002	2003	1980	1985	1990 ³	1995 ⁴	2000	2001	2002	2003				
1. Certain infectious and parasitic diseases	2,054.2	2,080.3	2,382.6	1,758.7	2,431.7	2,149.4	2,195.2	1,855.7	23.9	19.3	14.2	13.2	13.5	13.3	10.9	10.0				
2. Neoplasms	128.3	121.3	142.1	190.1	260.2	287.4	301.7	276.2	6.4	7.4	10.2	11.6	13.2	14.3	11.7	6.7				
3. Diseases of the blood & blood-forming organs & certain disorders involving the immune mechanism	356.7	287.1	168.0	152.2	111.0	104.5	87.4	79.4	3.4	2.5	1.5	1.0	0.9	0.6	0.7	0.5				
4. Endocrine, nutritional and metabolic diseases	232.6	225.5	139.4	205.8	278.4	327.5	304.5	312.2	3.5	3.5	2.6	3.8	4.3	4.1	3.5	3.3				
5. Mental and behavioural disorders	225.2	207.0	211.3	261.6	247.0	256.6	222.0	211.4	2.1	1.1	0.4	0.6	0.7	0.4	0.2	0.1				
6. Diseases of the nervous system	114.9	134.1	126.6	172.4	243.4	261.6	264.9	257.7	6.5	6.6	3.7	2.9	3.3	3.0	3.0	2.7				
7. Diseases of the eye and adnexa	183.1	181.8	166.4	276.6	299.9	347.9	349.3	366.4	-	-	-	-	-	-	-	-				
8. Diseases of the ear and mastoid process	97.3	92.4	58.4	66.6	86.8	88.2	88.9	83.9	-	-	-	-	-	-	-	-				
9. Diseases of the circulatory system	613.3	658.8	645.4	925.5	1,153.0	1,269.8	1,223.5	1,206.7	33.4	38.4	41.7	50.6	54.0	54.8	51.7	50.3				
10. Diseases of the respiratory system	2,327.2	2,180.1	2,057.2	2,088.7	2,313.4	2,301.5	2,441.1	2,352.7	19.0	17.1	13.3	16.0	18.1	18.2	18.1	17.3				
11. Diseases of the digestive system	687.5	613.0	528.8	739.2	1,056.7	1,147.4	1,128.4	1,095.6	8.4	8.4	9.2	13.6	16.4	17.9	17.5	16.2				
12. Diseases of the skin and subcutaneous tissue	592.9	535.2	471.5	529.2	566.6	594.8	593.9	566.6	0.4	0.4	0.2	0.2	0.3	0.2	0.1	0.2				
13. Diseases of the musculoskeletal system and connective tissue	412.0	398.6	565.1	627.9	612.3	621.4	619.8	587.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1				
14. Diseases of the genitourinary system	1,217.2	685.6	746.6	998.9	1,124.8	1,216.0	1,206.0	1,124.9	3.1	3.2	2.6	4.8	5.9	6.3	5.7	5.5				
15. Pregnancy, childbirth and the puerperium ^{1,5}	2,421.9	1,806.0	1,945.2	2,207.3	3,122.6	3,382.6	3,525.4	3,560.2	6.4	4.2	1.8	1.3	1.1	3.0	2.2	4.2				
16. Certain conditions originating in the perinatal period ²	3,081.9	2,914.3	2,848.0	4,986.5	9,108.9	9,505.2	9,284.3	9,642.7	664.4	733.8	387.8	505.4	599.8	592.2	494.6	455.2				
17. Congenital malformations, deformations and chromosomal abnormalities	30.4	24.2	32.3	52.8	54.8	61.9	63.3	57.6	3.3	2.2	1.3	2.5	2.7	2.8	2.5	2.7				
18. Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	1,078.1	1,352.6	1,134.9	1,311.6	1,061.0	1,193.3	1,198.0	1,242.2	13.9	11.2	7.0	5.0	8.5	8.2	7.0	6.7				
19. Injury, poisoning and certain other consequences of external causes	1,731.8	1,669.4	1,799.8	2,552.1	3,345.7	3,618.7	3,412.9	3,371.7	27.3	25.9	23.3	22.7	23.6	22.8	18.6	17.7				

Source: Medical Statistics Unit.

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 20. Trends in Hospitalization and Hospital Deaths of Selected Diseases, 1975 - 2003

Disease and ICD Code	Cases per 100,000 Population								Deaths per 100,000 Population									
	1975	1980	1985	1990 ¹	1995 ²	2000	2001	2002	2003	1975	1980	1985	1990 ¹	1995 ²	2000	2001	2002	2003
Intestinal infectious diseases (A00-A09)	969.8	955.4	849.1	837.5	676.1	747.4	827.3	744.3	622.5	18.6	10.3	7.3	3.0	1.0	1.0	1.0	0.7	0.6
Tuberculosis (A15-A19)	114.1	76.2	74.0	80.8	54.0	60.7	45.8	41.2	42.2	8.3	4.3	3.9	3.5	3.1	3.0	3.7	2.0	1.8
Diphtheria (A36)	2.3	0.3	0.1	-	-	-	-	-	-	0.3	0.0	0.0	-	-	-	-	-	-
Whooping cough (A37)	9.9	3.7	3.4	1.9	1.0	1.1	0.3	0.2	0.8	0.1	0.0	0.0	0.0	0.0	0.0	-	-	-
Septicaemia (A40, A41)	6.7	8.3	9.9	8.5	5.5	13.6	16.4	14.8	16.0	1.7	3.7	5.4	4.7	1.4	6.3	5.9	5.8	4.9
Rabies (A82)	1.3	0.9	0.7	1.7	0.9	0.8	0.6	0.5	0.5	0.3	0.1	0.2	0.3	0.5	0.5	0.3	0.3	0.2
Measles (B05)	37.0	34.1	59.3	27.6	1.5	90.7	1.8	1.6	1.3	0.0	0.1	0.1	0.0	-	0.0	0.0	-	0.0
Viral hepatitis (B15-B19)	109.8	31.7	41.9	40.9	38.7	26.3	30.8	27.7	23.8	1.4	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1
Malaria (B50-B54)	800.3	344.5	437.1	678.9	262.2	304.1	118.7	106.8	68.4	0.9	0.2	0.2	0.5	0.2	0.6	0.4	0.2	0.1
Malaria (B76, B77, B79, B80)	230.5	207.4	112.0	37.9	17.3	10.1	9.6	8.7	6.6	1.6	0.5	0.4	0.1	0.1	-	0.0	-	0.0
Helminthiasis (E10-E14)	95.5	65.6	86.6	87.5	78.6	204.8	254.9	229.3	231.1	4.7	1.8	2.0	2.0	3.8	3.7	3.6	3.1	2.9
Diabetes mellitus (E40-E46, E50-E56)	197.7	134.4	109.2	24.8	7.3	15.9	12.2	11.0	10.9	10.4	1.3	1.3	0.4	0.1	0.1	0.1	0.1	0.1
Nutritional deficiencies (E40-E46)	430.8	334.8	277.5	154.9	134.6	98.9	81.9	73.7	67.5	9.4	3.3	2.2	1.0	0.9	0.7	0.5	0.4	0.4
Anaemias (D50-D64)	121.6	182.7	186.8	200.7	326.7	428.3	514.1	462.5	444.1	6.0	4.9	4.5	3.6	3.1	3.3	3.2	2.6	2.9
Hypertensive disease (I10-I15)	76.4	117.3	163.9	163.2	263.3	313.2	377.8	339.9	341.7	7.6	12.5	15.9	15.1	16.8	18.6	19.0	18.9	18.8
Ischaemic heart disease (I20-I25)	353.6	396.6	395.0	554.7	779.3	894.8	1033.3	929.6	921.4	1.4	1.2	1.6	2.0	3.7	4.4	4.4	3.8	3.6
Asthma (J45)	38.5 ³	32.3	41.1	64.3	68.9	121.7	139.1	125.2	126.9	3.8	3.3	3.9	6.4	8.2	14.1	15.3	15.2	14.0
Diseases of the liver (K70-K76)	829.4	869.5	811.3	846.2	832.8	788.2	907.4	816.3	777.0	1.1	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.1
Abortions ⁴ (O00-O08)																		

Source: Medical Statistics Unit

Excludes:

- ¹ Northern and Eastern Provinces
- ² Jaffna, Kilinochchi, Mullaitivu and Ampara districts
- ³ cirrhosis of the liver only
- ⁴ Rate per 100,000 females of the reproductive age group

Table 21. Leading Causes of Hospitalization, 2003

Rank Order	ICD Code (10 th Revision)	Causes of Hospitalization	Number of Cases	Proportionate Morbidity	Rate per 100,000 Population.
1	S00-T19	Traumatic injuries	523,262	16.7	2,718.0
2	J20-J22, J40-J98	Diseases of the respiratory system, excluding diseases of upper respiratory tract, influenza and pneumonia	339,294	10.8	1,762.4
3	R00-R99	Symptoms, signs and abnormal clinical and laboratory findings	239,143	7.6	1,242.2
4	A80-B34	Viral diseases	198,411	6.3	1,030.6
5	K20-K92	Diseases of the gastrointestinal tract	198,277	6.3	1,029.9
6	O10-O46, O48-O75, O81-O99, Z35	Direct and indirect obstetric causes	148,316	4.7	770.4
7	N00-N39	Diseases of the urinary system	127,787	4.1	663.8
8	A00-A09	Intestinal infectious diseases	119,835	3.8	622.5
9	M00-M99	Diseases of the musculoskeletal system and connective tissue	113,045	3.6	587.2
10	L00-L99	Diseases of the skin and subcutaneous tissue	109,086	3.5	566.6
11	I10-I15	Hypertensive diseases	89,131	2.8	463.0
	A00-T98, Z35 Z00-Z13, Z30.2 Z40-Z54, W54	All causes ¹	3,129,567	100.0	16,255.8

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 22. Leading Causes of Hospitalization by District, 2003¹

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	Kilinochchi	Mullativu	Batticaloa	Ampara ²	Tincomalee	Kurunegale	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Moneragala	Ratnapura	Kegalle	
Traumatic injuries (S00-T19)	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	1	1	1	1	1	1	1	1	1	1	1
Diseases of the respiratory system excluding diseases of the upper the respiratory tract, pneumonia and influenza (J20-J22, J40-J98)	2	5	2	2	2	3	2	2	3	2	2	2	2	1	3	1	2	2	2	2	2	2	2	2	2	2	2
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	3	2	4	3	3	2	6	3	2	4	3	3		2	1	9	8		3	3	4	3	3	6	5	6	
Viral diseases (A80-B34)	4	7	5	4	4	6	3	5	5	3	6	10	9			4	3	7	5	7	3	4	5	3	3	3	
Diseases of the gastrointestinal tract (K20-K92)	5	6	3	5	5	4	4	4	6	5	5	5	4	5		2	4	3	4	4	5	5	6	4	4	4	
Direct and indirect obstetric causes (Z35,O10-O46,O48-O75,O81-O99)	6	4	7	6	6	5	5	6	4		8	4	7	7	9	7	7	4	9	5	6	6	8	10	8	10	
Diseases of the urinary system (N00-N39)	7		6	9	7	10		9	7	8	9	6	10	8		6	8	6	6	6	7	8	7	7	9	8	
Intestinal infectious diseases (A00-A09)	8		10	7	9	7	8	10		6	10		3	6	7	5	5	6	7	8	9	9	9	5	6	9	
Diseases of the musculoskeletal system and connective tissue (M00-M99)	9		9	10	10		10	8	9	9	4	9				10	10	9	8		10	10		8	7	5	
Diseases of the skin and subcutaneous tissue (L00-L99)	10	10	8	8	8	7	8	7	8		7	7	5				9	4	4	10		7	4		10		
Malaria (B50-B54)														4	4	8											
Neoplasms (C00-D48)		3																									
Diseases of the eye and adnexa (H00-H59)		9			8							8															
Hypertensive diseases (I10-I15)					8	8	9			10			8					10	10	9		10	9			7	
Ischaemic heart disease (I20-I25)								10																			
Influenza (J10-J11)															10												
Diseases of the upper respiratory tract (J00-J06,J30-J39)						9	7			7		6			6	6					8						
Diseases of the female genitourinary system. ((N70-N98,N99.2,N99.3)		8																									
Snake bites (T63.0)														9	8												
Poisoning and toxic effects, excluding toxic effects of pesticides (T36-T59,T64 T61-T62,T65)													10	5													

Source: Medical Statistics Unit

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

Table 24. Leading Causes of Hospital Deaths, 2003

(Excluding Kilinochchi District)

Rank Order	ICD Code (10 th Revision)	Causes of Death	Number of Deaths	Proportionate Mortality	Rate Per 100,000 Population
1	I20-I25	Ischaemic heart disease	3,619	12.5	18.8
2	K20-K92	Diseases of the gastrointestinal tract	3,120	10.8	16.2
3	I26-I51	Pulmonary heart disease and diseases of the pulmonary circulation	2,629	9.1	13.7
4	I60-I69	Cerebrovascular disease	2,616	9.1	13.6
5	J20-J22 J40-J98	Diseases of the respiratory system, excluding diseases of the upper respiratory tract, pneumonia and influenza	1,997	6.9	10.4
6	T60	Toxic effects of pesticides	1,310	4.5	6.8
7	R00-R99	Symptoms, signs and abnormal clinical and laboratory findings	1,287	4.5	6.7
8	C00-D48	Neoplasms ¹	1,282	4.4	6.7
9	J12-J18	Pneumonia	1,278	4.4	6.6
10	A29-A49	Zoonotic and other bacterial diseases	1,245	4.3	6.5
11	S00-T19	Traumatic injuries	1,212	4.2	6.3
	A00-T98, Z54 Z00-Z13, Z35 Z40-Z54	All causes ²	28,838	100.0	149.8

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

² Analysed deaths only

Source: Medical Statistics Unit

Table 25. Leading Causes of Hospital Deaths by District, 2003

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	Kilinochchi	Mullativu	Batticaloa	Ampara	Trincomalee	Kurunegale	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Moneragala	Ratnapura	Kegalle
Ischaemic heart diseases (I20-I25)	1	1	2	2	1	2	1	3	1	1	4	2	5	7			1	1	4	2	3	1	1	1	1	1
Diseases of gastrointestinal tract (K20-K92)	2	2	1	4	8	6	4	7	7	8					2			5	2	1	5	7	9	9	4	3
Pulmonary heart disease and diseases of the pulmonary circulation (I26-I51)	3	3	3	1	7	1	7	6	2	6	2	3		1		5	2	2	6	4	8	10	3	4	2	6
Cerebrovascular disease (I60-I69)	4	4	4	6	3	4	2	1	6	2	1	4		5			5	3	3	3	4	6	4	2	2	2
Diseases of the respiratory system, excluding diseases of upper respiratory tract, pneumonia and influenza (J20-J22, J40-J98)	5	10	6	5	4	5	6	7	3	3	7	7	5	2	2	3	3	8	1	6		4	2	2	7	4
Toxic effects of pesticides (T60)	6		10	10		3	4	9	5	4		5	2		3	8			5		5	2	5	5	6	5
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	7	7	7	3	5	7		4		9		1				10				1	8					
Neoplasms ¹ (C00-D48)	8			10	2			2	8						4						9	6	10	9	9	
Pneumonia (J12-J18)	9	8	8	7			5	8	4	10			5	7					8	10	7		8	5	7	
Zoonotic and other bacterial diseases (A20-A49)	10	6	5		9		9		9		3	6		5	1		6	3	10			10	6		8	
Intestinal infectious diseases (A00-A09)													4		7											
Tuberculosis (A15-A18)												5				10										
Viral diseases (A80-B34)																										
Malaria (B50-B54)																										
Diabetes mellitus (E10-E14)							9																			
Diseases of the nervous system (G00-G99)							10	5					3		3										10	
Hypertensive disease (I10-I15)													4													
Diseases of the urinary system (N00-N39)		9									5	1	4	5					6	7	2	5	7			
Other obstetric conditions (O10-O16, O38-O46, O60-O75, O81-O99, Z35)							3									1										
Disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition (P05-P07)			9	10	8	10	10	10	8	8	6	8		7		6			10		9	3	10			
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)						8	8		8			8		3							8					10
Congenital malformations, deformations and chromosomal abnormalities (Q00 - Q99)												8														
Traumatic injuries (S00-T19)		5		8	6			7	10				5		7				9	8	8					8
Burns and corrosion (T20-T32)												5														
Snake bites (T63.0)													5		7											
Poisoning and toxic effects, excluding toxic effects of pesticides (T36-T59, T64-T61-T62, T65)													5	3							5					7

Source: Medical Statistics Unit

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

² Kalmunai DPDHS Division

Table 26. Leading Causes of Hospital Deaths, 1995 - 2003

Disease and ICD (10th Revision) code	2003		2002 ⁶		2001		2000		1999		1998		1997 ²		1996 ³		1995 ⁵	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Ischaemic heart disease (I20-I25)	1	12.5	1	9.9	1	8.5	1	10.6	1	10.0	1	9.5	1	9.7	1	10.6	1	10.6
Diseases of the gastro-intestinal tract (K20-K92)	2	10.8	2	9.1	2	8.0	2	9.3	2	9.3	2	9.4	2	9.1	3	8.6	3	8.6
Pulmonary heart disease and diseases of the pulmonary circulation (I26-I51)	3	9.1	3	7.6	4	6.7	4	8.6	4	8.0	3	8.8	4	8.1	4	8.2	4	8.1
Cerebrovascular disease (I60-I69)	4	9.1	4	7.4	3	7.1	3	9.0	3	9.1	4	8.6	3	9.1	2	9.6	2	10.6
Diseases of the respiratory system, excluding diseases of upper respiratory tract, pneumonia and influenza (J40-J98)	5	6.9	6	5.8	6	5.3	6	6.5	6	6.8	7	6.1	7	5.9	7	5.7	7	5.7
Toxic effects of pesticides (T60)	6	4.5	7	4.0	7	4.1	7	5.4	7	5.7	6	6.7	6	6.6	6	6.3	6	6.0
Symptoms, signs and abnormal clinical and laboratory findings (R00-R99)	7	4.5	8	3.7	8	3.7	8	4.8	8	5.0	8	4.6	8	5.1	9	4.5	11	3.2
Neoplasms ¹ (C00-D48)	8	4.4	5	6.1	5	6.4	5	7.5	5	7.4	5	6.7	5	6.5	5	8.1	5	7.3
Pneumonia (J12-J18)	9	4.4	9	3.5			11	3.6	11	3.6	10	4.4	10	3.8			9	4.0
Zoonotic and other bacterial diseases (A20-A49)	10	4.3	10	3.5	10	3.1	9	7.3			9	4.4	9	4.3	8	5.0	8	4.3
Traumatic injuries (S00-T19)	11	4.2	11	3.2	9	3.2	10	4.0	9	4.5	11	3.8	11	3.8	11	3.4		
Diseases of the urinary system (N00-N39)					11	2.8			10	3.7								
Disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition (P05-P07)															10	3.8	10	3.3

Source: Medical Statistics Unit

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

Exclude:

² Ampara District

³ Kilinochchi, Mullaitivu and Ampara Districts

⁴ Pollonnaruwa District

⁵ Kilinochchi District

Table 27. Cases and Deaths of Poisonings and Case Fatality Rate, 2003

District	Poisoning by Drugs Medicaments and Biological Substances		Toxic Effects of Pesticides		Toxic Effects of Other Substances Chiefly Non Medicinal		Total		Rate per 100,000 population		Case Fatality Rate
	Cases	Deaths	Organophosphate and Carbamate		Cases	Deaths	Cases	Deaths	Cases	Deaths	
			Cases	Deaths							
Colombo	1,422	26	439	123	290	5	938	2	3,089	156	6.8
Gampaha	1,616	8	481	57	356	27	1,004	22	3,457	114	5.5
Kalutara	739	3	253	10	292	2	652	11	1,936	26	2.4
Kandy	841	4	835	65	234	15	1,030	25	2,940	109	8.3
Matale	274	5	517	33	351	26	626	5	1,768	69	15.2
Nuwera Eliya	584	5	770	54	118	6	316	0	1,788	65	9.1
Galle	844	9	282	12	299	87	872	12	2,297	120	11.9
Matara	318	0	209	12	178	56	262	11	967	79	10.1
Hambantota	569	1	404	7	147	4	261	0	1,381	12	2.3
Jaffna	475	5	350	23	125	9	2,057	18	3,007	55	510.5
Kilinochchi	99	4	49	0	39	0	114	0	301	4	214.8
Mannar	33	2	114	7	48	0	72	1	267	10	275.7
Vavuniya	92	1	115	9	17	9	820	5	1,044	24	749.8
Mullativu	76	0	90	3	27	0	273	0	466	3	331.0
Batticaloa	268	4	626	16	616	23	299	2	1,809	45	337.7
Ampara ¹	512	11	338	5	62	0	326	2	1,238	18	204.7
Trincomalee	339	1	256	9	93	1	689	6	1,377	17	365.6
Kurunegale	1,491	6	2,248	191	640	29	2,697	66	7,076	292	479.8
Puttalam	484	2	372	7	206	0	1,483	17	2,545	26	352.7
Anuradhapura	840	3	1,681	67	503	15	1,027	4	4,051	89	530.0
Polonnaruwa	643	10	716	41	527	33	624	7	2,510	91	682.8
Badulla	672	9	1,029	78	155	2	491	2	2,347	91	292.9
Moneragale	536	4	423	9	161	9	268	0	1,388	22	342.4
Ratnapura	645	23	506	49	113	5	563	11	1,827	88	176.4
Kegalle	620	9	245	32	110	28	344	5	1,319	74	167.2
Total	15,032	155	13,348	919	5,707	391	18,108	234	52,195	1,699	271.1
											8.8

Source : Medical Statistics Unit

Includes :
¹ Kalmunai DPDHS Division

Table 28. Distribution of Mental Disorders by Region / Campaign, 2003

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	23	0	884	0	276	0	122	0	169	0	163	0	5	0	35	0	212	0	1,889	0
Gampaha	21	0	1,536	0	53	0	278	0	200	0	93	0	5	0	66	0	274	0	2,526	0
Kalutara	8	0	413	0	42	0	115	0	185	0	23	0	7	0	36	0	90	0	919	0
Kandy ¹	33	0	448	3	138	0	861	0	1,034	0	170	0	32	0	126	0	344	0	3,186	3
Matale	7	0	229	0	25	0	187	0	196	0	75	0	3	0	2	0	121	0	845	0
Nuwera Eliya	15	0	48	0	12	0	66	0	51	0	20	0	33	0	33	0	160	0	438	0
Galle ²	56	0	747	0	149	0	1,339	0	897	0	71	0	10	0	88	0	140	0	3,497	0
Matara	2	0	268	0	2	0	40	0	20	0	109	0	1	0	10	0	126	0	578	0
Hambantota	0	0	178	0	37	0	53	0	79	0	0	0	6	0	7	0	94	0	454	0
Jaffna	33	0	180	0	85	0	1,098	0	182	0	236	0	2	0	8	0	354	0	2,178	0
Kilinochchi	0	0	2	0	3	0	29	0	29	0	18	0	5	0	6	0	21	0	113	0
Mannar	0	0	20	0	2	0	2	0	29	0	5	0	1	0	0	0	3	0	62	0
Vavuniya	2	0	32	0	2	0	87	0	28	0	12	0	6	0	3	0	39	0	211	0
Mullativu	1	0	3	0	7	0	34	0	2	0	32	0	1	0	4	0	35	0	119	0
Batticaloa	165	0	107	0	171	0	354	0	464	0	156	0	333	0	111	0	432	0	2,293	0
Ampara ⁴	5	0	107	1	29	0	55	1	109	0	75	0	19	0	40	0	53	0	492	2
Trincomalee	19	0	100	0	34	0	234	0	170	0	110	0	21	0	9	0	96	0	793	0
Kurunegale	30	0	1,078	3	271	0	1,121	0	1,306	0	184	0	20	0	144	0	453	0	4,607	3
Puttalam	26	0	407	1	36	0	94	0	91	0	16	0	2	0	50	0	50	0	772	1
Anuradhapura	52	0	486	1	53	0	465	0	415	0	117	0	19	1	80	0	312	0	1,999	2
Polonnaruwa	14	0	218	0	8	0	72	0	49	0	6	0	2	0	5	0	185	0	559	0
Badulla	23	0	226	0	180	0	1,063	0	408	0	141	0	16	0	23	0	229	0	2,309	0
Moneragale	0	0	47	0	81	0	55	0	29	0	19	0	1	0	7	0	118	0	357	0
Ratnapura	22	0	408	0	79	0	657	0	291	0	73	0	6	0	8	0	130	0	1,674	0
Kegalle	16	0	674	0	48	0	105	0	230	0	44	0	1	0	4	0	47	0	1,169	0
Mental Hospitals ³	44	0	273	0	205	0	4,100	0	1,144	0	39	0	177	5	1	0	675	1	6,658	6
Sri Lanka	617	-	9,119	9	2,028	-	12,686	1	7,807	-	2,007	-	734	6	906	-	4,793	1	40,697	17

Source : Medical Statistics Unit

Includes :
¹ Deltora Mental Rehabilitation Centre Deltora.
² Unawatuna District Hospital
³ Angoda, Mulleriyawa and Hendaia Mental Hospitals
⁴ Kalmunai DPDHS Division

Table 29. Age Specific Mortality Rates per 100,000 Population by Broad Disease Groups, 1997

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	139.6	22.4	6.5	5.5	6.6	7.5	7.4	12.3	24.6	51.0	84.5	172.4	25.8
1.1 Intestinal infectious disease	29.2	7.7	1.8	1.4	1.4	1.2	1.1	1.8	3.4	7.1	17.8	51.1	5.5
2 Neoplasms C00-D48	4.3	5.5	3.5	3.7	4.9	5.0	4.6	11.7	40.0	105.5	193.3	253.1	35.3
3 Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism D50-D89	4.0	1.7	0.5	0.3	0.8	0.5	1.1	1.3	2.6	5.6	12.9	21.3	2.8
4 Endocrine, nutritional and metabolic diseases E00-E88	17.6	2.3	0.4	0.3	0.7	0.6	0.9	2.5	7.3	24.7	61.1	133.9	11.4
5 Mental and behavioural disorders F01-F99	0.7	0.4	0.2	0.2	0.3	0.7	1.6	5.3	10.9	13.8	20.6	27.5	5.4
6 Diseases of the nervous system G00-G98	44.5	9.1	4.0	3.1	4.0	4.0	4.5	6.1	12.5	40.1	150.3	614.3	36.8
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	0.0	0.0	0.2	0.0	0.0
8 Diseases of the ear and mastoid process H60-H93	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
9 Diseases of the circulatory system I00-I99	103.7	8.8	3.6	3.9	6.1	9.3	12.9	26.5	94.2	268.3	588.8	1,290.4	114.0
10 Diseases of the respiratory system J00-J98	110.3	13.2	3.6	3.5	4.9	6.2	5.9	12.7	29.7	77.7	184.4	397.9	39.0
11 Diseases of the digestive system K00-K92	17.6	3.6	2.5	1.1	1.3	2.0	6.8	21.0	45.1	70.1	69.9	79.3	21.9
12 Diseases of the skin and subcutaneous tissue L00-L98	2.0	0.2	0.1	0.0	0.2	0.1	0.1	0.0	0.5	0.9	2.2	3.5	0.4
13 Diseases of the musculoskeletal system and connective tissue M00-M99	0.0	0.1	0.0	0.3	0.4	0.1	0.2	0.3	0.6	2.4	8.9	48.2	2.5
14 Diseases of the genitourinary system N00-N98	11.6	1.6	1.2	1.1	1.9	2.4	3.3	5.3	10.9	23.1	38.8	78.8	9.7
15 Pregnancy, childbirth and the puerperium O00-O99 ¹	1,009.8				0.4	3.6	3.4	3.3	0.4				2.2
16 Certain conditions originating in the perinatal period P00-P96 ²													1,009.8
17 Congenital malformations, deformations and chromosomal abnormalities Q00-Q99	92.1	4.8	3.0	2.4	1.8	1.1	1.1	0.8	1.0	1.0	1.0	1.8	3.2
18 Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	189.8	23.9	8.4	5.9	11.1	15.6	18.5	27.2	62.0	164.1	511.0	3,951.4	192.2
19 External causes of morbidity and mortality V01-Y99	43.2	18.1	13.3	17.3	101.1	192.4	175.1	122.8	106.4	110.3	112.9	182.2	98.5
All Causes	1,928.6	123.2	52.5	50.1	147.7	250.4	246.9	259.2	451.8	965.5	2,058.6	7,307.0	623.2

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 30. Deaths and Rates for the Five Leading Causes of Death in Each Age Group, 1997

Age and Cause of Death	Number	Rate	Age and Cause of Death	Number	Rate
Under 1 Year			15 - 24 Years		
Certain conditions originating in the perinatal period P00-P96 ¹			External causes of morbidity and mortality V01-Y99	4,974	144.1
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	3,365	1009.9	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	456	13.2
Certain infectious and parasitic diseases A00-B99	571	189.8	Diseases of the circulatory system I00-I99	263	7.6
Diseases of the respiratory system J00-J98	420	139.6	Certain infectious and parasitic diseases A00-B99	243	7.0
Diseases of the circulatory system I00-I99	332	110.3	Diseases of the respiratory system J00-J98	190	5.5
Others	312	103.7	Others	641	18.6
All causes	803	266.9	All causes	6,767	196.1
	5,803	1928.6			
1 - 4 Years			25 - 49 Years		
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	319	23.9	External causes of morbidity and mortality V01-Y99	8,634	129.1
Certain infectious and parasitic diseases A00-B99	298	22.4	Diseases of the circulatory system I00-I99	3,087	46.2
External causes of morbidity and mortality V01-Y99	241	18.1	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	2,468	36.9
Diseases of the respiratory system J00-J98	176	13.2	Diseases of the digestive system K00-K92	1,729	25.9
Diseases of the nervous system G00-G98	121	9.1	Neoplasms C00-D48	1,313	19.6
Others	487	36.6	Others	4,244	63.5
All causes	1,642	123.2	All causes	21,475	321.2
5 - 14 Years			50 and above		
External causes of morbidity and mortality V01-Y99	592	15.4	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	31,576	1075.0
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified R00-R99	272	7.1	Diseases of the circulatory system I00-I99	17,225	586.4
Certain infectious and parasitic diseases A00-B99	230	6.0	Diseases of the nervous system G00-G98	5,773	196.5
Diseases of the circulatory system I00-I99	146	3.8	Diseases of the respiratory system J00-J98	5,269	179.4
Neoplasms C00-D48	138	3.6	Neoplasms C00-D48	4,837	164.7
Others	592	15.4	Others	13,276	452.0
All causes	1,970	51.2	All causes	77,956	2654.1

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 31. Age and Sex Specific Death Rates, 1935 - 1997

Age	1935		1945		1955		1965		1975		1985		1991		1996		1997	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
All ages	34.1	39.4	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
0 - 4	109.2	119.2	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
5 - 9	15.4	18.6	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
10-14	6.4	7.4	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
15-19	8.8	11.2	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
20-24	10.7	18.4	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
25-34	13.1	21.5	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
35-44	20.7	23.5	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
45-54	33.0	28.7	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
55 & above	104.3	127.6	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

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

Source: Medical Statistics Unit

Table 32. Age and Sex Specific Mortality Rates Per 100,000 Population for Selected Diseases, 1997

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	38.3	4.0	5.9	4.0	5.3	12.3	104.2	288.8
	F	32.3	4.7	5.0	3.2	4.6	14.0	94.3	198.4
Anaemias D50-D64	M	2.5	3.3	1.6	0.4	0.4	0.9	4.9	20.9
	F	2.7	2.7	1.4	0.4	0.9	1.6	5.7	16.1
Mental and behavioural disorders F01-F99	M	8.9	0.7	0.4	0.3	0.9	9.2	25.4	34.5
	F	2.1	0.7	0.3	0.2	0.2	0.9	4.5	17.9
Hypertensive diseases I10-I14	M	16.6	1.3	0.0	0.1	0.6	2.7	40.6	167.7
	F	12.1	0.7	0.0	0.1	0.3	1.9	22.0	142.5
Ischaemic heart diseases I20-I25	M	63.4	11.9	1.3	0.7	2.6	23.1	174.0	509.9
	F	25.8	11.3	1.4	0.8	1.4	4.9	49.6	283.1
Diseases of the respiratory system J00-J98	M	49.4	123.0	13.6	3.9	5.5	15.9	106.0	417.5
	F	28.8	97.5	12.8	3.2	5.5	9.9	48.6	250.8
Diseases of the digestive system K00-K92	M	37.7	22.5	3.7	1.4	2.2	38.3	116.3	121.0
	F	6.5	12.7	3.5	2.1	1.0	3.2	14.5	38.6
Transport accidents V01-V99	M	15.5	3.3	2.2	3.7	12.3	19.8	25.8	39.4
	F	3.8	2.0	1.5	1.4	2.7	2.9	7.1	15.0
Accidental poisoning by and exposure to noxious substances X40-X49	M	1.6	2.6	0.9	0.2	0.7	2.0	2.9	3.7
	F	0.5	1.3	1.1	0.0	0.3	0.7	0.7	0.4
Intentional self-harm X60-X84	M	48.0	0.0	0.0	1.9	54.5	71.1	70.3	92.6
	F	15.9	0.0	0.0	2.6	35.5	19.1	10.9	20.0
Deaths from all causes	M	786.7	2,082.9	112.7	53.7	285.3	432.2	1,342.0	6,130.9
	F	453.1	1,713.2	118.5	45.5	107.2	126.6	555.7	4,702.6

Source : Medical Statistics Unit

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Based on Registrar General's Mortality statistics.

Table 33. Case Fatality Rate for Selected Diseases, 1985, 2000, 2001, 2002 and 2003

Disease	1985			2000			2001			2002 *			2003		
	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	8,562	31	0.4	8,552	14	0.2	7,129	13	0.2	6,785	3	0.0	6,767	13	0.2
Tetanus	405	66	16.3	119	28	23.5	96	14	14.6	116	17	14.7	41	9	22.0
Shigellosis	12,667	126	1.0	10,342	11	0.1	13,660	19	0.1	11,335	18	0.2	8,662	20	0.2
Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight	6,403	4,860	75.9	10,002	998	10.0	10,332	1,092	10.6	9,955	971	9.8	9,625	913	9.5
Measles	9,398	22	0.2	17,567	1	0.0	610	1	0.2	300	-	-	243	-	-
Whooping cough	536	4	0.7	213	3	1.4	57	-	-	46	-	-	148	-	-
Viral hepatitis	6,642	61	0.9	3,851	21	0.5	4,214	18	0.4	5,260	22	0.4	4,582	11	0.2
Malaria	69,223	25	0.0	58,863	111	0.2	27,791	72	0.3	20,241	33	0.2	13,165	16	0.1
Tetanus neonatorum	76	30	39.5	1	1	100.0	13	-	0.0	12	2	16.7	21	-	-
Diseases of the liver	6,511	623	9.6	23,559	2,724	11.6	25,470	2,861	11.2	23,729	2,879	12.1	24,433	2,695	11.0
Septicaemia	1,573	854	54.3	2,630	1,219	46.3	3,046	1,102	36.2	2,797	1,101	39.4	3,088	948	30.7
Snake bites	3,820	132	3.5	37,081	194	0.5	38,705	144	0.4	37,240	81	0.2	36,832	92	0.2
Hypertensive diseases	29,585	708	2.4	82,924	637	0.8	92,396	764	0.8	90,772	555	0.6	89,131	609	0.7
Ischaemic heart disease	25,962	2,521	9.7	60,633	3,596	5.9	64,069	3,558	5.6	64,431	3,590	5.6	65,787	3,619	5.5
Pneumonia	35,301	1,353	3.8	21,975	1,213	5.5	20,207	1,074	5.3	25,162	1,274	5.1	24,093	1,278	5.3
Asthma	62,574	248	0.4	173,233	854	0.5	178,510	826	0.5	176,206	727	0.4	177,392	702	0.4
Bacterial meningitis	2,838	453	16.0	2,980	172	5.8	2,458	175	7.1	2,597	196	7.5	3,116	158	5.1

* : Excluding Kilinochehi District

Source: Medical Statistics Unit

Table 34. Average Duration of Stay (days) in Selected Types of Hospitals, 1965-2003

Type of Hospital	1965	1975	1985	1990 ²	1995 ³	2000	2001	2002	2003
National Hospital, Colombo	9.1	8.3	6.8	6.6	6.1	5.5	5.4	5.3	5.0
Provincial Hospitals ¹	8.3	7.0	6.2	5.8	5.1	4.4	4.2	4.0	4.0
Base Hospitals	6.3	6.2	5.0	4.6	4.0	3.3	3.2	3.0	3.2
District Hospitals	5.9	4.6	3.8	3.5	2.9	2.5	2.6	2.3	2.3
Peripheral Units	...	4.0	3.6	3.3	2.7	2.5	2.5	2.1	2.2
Rural Hospitals	...	4.2	4.6	3.8	3.3	2.3	2.4	2.1	2.0
Children's Hospital	6.9	5.9	4.0	4.2	3.8	3.1	3.2	3.2	3.3
Eye Hospital	22.4	18.2	12.4	8.6	7.9	6.4	6.6	5.7	6.7
Cancer Hospital	28.8	28.0	25.5	21.9	15.9	10.5	10.5	8.8	9.3
Mental Hospitals	151.5	44.1	43.9	62.3	62.1	70.0	74.2	63.8	67.5
Chest Hospitals	78.6	58.3	21.2	19.0	26.9	32.1	19.9	N/A	N/A
Maternity Hospitals	5.5	5.0	3.8	4.5	4.8	4.3	4.3	4.7	4.1
Maternity Homes	...	5.0	3.9	4.5	2.8	2.9	3.1	2.9	2.4

¹ Includes Teaching Hospitals

Source: Medical Statistics Unit

Excludes:

² Northern and Eastern Provinces³ Jaffna, Kilinochchi, Mullaitivu and Ampara Districts

Table 35. Registered Births and Hospital Births 1960-2003

Year	Registered Live Births	Live Births in Government Hospitals	% of Live Births in Government Hospitals
1960	361,702	191,777	53.0
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	347,769 ¹	314,352	93.9
2001	354,101 ¹	325,813	92.0
2002	363,549 ¹	307,272	84.5
2003	363,343 ¹	316,465	87.1

¹ Provisional

Source: Medical Statistics Unit

² Excludes Northern and Eastern Provinces³ Excludes Kilinochchi and Mullaitivu Districts

Table 37. Inpatients Treated and Hospital Deaths by Type of Institution and District, 2003

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 Cases
	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths	Treated	Deaths		
Colombo	494,717	8,324	-	-	89,194	866	15,377	60	25,473	72	434	-	-	-	47,021	2,369	672,216	11,691	291.6	1.7
Gampaha	80,261	1,380	-	-	174,994	1,672	42,167	187	9,495	19	12,090	22	-	-	3,633	12	322,640	3,292	154.4	1.0
Kalutara	-	-	57,038	-	74,194	384	45,333	112	8,631	17	10,485	6	1	-	-	-	195,682	605	181.7	0.3
Kandy	170,643	3,308	-	-	47,651	442	57,106	154	15,029	38	36,938	41	-	-	1,576	2	328,943	3,985	251.7	1.2
Matale	-	-	-	-	77,174	617	11,884	57	7,458	14	10,100	49	86	-	-	-	108,352	725	239.0	0.7
Nuwara Eliya	-	-	-	-	24,622	550	47,918	221	4,797	6	10,100	49	405	-	-	-	87,842	826	123.0	0.9
Galle	134,002	2,158	-	-	-	-	61,847	171	26,975	34	8,803	2	114	-	212	-	231,953	2,365	229.5	1.0
Matara	-	-	77,330	769	-	-	29,737	36	6,054	5	2,610	0	222	-	-	-	115,953	810	148.7	0.7
Hambantota	-	-	-	-	9,435	66	40,845	56	18,918	17	18,073	16	52	-	-	-	87,323	155	163.7	0.2
Jaffna	87,449	1,185	-	-	11,477	45	15,842	22	12,762	12	251	-	121	-	-	-	127,902	1,264	217.1	1.0
Kilinochchi	-	-	-	-	-	-	4,731	29	5,122	14	-	-	1,427	-	-	-	11,280	43	80.5	0.4
Mannar	-	-	-	-	12,212	62	2,482	2	1,038	1	-	-	15	-	-	-	15,747	65	162.6	0.4
Vavuniya	-	-	-	-	33,000	246	-	-	3,157	-	2,277	-	82	-	-	-	35,359	246	254.0	0.7
Mullaitivu	-	-	-	-	-	-	8,016	36	-	-	-	-	229	-	-	-	11,402	36	81.0	0.3
Batticaloa	-	-	-	-	-	-	34,404	21	-	-	8,156	-	467	-	10	-	94,637	837	176.7	0.9
Anpara ³	51,600	816	-	-	66,561	367	16,731	29	6,593	1	-	-	332	-	-	-	90,217	397	149.2	0.4
Trincomalee	-	-	-	-	45,360	334	13,519	38	8,792	11	8,211	11	1,853	-	-	-	77,735	394	206.4	0.5
Kurunegala	117,328	2,185	-	-	53,486	709	123,634	285	35,698	88	19,259	17	261	-	-	-	349,666	3,284	237.1	0.9
Puttalam	-	-	-	-	57,307	372	39,424	130	12,730	34	7,557	5	699	-	-	-	117,717	541	163.2	0.5
Anuradhapura	-	-	73,536	1,040	15,443	17	38,282	73	20,635	28	51,502	46	122	-	318	-	199,838	1,204	261.5	0.6
Polonnaruwa	-	-	51,007	631	10,613	43	8,875	11	14,336	9	10,904	9	225	-	-	-	95,735	703	260.4	0.7
Badulla	-	-	78,246	869	38,717	249	49,574	133	1,898	1	19,148	37	82	-	91	-	188,199	1,289	234.9	0.7
Moneragala	-	-	-	-	16,207	115	56,889	111	3,809	0	11,796	15	82	-	-	-	88,783	241	219.0	0.3
Ratnapura	-	-	84,323	918	41,075	89	57,201	168	12,341	24	5,895	7	-	-	-	-	200,835	1,206	193.9	0.6
Kegalle	64,894	734	-	-	17,266	51	43,082	126	3,669	9	7,933	6	5	-	25	-	136,874	926	173.5	0.7
Total	1,200,894	20,090	421,780	4,313	915,988	7,296	864,900	2,268	269,702	477	259,880	303	6,800	-	52,886	2,383	3,992,830	37,130	207.4	0.9

Source : Medical Statistics Unit

* Excludes :

- ¹ De Soysa and Castle Street Hospitals for Women, Eye Hospital and Children's Hospital
- ² Chest, Leprosy, Mental, Dental, Fever, Rehabilitation, Prison and Police Hospital.
- ³ Kalmunai DPDHS Division

Includes :

Adampam	Ammanawala	Amugoda	CD & MH	Korase	Other
Punkuduttivu	Amitrigala	Batalala	CD & MH	M. Anuradham	Chest Hos., Welisara
Alungamweediya	Diyabeduma	Bemmulla	Amugoda	Mectrigala	Chest Hospital KKS
Morawaka	Halgola Watta (EH)	Cheddipalayam	Batalala	Nambuluwa	Dental Hospital Peradeniya
Nivrigala	Kiriporawa Watta (EH)	Devahuwa	Bemmulla	Nuwaragala	Fever Hospital
Pallai	Kuchchaveli	Domagaha	Cheddipalayam	Pallama	Mahiloor
	Murutankemey	Elleweewa	Devahuwa	Pugoda	Mavadi Vambu
	Ormalpe	Hapugastalawa	Domagaha	Senarathapura	Mental Hos., Mulleriyawa
	Paluhenamadu	Kalageddhena	Elleweewa	Talahaena/Phipana	Palamunai
	Pundabhiripu	Veyangoda	Hapugastalawa	Unthirapuram	Pattiyagama/Pallegama
	Sopumalkanda	Wakrigala	Kalageddhena	Veyangoda	Prison Hospital
	Vidathalthivu				

Table 38. Outpatient Attendance by District and Type of Institution, 2003

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	2,627,215	-	519,074	408,915	484,371	56,998	-	442,240	464,487	5,003,300	2,170.6
Gampaha	478,579	-	842,376	621,459	162,729	406,791	137,072	69,867	539,451	3,258,324	1,559.4
Kalutara	-	413,256	486,412	535,315	306,749	238,099	18,254	-	132,668	2,130,753	1,978.1
Kandy	620,704	-	367,080	830,688	223,801	766,147	-	71,621	375,152	3,255,193	2,490.4
Matale	-	-	370,493	196,081	170,883	231,661	23,319	-	141,084	1,133,521	2,500.6
Nuwara Eliya	-	-	120,795	469,203	61,480	118,211	111,042	-	222,016	1,102,747	1,544.4
Galle	316,850	-	-	693,660	473,713	162,968	75,964	10,966	355,998	2,090,119	2,068.0
Matara	-	291,975	-	404,011	209,393	288,025	110,059	-	196,137	1,499,600	1,923.0
Hambantota	-	-	200,151	490,555	226,764	305,315	78,561	-	156,659	1,458,005	2,733.9
Jaffna	286,790	-	118,295	344,440	229,108	45,282	172,090	-	228,070	1,424,075	2,417.6
Kilinochehi	-	-	-	68,150	69,080	-	108,051	-	68,799	314,080	2,241.1
Mannar	-	-	132,805	53,934	21,730	9,339	27,166	-	46,802	291,776	3,013.2
Vavuniya	-	-	212,322	-	25,418	39,663	39,660	-	54,213	371,276	2,666.6
Mullaitivu	-	-	-	150,882	106,469	-	79,684	-	51,244	388,279	2,758.0
Batticaloa	168,706	-	-	553,062	-	175,118	52,082	56,666	234,915	1,240,549	2,315.8
Ampara ³	-	-	584,913	469,748	184,611	21,630	112,350	-	387,605	1,760,857	2,912.0
Trincomalee	-	-	335,173	214,101	77,571	134,032	41,806	-	200,071	1,002,754	2,662.5
Kurunegala	293,208	-	396,933	1,336,187	516,401	367,346	47,641	-	682,014	3,639,730	2,468.1
Puttalam	-	-	342,606	355,570	185,273	133,343	80,501	-	232,296	1,329,589	1,842.8
Anuradhapura	-	257,237	151,659	409,146	316,610	808,488	40,672	13,080	398,818	2,395,710	3,134.3
Polonnaruwa	-	170,572	96,760	87,139	212,969	238,108	39,649	-	93,304	938,501	2,553.1
Badulla	-	278,827	317,620	812,174	39,121	407,460	15,342	14,075	263,585	2,148,204	2,681.2
Moneragala	-	-	161,593	760,249	48,670	293,795	10,143	-	90,804	1,365,254	3,367.8
Ratnapura	-	438,432	458,262	716,731	329,756	262,915	-	-	159,520	2,365,616	2,284.4
Kegalle	305,771	-	282,174	537,493	81,067	234,958	137,685	32,201	245,946	1,857,295	2,354.7
Total	5,097,823	1,850,299	6,497,496	11,518,893	4,763,737	5,745,692	1,558,793	710,716	6,021,658	43,765,107	2,273.3

Source: Medical Statistics Unit.

Includes:

¹ National Hospital Sri Lanka, TH Sri Jaywardanapura,

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 39. Utilization of Medical Institutions by District, 2003

District	Teaching Hospitals ¹			Provincial Hospitals			Base Hospitals			District Hospitals			Peripheral Units			Rural Hospitals			Maternity Homes & Central Dispensary		
	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	4.2	76.7	87.9	-	-	81.1	1.8	19.4	9.7	1.8	84.8	42.6	6.5	24.1	42.7	-	-	-	-	-	-
Gampaha	5.2	65.9	93.9	-	-	79.4	2.0	62.5	34.2	2.2	52.8	31.2	2.0	67.9	37.8	N/A	N/A	N/A	N/A	N/A	N/A
Kalutara	-	-	-	4.2	83.3	95.5	1.6	77.1	34.8	0.9	86.1	21.7	1.1	75.4	22.3	2.0	0.3	0.2	2.0	0.3	0.2
Kandy	4.7	70.7	91.4	-	-	107.3	2.4	61.3	40.0	2.5	67.5	46.8	2.4	60.3	39.8	-	-	-	-	-	-
Matale	-	-	-	-	-	87.3	2.4	56.5	36.5	2.0	53.7	30.0	2.0	55.6	31.1	2.0	29.5	16.2	2.0	29.5	16.2
Nuwara Eliya	-	-	-	-	-	99.2	2.5	47.7	33.2	3.0	62.5	51.8	2.4	59.8	39.7	2.0	6.2	3.4	2.0	6.2	3.4
Galle	4.3	85.3	100.1	-	-	78.7	2.4	69.5	45.5	2.0	81.2	43.6	1.9	98.8	51.3	2.0	2.7	1.5	2.0	2.7	1.5
Matara	-	-	-	2.7	107.7	-	2.4	51.0	34.0	2.6	20.7	14.5	0.4	22.4	2.7	2.0	6.8	3.6	2.0	6.8	3.6
Hambantota	-	-	-	-	-	76.9	1.9	82.1	43.5	1.7	93.7	42.7	1.7	66.0	30.7	1.3	1.6	0.6	1.3	1.6	0.6
Jaffna	4.7	95.1	122.8	-	-	40.1	4.1	39.0	43.9	4.1	46.2	51.7	1.9	6.8	3.6	3.2	1.3	1.2	3.2	1.3	1.2
Kilinochchi	-	-	-	-	-	-	2.8	68.4	52.9	5.0	51.5	70.7	-	-	-	3.6	41.4	40.3	3.6	41.4	40.3
Mannar	-	-	-	-	-	55.4	1.8	27.6	13.6	17.3	49.4	234.0	-	-	-	1.7	6.4	3.0	1.7	6.4	3.0
Vavuniya	-	-	-	-	-	123.3	-	-	-	-	-	-	-	-	-	2.4	4.8	3.2	2.4	4.8	3.2
Mullaitivu	-	-	-	-	-	-	5.2	60.7	86.2	5.3	22.1	32.0	-	-	-	2.5	28.6	19.3	2.5	28.6	19.3
Batticaloa	4.1	74.9	84.0	-	-	-	2.1	96.9	56.1	-	-	-	1.2	88.7	29.3	2.7	27.5	20.2	2.7	27.5	20.2
Ampara ²	-	-	-	-	-	107.5	2.6	55.4	38.7	3.1	40.4	34.5	-	-	-	1.9	2.8	1.4	1.9	2.8	1.4
Tricomalee	-	-	-	-	-	83.8	2.4	84.5	54.9	2.0	65.6	36.7	2.3	65.2	40.7	2.2	48.9	30.0	2.2	48.9	30.0
Kurunegala	3.8	97.3	101.7	-	-	90.2	2.0	78.5	43.5	2.2	70.6	42.8	1.9	71.7	36.5	1.1	10.4	3.1	1.1	10.4	3.1
Puttalam	-	-	-	-	-	70.7	3.1	75.5	63.3	2.0	77.2	42.2	1.9	59.0	30.8	2.2	6.5	3.9	2.2	6.5	3.9
Anuradhapura	-	-	-	6.2	62.7	106.3	1.9	90.0	46.1	2.0	86.6	47.5	2.1	94.4	54.9	1.7	7.2	3.3	1.7	7.2	3.3
Polonnaruwa	-	-	-	2.9	145.3	114.4	1.6	129.6	55.7	1.8	78.8	19.2	2.4	53.5	34.5	-	-	-	-	-	-
Badulla	-	-	-	4.6	142.6	179.0	4.0	98.5	108.4	1.5	63.3	25.2	2.6	56.1	39.1	2.2	45.0	27.3	2.2	45.0	27.3
Moneragala	-	-	-	-	-	78.0	2.0	78.1	42.2	1.4	100.2	39.5	1.4	97.3	36.0	1.6	14.5	6.4	1.6	14.5	6.4
Ratnapura	-	-	-	3.2	93.0	80.4	2.7	96.0	69.6	2.3	51.4	27.9	2.2	39.0	23.8	-	-	-	-	-	-
Kegalle	2.8	93.9	71.1	-	-	62.8	1.9	75.9	39.9	1.7	64.4	30.1	2.0	36.8	20.2	2.4	0.5	0.3	2.4	0.5	0.3
Average	4.3	79.1	92.4	3.9	96.8	103.2	3.2	96.4	83.4	2.3	64.3	38.6	2.0	63.0	34.7	2.4	10.0	6.6	2.4	10.0	6.6

Source: Medical Statistics Unit.

¹ Adjusted for annum in case of arrears, Excluded institution as Table 36

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

² Excludes De Soysa, Castle Street and Mahamodara Maternity Hospitals, Children's Hospital, and Eye Hospital

³ Kalmunai DPDHS Division

Table 40. Live Births, Maternal Deaths, Still Births and Low Birth Weight in Government Hospitals, 2003.

District	In Government Hospitals During 2003						
	Live Births	Maternal Deaths		Still Births		Low Birth Weight ⁴	
		No	Rate ¹	No	Rate ²	No	Rate ³
Colombo	50,189	20	4.0	406	8.0	8,087	16.1
Gampaha	25,894	2	0.8	218	8.3	3,940	15.2
Kalutara	14,215	-	-	126	8.8	2,214	15.6
Kandy	27,919	1	0.4	444	15.7	6,215	22.3
Matale	9,177	3	3.3	93	10.0	1,755	19.1
Nuwera Eliya	9,089	-	-	94	10.2	2,712	29.8
Galle	19,704	3	1.5	222	11.1	2,417	12.3
Matara	12,680	1	0.8	209	16.2	2,228	17.6
Hambantota	7,307	1	1.4	57	7.7	1,110	15.2
Jaffna	9,822	6	6.1	192	19.2	1,449	14.8
Kilinochchi	1,577	-	-	27	16.8	270	17.1
Mannar	1,435	2	13.9	27	18.5	95	6.6
Vavuniya	2,882	1	3.5	47	16.0	391	13.6
Mullativu	1,066	-	-	19	17.5	160	15.0
Batticaloa	7,942	4	5.0	181	22.3	1,603	20.2
Ampara ⁵	9,401	1	1.1	97	10.2	1,122	11.9
Trincomalee	7,026	1	1.4	36	5.1	859	12.2
Kurunegala	22,608	8	3.5	253	11.1	3,560	15.7
Puttalam	11,823	-	-	99	8.3	1,612	13.6
Anuradhapura	14,475	5	3.5	140	9.6	2,442	16.9
Polonnuruwa	6,893	2	2.9	63	9.1	1,085	15.7
Badulla	15,608	4	2.6	181	11.5	3,334	21.4
Moneragala	6,428	2	3.1	43	6.6	1,222	19.0
Ratnapura	18,114	2	1.1	250	13.6	3,142	17.3
Kegalle	3,191	-	-	34	10.5	429	13.4
Sri Lanka	316,465	69	2.2	3,558	11.1	53,453	16.9

¹ Per 10,000 live births.

Source: Medical Statistics Unit.

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

Table 41. Performance of Dental Surgeons by District, 2003

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	4,072	63,370	16,650	2,554	9,571	2,517	33	8	33,145	20,048	9,141	851	16,790	1,999	2,828	230,137
Gampaha	8,457	66,397	16,263	909	7,627	1,397	79	37	23,782	14,220	5,295	1,258	9,307	1,718	4,801	166,246
Kalutara	3,610	52,754	11,255	1,498	3,541	504	14	5	11,882	5,598	1,553	290	3,419	423	392	110,634
Kandy	5,416	41,997	7,218	1,148	2,696	2,765	48	14	8,420	4,582	2,857	87	4,968	781	1,128	90,653
Matale	1,490	10,370	2,550	44	2,137	73	4	3	3,013	1,713	449	94	1,339	167	321	26,468
Nuwera Eliya	1,373	13,687	2,865	144	1,767	249	16	4	2,815	1,052	241	96	1,294	274	781	31,048
Galle	5,620	49,182	11,158	1,161	1,995	774	84	33	11,414	6,463	2,877	200	4,816	766	681	108,900
Matara	1,064	12,825	1,931	117	1,698	209	3	2	3,350	1,889	258	34	1,793	204	1	29,354
Hambantota	2,833	17,102	7,018	1,038	2,596	339	52	13	7,274	2,379	240	208	1,533	992	317	53,502
Jaffna	3,740	21,128	6,386	1,658	10,781	1,303	218	609	6,971	2,070	1,933	1,881	2,932	1,206	250	86,523
Kilinochchi	594	3,020	380	11	0	4	0	0	726	198	28	30	431	45	0	7,622
Mannar	923	4,963	851	351	62	149	15	3	367	133	24	0	0	0	0	8,599
Vavuniya	1,454	7,148	1,639	57	1,142	303	17	1	2,129	1,098	138	97	423	195	1	22,841
Mullaitivu	370	2,175	211	720	226	9	5	1	165	7	0	17	31	14	71	5,810
Batticaloa	8,728	31,520	4,419	458	1,603	686	31	95	1,953	2,370	763	243	896	676	479	63,523
Ampara	4,144	18,708	3,805	987	2,181	629	11	8	2,535	975	197	211	1,076	570	2	41,695
Trincomale	794	6,369	1,189	98	311	96	9	5	2,729	109	61	0	202	131	4	13,182
Kurunegala	6,695	67,212	18,276	1,339	7,692	1,495	65	48	20,494	13,406	4,741	1,399	8,595	3,086	10,596	187,193
Puttalam	2,683	21,626	3,896	304	3,392	164	8	2	4,626	2,780	1,019	325	2,024	217	154	51,216
Anuradhapura	2,599	19,686	6,268	869	1,395	231	11	4	5,137	2,553	600	683	2,207	395	0	56,066
Pollanurawa	483	4,624	1,607	670	601	124	8	1	1,168	234	107	17	425	72	88	13,316
Badulla	4,700	26,124	4,055	206	6,168	492	27	34	7,090	4,619	1,507	231	4,281	1,048	255	67,797
Monaragale	2,285	11,474	2,567	213	2,332	250	5	3	3,284	1,306	145	285	2,170	244	381	32,282
Ratnapura	5,080	37,969	6,834	502	6,105	756	84	17	12,989	5,703	1,944	525	3,488	1,140	2,519	94,690
Kegalle	2,573	31,263	8,022	710	3,448	547	16	14	8,144	5,169	2,269	776	3,286	912	1,255	77,658
Total	81,780	642,693	147,313	17,766	81,067	16,065	863	964	185,602	100,474	38,387	9,838	77,726	17,275	27,305	1,676,955

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

Table 42. Performance of Dental Surgeons By Type of Institution, 2003

Type of Institution	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					No Response
Dental Institute	1,262	13,300	4,425	434	2,507	1,602	10	0	8,613	6,282	5,037	346	4,830	219	507	69,648	
Teaching Hospitals	10,459	67,227	16,600	3,183	12,454	4,975	298	730	21,383	12,588	7,004	2,305	8,237	2,814	250	220,767	
Provincial Hospitals	893	11,393	1,347	63	2,218	157	22	25	5,147	2,678	376	245	877	393	0	29,207	
Base Hospitals	14,963	121,363	22,502	2,897	12,775	2,115	137	76	34,400	15,928	4,455	1,986	6,778	3,326	2,556	290,698	
District Hospitals	30,695	255,902	58,662	4,760	29,080	4,890	238	86	53,954	29,106	9,943	2,289	23,517	5,903	2,669	585,351	
Peripheral Units	6,400	82,082	21,247	2,095	10,860	936	96	27	20,769	8,575	3,276	865	7,941	1,755	2,219	185,204	
Rural Hospitals	5,269	35,273	9,822	641	2,867	668	15	8	7,918	4,657	1,266	282	3,859	1,107	107	82,811	
Adolescent Dental Clinics	8,453	16,448	2,903	1,089	3,615	266	14	4	18,548	13,406	4,094	1,033	16,592	321	5,370	102,232	
Central Dispensaries	1,483	11,557	3,566	682	1,737	277	9	5	2,646	1,627	380	91	1,091	75	447	28,863	
Others	1,903	28,148	6,239	1,922	2,954	179	24	3	12,224	5,627	2,556	396	4,004	1,362	13,180	82,174	
Total	81,780	642,693	147,313	17,766	81,067	16,065	863	964	185,602	100,474	38,387	9,838	77,726	17,275	27,305	1,676,955	

Source: Medical Statistics Unit

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

Table 43. Type of Dental Clinics Visited

Sector	Age	Government Hospitals		Private Clinics		School Dental Clinics		Other Clinics		Mobile Clinics		None		Unqualified & Not Known		No Response		Survey Population	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Sri Lanka	6	200	9.9	45	2.2	574	28.4	1	0.0	200	9.9	975	48.2	3	0.1	25	1.2	2,023	100.0
	12	212	10.6	91	4.5	670	33.5	16	0.8	319	15.9	682	34.1	5	0.2	6	0.3	2,001	100.0
	15	387	19.4	197	9.9	567	28.4	12	0.6	151	7.6	665	33.3	13	0.7	6	0.3	1,998	100.0
	35 - 44	1,019	49.8	543	26.5	19	0.9	18	0.9	5	0.2	414	20.2	29	1.4	1	0.0	2,048	100.0
	65 - 74	763	40.0	381	20.0	2	0.1	8	0.4	-	-	724	38.0	22	1.2	6	0.3	1,906	100.0
Urban	6	88	15.4	30	5.2	173	30.2	-	-	14	2.4	260	45.5	1	0.2	6	1.0	572	100.0
	12	66	11.8	42	7.5	267	47.6	6	1.1	18	3.2	160	28.5	2	0.4	-	-	561	100.0
	15	109	19.4	99	17.6	165	29.4	5	0.9	5	0.9	169	30.1	8	1.4	1	0.2	561	100.0
	35 - 44	271	47.5	221	38.7	6	1.1	4	0.7	2	0.4	60	10.5	7	1.2	-	-	571	100.0
	65 - 74	213	38.6	190	34.4	2	0.4	3	0.5	-	-	135	24.5	7	1.3	2	0.4	552	100.0
Rural	6	112	7.7	15	1.0	401	27.6	1	0.1	186	12.8	715	49.3	2	0.1	19	1.3	1,451	100.0
	12	146	10.1	49	3.4	403	28.0	10	0.7	301	20.9	522	36.3	3	0.2	6	0.4	1,440	100.0
	15	278	19.3	98	6.8	402	28.0	7	0.5	146	10.2	496	34.5	5	0.3	5	0.3	1,437	100.0
	35 - 44	748	50.6	323	21.9	13	0.9	14	0.9	3	0.2	353	23.9	22	1.5	1	0.1	1,477	100.0
	65 - 74	550	40.6	191	14.1	-	-	5	0.4	-	-	589	43.5	15	1.1	4	0.3	1,354	100.0

Source: National Oral Health Survey 1994-1995

Table 44. Distribution of Notifiable Diseases by District, 2003

District	Cholera		Whooping Cough		Tetanus		Measles		Tuberculosis ¹		Viral Hepatitis		Typhoid Fever		Leptospirosis		Malaria		Viral Encephalitis		Food Poisoning		Rabies		Shigellosis		Dengue Haemorrhagic Fever		Rubella ²	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Colombo	-	-	91	-	5	1	5	-	873	78	408	1	324	-	998	108	207	3	26	4	99	-	-	-	681	1	441	11	1	
Gampaha ¹	-	-	4	-	1	-	60	-	532	14	336	1	164	-	730	17	521	-	7	-	560	-	7	4	382	1	128	4	3	
Kalutara	-	-	6	-	-	-	6	-	370	3	225	-	177	-	617	-	125	-	20	-	409	-	3	3	353	1	21	-	-	
Kandy	-	-	6	-	9	2	21	-	1,331	57	546	5	412	2	337	28	250	1	10	2	212	-	3	2	779	1	67	1	5	
Matale	-	-	-	-	-	-	3	-	223	7	294	-	101	1	68	1	165	-	-	-	102	-	-	-	320	-	3	-	-	
Nuwara Eliya	-	-	-	-	-	-	19	-	104	2	134	1	413	3	12	-	15	-	3	-	99	-	2	2	286	-	-	-	2	
Galle	-	-	10	-	3	-	8	-	426	31	65	-	159	-	430	18	45	-	13	5	387	-	7	7	184	-	19	-	-	
Matara	-	-	-	-	-	1	-	95	5	18	-	105	-	8	107	8	165	-	-	107	-	-	-	-	162	-	63	1	1	
Hambantota	-	-	-	-	-	-	11	-	23	1	12	-	65	-	4	-	96	-	-	99	-	99	-	2	1	924	-	50	-	-
Jaffna	1	-	2	-	5	-	2	-	408	10	249	-	1,624	3	12	-	2,038	4	17	5	144	-	10	8	188	-	37	2	1	
Kilinochchi	-	-	-	-	-	-	-	16	-	-	2	-	42	-	-	-	570	1	-	-	112	-	-	-	-	-	-	-	-	-
Mammar	-	-	1	-	-	-	-	58	3	14	-	247	-	-	-	-	115	-	-	45	-	45	-	1	21	-	9	-	-	-
Vavuniya	-	-	2	-	1	-	1	-	137	7	13	-	99	-	4	-	206	-	3	-	59	-	1	-	10	-	9	-	-	-
Mullativu	-	-	-	-	-	-	-	25	-	-	4	-	67	-	-	-	848	3	-	6	-	6	-	3	1	-	-	-	-	-
Batticaloa	-	-	-	-	3	-	1	-	356	9	421	-	250	2	36	-	3,016	2	93	6	187	6	3	-	513	15	39	-	19	-
Ampara ³	-	-	2	-	-	-	9	-	231	5	274	-	495	-	27	-	917	-	-	136	-	2	-	2	276	-	13	-	7	-
Trincomalee	-	-	-	-	-	-	2	-	343	11	180	1	113	1	32	-	753	-	1	-	120	-	2	1	133	-	11	3	7	-
Kurunagala	-	-	-	-	2	2	11	-	806	47	223	-	208	-	338	8	671	-	12	2	487	-	12	5	461	1	26	2	3	-
Puttalam	-	-	-	-	1	-	2	-	140	4	51	-	279	1	55	-	184	1	14	1	139	-	1	-	275	-	57	-	-	-
Anuradhapura	-	-	-	-	-	-	50	-	220	17	150	2	236	-	139	8	600	-	23	2	508	-	2	1	387	-	86	-	6	-
Polonnaruwa	-	-	2	-	2	1	7	-	158	7	87	-	28	-	150	3	680	-	3	2	96	-	2	2	159	-	3	1	1	-
Badulla	-	-	11	-	3	-	3	-	395	12	401	-	326	-	125	3	254	1	22	2	245	-	3	1	479	-	3	1	48	-
Moneragala	-	-	-	-	-	-	2	-	46	1	107	-	324	-	101	3	386	-	3	1	251	-	29	-	1,002	-	-	-	1	-
Ratnapura	-	-	1	-	3	2	12	-	537	9	61	-	478	-	85	1	244	-	13	-	305	-	4	-	441	-	14	-	21	-
Kegalle	-	-	10	-	-	-	10	-	274	14	307	-	31	-	306	6	94	-	7	-	78	-	5	1	246	-	16	-	-	-
Total	1	-	148	-	41	9	243	-	8,127	354	4,582	11	6,767	13	4,713	212	13,165	16	290	32	4,992	6	104	36	8,662	20	1,115	26	126	-

Source : Medical Statistics Unit

Includes:
¹ TB Patients treated at Welisara Hospital (21 cases 1 deaths)
² Congenital Rubella
³ Kamunai DPDHS Division

Based on the Indoor Morbidity and Mortality Return.
 No cases of poliomyelitis and diphtheria were reported.
 5 cases of HIV and 1 death were reported.
 8 case of tetanus neo-natorum was reported.

Table 45. Age Distribution of Notifiable Diseases¹, 2003

Age Group	Dysentery ¹		Encephalitis ²		Enteric Fever ¹		Food Poisoning ¹		Human Rabies ²		Leptospirosis ¹		Measles ²		Tetanus ²		Viral Hepatitis ²		Dengue Haemorrhagic Fever (DHF) ²		Simple Continued Fever ¹		
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	
Under 1	275	8.8	3	2.3	4	0.4	3	1.5	-	-	-	-	12	17.4	3	8.3	3	0.3	16	1.0	1	1.2	
1-4	781	24.9	15	11.3	92	8.5	9	4.5	6	7.8	2	0.2	8	11.6	-	-	59	4.9	106	6.6	5	5.8	
5-14	737	23.5	30	22.6	280	25.9	41	20.6	15	19.5	27	2.7	9	13.0	3	8.3	415	34.8	337	21.0	14	16.3	
15-24	345	11.0	27	20.3	245	22.7	82	41.2	6	7.8	197	20.0	25	36.2	4	11.1	388	32.5	450	28.0	21	24.4	
25-49	575	18.4	28	21.1	359	33.2	47	23.6	24	31.2	564	57.1	15	21.7	6	16.7	286	24.0	596	37.1	35	40.7	
50-59	170	5.4	8	6.0	66	6.1	10	5.0	11	14.3	144	14.6	-	-	8	22.2	30	2.5	64	4.0	7	8.1	
60 and over	248	7.9	19	14.3	35	3.2	7	3.5	15	19.5	53	5.4	-	-	11	30.6	13	1.1	29	1.8	3	3.5	
Unknwn	-	-	3	2.3	-	-	-	-	-	-	-	-	-	-	-	1	2.8	-	-	7	0.4	-	-
All ages	3,131	100.0	133	100.0	1,081	100.0	199	100.0	77	100.0	987	100.0	69	100.0	36	100.0	1,194	100.0	1,605	100.0	86	100.0	

¹ Confirmed cases

² From special surveillance

Tetanus - including 2 cases of neo-natal tetanus

Source : Epidemiological Unit

Table 46. Distribution of Notifiable¹ Diseases by Month, 2003

Month	Dysentery ¹	Encephalitis ²	Enteric Fever ¹	Food Poisoning ¹	Human Rabies ²	Leptospirosis ¹	Measles ²	Tetanus ²	Viral Hepatitis ²	Dengue Haemorrhagic Fever ²	Simple Continued Fever ¹
January	394	67	231	27	8	40	7	3	195	222	23
February	209	16	129	14	4	61	2	6	141	123	8
March	126	6	102	9	4	145	5	1	86	99	10
April	154	5	60	7	10	42	1	2	100	73	6
May	301	6	87	54	5	118	2	2	103	62	4
June	278	7	88	11	5	56	3	4	89	66	10
July	319	7	95	15	5	24	4	3	83	83	5
August	179	3	62	17	8	58	26	5	65	88	2
September	110		64	13	12	167		4	124	112	1
October	309	8	67	7	7	128	6	1	118	186	5
November	597	3	78	20	4	123	11	1	69	253	4
December	155	5	18	5	5	25	2	4	21	238	2
Unknown	-	-	-	-	-	-	-	-	-	-	6
Total	3,131	133	1,081	199	77	987	69	36	1,194	1,605	86

¹ Confirmed Cases

Source : Epidemiological Unit

² From special surveillance

Tetanus - including 2 cases of neo-natal tetanus

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Table 47. Cases, Deaths and Case Fatality Rate (CFR) of Japanese Encephalitis and Dengue Haemorrhagic Fever, 1990 - 2003

Year	Japanese Encephalitis				Dengue Haemorrhagic Fever			
	Cases		Deaths	C.F.R.	Cases		Deaths	C.F.R.
	No.	Rate			No.	Rate		
1990	387	2.3	43	11.1	1,350	7.9	54	4.0
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

Based on Special surveillance

Source : Epidemiological Unit

Incidence rate per 100,000 population

Case fatality rate (CFR) percentage

Table 48. Distribution of Cases and Deaths due to Japanese Encephalitis and Dengue Haemorrhagic Fever by DPDHS Divisions, 2003

Division	Japanese Encephalitis			Dengue Haemorrhagic Fever		
	Cases	Positives*	Deaths	Cases	Positives*#	Deaths
Colombo	21	20	-	366	29	3
Gampaha	4	-	-	159	4	4
Kalutara	1	-	-	70	-	3
Kandy	5	5	-	223	1	3
Matale	-	-	-	30	-	-
Nuwara Eliya	3	-	1	9	-	-
Galle	6	2	1	32	4	-
Matara	3	-	1	56	5	1
Hambantota	3	-	-	11	-	2
Jaffna	2	1	-	102	14	1
Kilinochchi	-	-	-	2	-	-
Mannar	-	-	-	1	-	1
Vavuniya	1	1	-	30	-	-
Mullativu	-	-	-	7	-	-
Batticaloa	4	4	-	49	7	-
Ampara	-	-	-	8	-	-
Kalmunai	-	-	-	25	5	1
Trincomalee	8	4	4	19	2	2
Kurunegala	5	-	-	81	-	2
Puttalam	3	-	1	25	2	7
Anuradhapura	6	3	1	141	3	1
Polonnaruwa	1	1	-	32	3	1
Badulla	5	1	-	35	-	-
Moneragala	-	-	-	1	-	-
Ratnapura	49	10	11	36	-	-
Kegalle	3	-	-	55	-	1
Total	133	52	20	1,605	79	33

Based on Special surveillance

Source: Epidemiological Unit

* Data received from the Medical Research Institute

Positive for DHF data received up to October 2003 from MRI.

Table 49. Cases and deaths of Japanese Encephalitis and Dengue Haemorrhagic Fever by Months, 2003

Month	Japanese Encephalitis			Dengue Haemorrhagic Fever		
	Suspected Cases	Positives*	Deaths	Suspected Cases	Positives*	Deaths
January	67	31	7	222	21	12
February	16	8	5	123	18	4
March	6	1	1	99	6	1
April	5	-	1	73	5	2
May	6	3	1	62	4	1
June	7	1	-	66	7	1
July	7	-	-	83	7	1
August	3	2	-	88	4	1
September	-	-	-	112	-	2
October	8	1	4	186	7	1
November	3	2	-	253	N.A	2
December	5	3	1	238	N.A	4
Total	133	52	20	1,605	79	32

Based on Special Surveillance

Source :Epidemiological Unit.

* Data received from the Medical Research Institute

N.A - Data Not Available

Table 50. Cases and Deaths of Japanese Encephalitis and Dengue Haemorrhagic Fever by Age Groups, 2003

Age Group	Japanese Encephalitis				Dengue Haemorrhagic Fever			
	Cases		Deaths		Cases		Deaths	
	No	%	No	%	No	%	No	%
under 1	3	2.3	-	-	16	1.0	-	-
1 - 4	15	11.3	4	20.0	106	6.6	3	9.4
5 - 9	15	11.3	1	5.0	187	11.7	10	31.3
10 - 14	15	11.3	4	20.0	150	9.3	3	9.4
15 - 19	15	11.3	1	5.0	178	11.1	3	9.4
20 - 24	12	9.0	-	-	272	16.9	5	15.6
25 - 29	6	4.5	-	-	191	11.9	1	3.1
30 - 34	3	2.3	-	-	164	10.2	2	6.3
35 - 39	5	3.8	-	-	96	6.0	1	3.1
40 - 44	6	4.5	1	5.0	92	5.7	1	3.1
45 - 49	8	6.0	1	5.0	53	3.3	-	-
50 - 54	2	1.5	-	-	44	2.7	3	9.4
55 - 59	6	4.5	-	-	20	1.2	-	-
> 60	19	14.3	8	40.0	29	1.8	-	-
Unknown	3	2.3	-	-	7	0.4	-	-
Total	133	100.0	20	100.0	1,605	100.0	32	100.0

Based on Special Surveillance

Source : Epidemiological Unit

Table 51. Incidence of EPI Target Diseases, 1955-2003

Year	Poliomyelitis		Diphtheria		Whooping Cough		Tetanus		Tetanus Neo-natorum		Tuberculosis		Measles	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate ¹	Cases	Rate	Cases	Rate
1955	155	1.8	1,179	13.5	1,941	22.2	873	10.0	-	-	-	-	3,499	40.1
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	-	-	-	-	-	-	34	0.2	2	0.6	9,312	48.4	69	0.4

Source : Epidemiological Unit

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

Table 52. Immunization Coverage by DPDHS Division, 2003

DPDHS Division	Infants						At 1 1/2 Years		At 3 Years		At 5 Years		At 10-15 Years	
	BCG		DPT3/OPV3		Measles		DPT 4 / OPV 4		Measles Rubella		OPV/DT		Adult Tetanus Diphtheria	
	Coverage	Rank	Coverage	Rank	Coverage	Rank	Coverage	Rank	Coverage	Rank	Coverage	Rank	Coverage	Rank
Colombo	98	11	93	24	97	19	88	25	73	25	79	22	43	24
Gampaha	94	13	96	18	99	10	90	24	83	22	81	19	48	23
Kalutara	77	20	97	14	101	7	97	12	85	16	87	10	53	21
Kandy	115	3	97	14	99	10	96	13	94	4	86	13	85	5
Matale	111	5	98	9	97	19	98	10	93	6	86	13	70	9
Nuwara Eliya	100	10	98	9	100	8	96	13	82	24	81	19	54	20
Galle	101	9	97	14	104	4	100	6	95	3	97	2	58	17
Matara	68	23	95	21	97	19	93	19	86	14	88	6	67	11
Hambantota	107	7	96	18	98	16	96	13	84	20	88	6	66	13
Jaffna	113	4	101	5	102	5	104	4	113	1	86	13	101	2
Kilinochechi	85	16	100	7	97	19	112	1	86	14	88	6	82	7
Mannar	92	14	107	2	99	10	108	3	87	12	64	25	55	19
Vavuniya	107	7	121	1	105	3	111	2	88	10	69	24	37	25
Batticaloa	122	1	103	4	109	1	103	5	83	22	83	18	58	16
Ampara	83	18	101	5	99	10	100	6	90	8	91	5	92	3
Kalmunai	95	12	104	3	107	2	96	13	91	7	93	3	86	4
Trincomalee	84	17	91	25	95	24	91	23	84	20	99	1	105	1
Kurunegala	83	18	94	22	95	24	93	19	87	12	74	23	85	5
Puttalam	76	21	96	18	98	16	92	22	85	16	92	4	67	11
Anuradhapura	92	14	98	9	100	8	96	13	94	4	84	17	75	8
Polonnaruwa	108	6	99	8	98	16	98	10	89	9	87	10	65	15
Badulla	120	2	97	14	96	23	93	19	85	16	86	13	68	10
Moneragala	68	23	94	22	99	10	99	8	88	10	87	10	66	13
Ratnapura	69	22	98	9	99	10	95	18	85	16	88	6	58	17
Kegalle	65	25	98	9	102	5	99	8	96	2	81	19	49	22
Sri Lanka	98.0		97.0		99.0		95.0		87.0		84.0		65.0	

Source: Epidemiological Unit

Based on the Quarterly Immunization Returns
Coverage as a percentage of estimated target population

Table 53. Morbidity and Mortality of Diarrhoeal Diseases and Case Fatality Rates, 1980-2003

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	160,513	857.4	180	1.0	0.1
2002	141,086	743.6	128	0.7	0.1
2003	119,835	622.5	113	0.6	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
- ⁶ Kilinochchi district

Table 54. Morbidity and Mortality of Shigellosis and Case Fatality Rates, 1980-2003

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

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
- ⁵ Kilinochchi districts.

Table 55. Distribution of Leprosy New Cases by Province, 2003

Province	Multibacillary	Paucibacillary	Total New Cases	New Cases per 10,000 Population*
Western	294	576	870	1.6
Central	36	51	87	0.4
Southern	97	119	216	0.9
Northern	12	40	52	0.5
Eastern	87	167	254	1.7
North Western	84	110	194	0.9
North Central	74	60	134	1.2
Uva	11	20	31	0.3
Sabaragamuwa	30	47	77	0.4
Total	725	1,190	1,915	1.0

* Rates based on 2003 population estimates

Source: Anti-Leprosy Campaign

Table 56. Distribution of Active Leprosy Cases by Province, 2003

Province	Total Active Cases	Active Cases per 10,000 Population*
Western	566	1.0
Central	64	0.3
Southern	175	0.8
Northern	24	0.2
Eastern	158	1.0
North Western	140	0.6
North Central	115	1.0
Uva	22	0.2
Sabaragamuwa	53	0.3
Total	1,317	0.7

* Rates based on 2003 population estimates

Source: Anti-Leprosy Campaign

Table 57. Basic Indicators in Leprosy, 1990-2002

Year	Prevalence	Incidence	Child Rate	Multibacillary Rate	Deformity Rate
	Per 10,000 Population				
1990	1.6	1.5	16.0	14.0	2.5
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	1.8	11.5	37.7	8.2

Source: Anti-Leprosy Campaign

Table 58. Trends in Rabies Control Activities and Human Deaths from Rabies

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	66.0	83	0.4
2002	797,565	117,790	644	72.4	64	0.3
2003	664,493	84,350	707	67.5	76	0.4

+ Registrar General's Department

Source: Rabies Control Programme

* Notified by MOH

¹ Per 100,000 Population² Medical Statistics Unit

Table 59. Rabies Control Activities by District, 1985-2003

DPDHS Area	Vaccination						Elimination							
	1985	1995	1999	2000	2001	2002	2003	1985	1995	1999	2000	2001	2002	2003
Colombo	47,221	34,225	83,308	85,715	87,949	86,445	65,630	5,031	8,321	9,497	10,782	10,405	9,844	7,417
Gampaha	83,234	42,166	102,617	88,974	93,253	128,009	75,149	9,855	5,802	5,082	3,752	3,679	4,311	3,278
Kalutara	26,008	35,834	41,612	41,735	31,276	56,381	35,967	2,445	8,511	3,277	3,497	2,576	325	1,399
Kandy	260	28,530	41,608	49,823	68,144	43,479	70,414	2,338	4,042	5,016	7,679	8,793	8,375	4,836
Matale	-	25,103	26,063	9,110	26,279	27,442	28,423	2,478	10,274	1,221	2,760	4,338	6,847	2,421
Nuwera Eliya	-	7,686	-	33,444	27,176	45,554	32,707	456	2,189	3,857	6,882	8,678	6,191	12,969
Galle	35,530	29,038	32,644	46,605	19,156	6,673	17,547	10,536	6,138	6,956	8,557	9,799	3,105	675
Matara	34,805	15,472	28,872	30,281	36,452	35,607	31,452	8,975	3,350	9,543	10,792	9,968	8,708	4,774
Hambantota	-	15,160	28,366	28,510	20,741	15,633	25,133	-	6,035	11,642	9,285	8,813	6,967	8,258
Jaffna	-	4,361	12,508	9140*	2,916	6,565	5,354	-	2,063	423	732	983	2,966	2,191
Kilinochchi	-	-	-	-	41	492	-	-	-	-	-	369	-	-
Vavuniya	-	-	-	2,170	-	4,950	1,536	231	-	-	-	306	-	146
Mannar	-	-	-	-	-	-	-	-	-	-	-	-	-	93
Batticaloa	-	212	-	-	-	-	-	-	-	-	-	-	-	-
Ampara	-	-	648	-	400	425	-	-	-	249	1,569	69	491	-
Trincomalee	-	1,133	-	411	-	-	3,580	-	1,071	549	1,583	132	-	724
Kurunegala	20,298	76,161	91,785	83,750	106,734	121,103	62,639	6,651	10,839	10,596	6,617	6,188	6,144	8,236
Puttalam	8,545	50,328	30,190	25,310	63,645	59,442	75,937	2,324	7,348	7,283	5,180	8,987	9,712	2,687
Anuradhapura	-	32,589	54,293	31,084	37,123	37,581	21,567	2,410	8,349	12,366	9,498	10,896	3,536	7,539
Polonnaruwa	-	17,372	18,298	11,607	18,465	14,048	11,766	-	3,420	3,887	5,144	5,228	4,043	1,803
Badulla	1,181	18,737	22,559	25,504	32,401	30,060	26,536	2,361	4,671	3,054	3,457	3,750	4,807	3,008
Moneragala	-	5,212	8,496	7,381	4,173	17,862	8,971	228	3,487	1,450	3,905	3,679	3,668	-
Ratnapura	-	13,299	11,527	15,300	422,261	24,801	21,885	1,602	8,819	7,956	10,344	8,807	2,748	9,537
Kegalle	11,479	10	31,876	31,743	40,511	34,995	42,300	317	7,133	2,795	5,488	3,318	2,700	2,359
Total	268,561	452,828	667,270	618,714	657,597	797,547	664,493	58,238	106,862	106,699	117,503	119,761	95,488	84,350

Source: Rabies Control Programme

* : Includes Kilinochchi Districts.

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