ANNUAL HEALTH BULLETIN

2012

SRI LANKA

Medical Statistics Unit

Ministry of Health

Message from the Secretary of Health

Sri Lanka is in a fast phase of development. Keeping in par with this development the state health sector has taken up many development projects in multiple facets of healthcare provision. The Annual Health Bulletin, which is the main provider of health related information, plays an important role in planning and monitoring of these projects. Moreover, it acts as the mirror that reflects the health status of Sri Lanka.

The publication of this bulletin over the recent past has been hampered owing to various reasons. This publication bears witness to the untiring efforts of the staff at Medical Statistics Unit to cover the bulk of the backlog. Further, I am pleased to see the new developments and technological adaptations in the data collection process. The implementation of the eIMMR system seems a promising option to improve the efficiency and accuracy of the data collection process.

I wish to appreciate all officials who have given their fullest support by providing data pertaining to their respective institutions, programmes and Medical Statistics Unit of the Ministry of Health for the support extended in publishing the Annual Health Bulletin – 2012.

Dr.Y.D.Nihal Jayathilaka
Secretary
Ministry of Health

Preface

The Annual Health Bulletin is the main comprehensive report which gives information of the health sector in Sri Lanka.

The Bulletin is mainly confined to the government health sector and presents information on four major areas, morbidity, mortality, resource availability and provision of services. The information has been revised and brought up to date to reflect, as far as possible the situation during 2012 and trends over the period as well.

I wish to place on record my sincere appreciation to all officials who extended their energy and wisdom generously in providing data from their surveys and programmes. My appreciation also extended to the valuable services rendered by the staff of Medical Statistics Unit.

Further I wish to extend my gratitude for those who have involved in preparation of this Bulletin since 1980 and also the Planning Unit of the Ministry of Health for the great support extended in publishing the Annual Health Bulletin 2012.

Dr. P.G. Mahipala
Director General of Health Services

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Demographic Indicators				
Total population (in thousands)		2012*	20,271	Census of Population & Housing,2012, based on 5 % sample
Land area (Sq. km)		1988	62,705	Survey General's Department
Population density (persons per sq. km)		2012*	323	Census of Population & Housing,2012, based on 5 % sample
Population growth rate (%)		2012*	0.9	Registrar General's Department
Crude birth rate (per 1000 population)		2012*	17.5	
Crude death rate (per 1000 population)		2012*	6.0	
Urban population (%)		2012*	18.3	Census of Population & Housing,2012, based on 5 % sample
Sex ratio (No of males per 100 females)		2012*	94	
Child population (under 5 years) %		2012*	8.6	
Women in the reproductive age group (15-49 years) %		2012*	51.0	
Average household size (Number of persons per family)		2012*	3.8	
Socio-economic Indicators				
GNP per capita at current prices (Rs)		2012	365,192	Department of Census & Statistics
Human development index		2012	0.715	UNDP, Human Development Report
Unemployment rate	Total	2012	4.0	Department of Census & Statistics
	Male		2.8	
	Female		6.2	
Dependency ratio	Total	2012*	60.2	Census of Population & Housing,2012, based on 5 % sample
	Old age(60 years and more)		19.8	
	Child (under 15 years)		40.4	
Literacy rate (%)	Total	2012*	95.6	
(10 years or more)	Male		96.8	
	Female		94.6	
Pupil Teacher Ratio in	Government Schools	2012	18	Ministry of Education
	Private Schools		21	
	Pirivenas		11	
Singulate Mean age at Marriage (years.)	Female	2006/07	23.5	Demographic & Health Survey[1] 2006/07
Health and Nutrition Indicators				
Life expectancy at birth (years)	Male	2011[2]	70.5	Department of Census and Statistics (Life Tables for Sri Lanka and Districts,2000-2002)
	Female		79.8	
Neonatal mortality rate (per 1,000 live births)		2009	6.4	Registrar General's Department
Infant mortality rate (per 1,000 live births)		2009	9.7	
Under-five mortality rate (per 1,000 live births)		2009	12.1	
Average No. of children born to ever married women in Sri Lanka		2012*	2.6	Census of Population & Housing,2012, based on 5 % sample
Maternal mortality rate (per 100,000 live births)		2009	22.3	Registrar General's Department
Low-birth-weight per 100 live births in government hospitals %		2012	16.3	Medical Statistics Unit
Percentage of under five Children				Family Health Bureau
Under Weight (weight-for- age)		2012	17.3	
Wasting (Acute Undernutrtion or weight-for-height)			14	
Stunting (Chronic Malnutrition or height-for-age)			11.4	

Note : 1 Demographic and Health Survey 2006/07 - Exclude Northern Province

2 Projected life expectancy at birth

Indicator	Year	Data	Source
Primary Health Care Coverage Indicators			
Percentage of pregnant women attended by Skilled Personnel	2006/07	98.6	Demographic and Health Survey 2006/07
Percentage of live births in government hospitals	2012	95.6	Medical Statistics Unit
Women of childbearing age using contraceptives (%) Modern Method	2006/ 07	52.5	Demographic and Health Survey 2006/07
Traditional method		15.9	
Population with access to safe water (%)	2012*	80.5	Census of Population & Housing,2012, based on 5 % sample
Health Resources			
Government health expenditure as a precent of GNP	2012	1.2	Department of Health Services
Government health expenditure as a precent of total government expenditure	2012	4.1	
Per capita health expenditure (Rs)	2012	4,392	
Medical Officers per 100,000 population	2012	78.6	Medical Statistics Unit
Population per Medical Officer	2012	1,278	
Dental Surgeons per 100,000 population	2012	6.0	
Nurses per 100,000 population	2012	180.3	
Public Health Midwives per 100,000 population	2012	28.6	
Number of hospitals	2012	621	
Number of hospital beds	2012	76,087	
Hospital beds per 1,000 population	2012	3.8	
Number of Medical Officer of Health (MOH) Divisions	2012	337	

*Provisional

1. General Information

1.1 Country Background

Sri Lanka is an island situated off the southern coast of India. It lies between northern latitudes 5^0 55' and 9^0 50' and eastern longitudes 79^0 42' and 81^0 52'. The island is in the northern Indian Ocean in South Asia, separated from the Indian sub continent by a narrow strip of shallow water, known as Palk Strait. Total land area of the country is 65,610 suqare kilometers including inland water. 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 country is known as the 'Pearl of the Indian ocean' because of its natural beauty. It contains tropical forests and diverse landscapes with high biodiversity. In addition the country has a rich cultural heritage with much evidence in historical places like Sigiriya, Polonnaruwa and Anuradhapura.

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.

1.2 Administrative Setup

For the purpose of administration, Sri Lanka is divided into 9 Provinces, 25 Districts and 331 Divisional Secretary areas (Detailed Table 1). 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. Local government which is the lowest level of government in Sri Lanka is responsible for providing supportive services for the public such as roads, sanitation,drains, housing, libraries, public parks etc. The local government bodies are known as local authorities: municipal councils, urban councils and pradeshiya sabhas.

Sri Lanka, officially the Democratic Socialist Republic of 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.

1.3 Population

The fourteenth National Census of Population and Housing which covered the entire island after a lapse of 30 years since 1981 was conducted by Deparment of Census and Statistics on 20th March 2012. The data were collected from persons according to their place of usual residence.

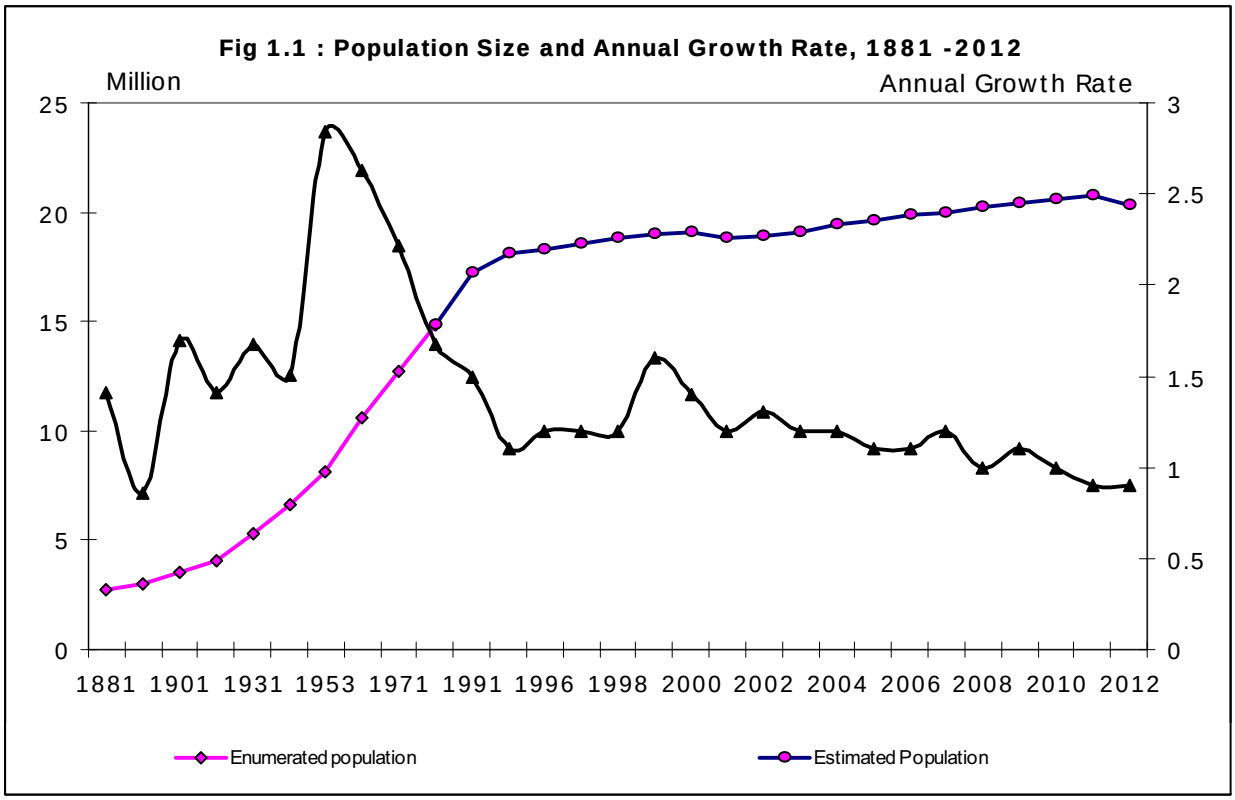
According to the provisional data based on 5 precent sample of the census, population of Sri Lanka for the year 2012 is 20,271 thousand (Detailed Table 2). Of the entire population more than three fourth (77.3 precent) resides in the rural sector, followed by 18.3 percent in the urban sector and 4.4 precent in the estate sector. Unequal distribution of population can be observed among districts. Colombo district is the most populous district of the country with a population 2,310 thousand. This is followed by Gampaha district which records a population of 2,294 thousand. Mullaitivu district records the lowest population (90 thousand) among the districts, followed by Mannar district with a population 99 thousand.

The homeless people who do not have a usual place of residence were also enumerated at the census during the mid night of 19th March 2012. According to the Preliminary report of the census, 3,418 persons were homeless.

Since the entire country was not enumerated in the Census of Population and Housing-2001, average annual growth rates during the intercensal period 1981 to 2012 are presented in the Detailed Table 2. The average annual growth rate from 1981 to 2012 was 1.0 precent. The highest average annual growth rate of 1.9 percent was reported from Vavuniya district. Jaffna and Mannar districts reported a decrease in population growth rates during the period 1981 to 2012. It might be due to out migration of people because of conflict situation in these districts.

According to Registrar General's Department Annual population growth rate is 0.9 percent during the year 2012 (Fig 1.1)

Fig 1.1 : Population Size and Annual Growth Rate, 1881 -2012



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

1.3.1 Population Density

Population density is defined as the number of persons in a unit area. It measures the level of concentration of the population in a particular area. It is vital to study population density by districts since it might be caused to many health hazards due to over crowding.

Population density of 230 persons per square kilometer in 1981 census has increased to 323 in the 2012 census. During this 30 year period the density of the country has incresed by 40 percent.

Population densities among districts show huge regional variations. Colombo district shows the highest density of 3,417 persons per square kilometer in 2012. The next highest density of 1,711 was recorded from the adjoining district of Gampaha. The districts of Kalutara, Kandy, Galle, Matara and Jaffna have population densities of more than 600 persons per squre killometer.

Mullaitivu district was the district with the lowest population density of 38 persons per square kilometer.

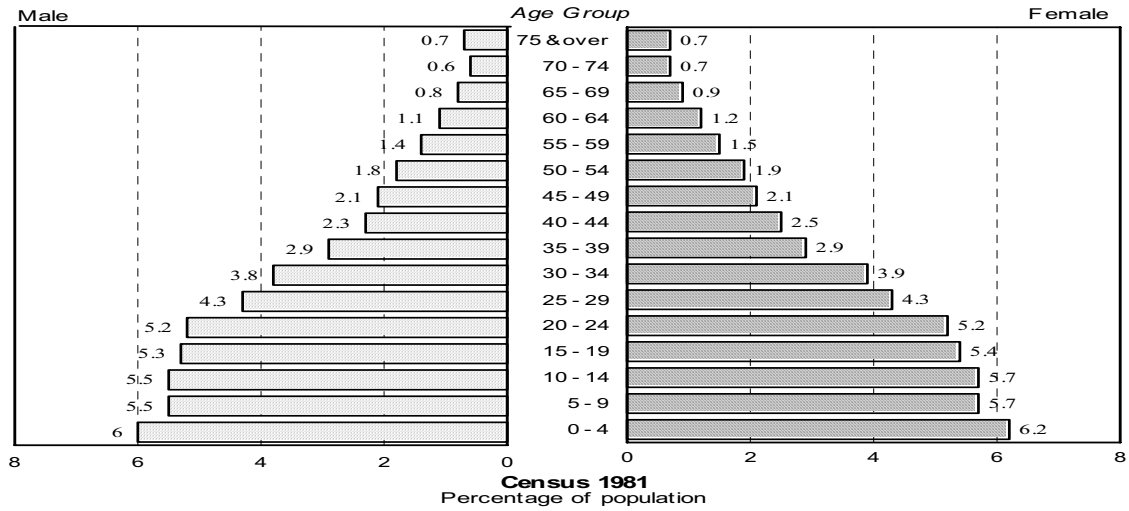
Over half of the population is concentrated in the Western, Central and Southern provinces which jointly covered less than one forth of the total land area of the country.

1.3.2 Age Composition

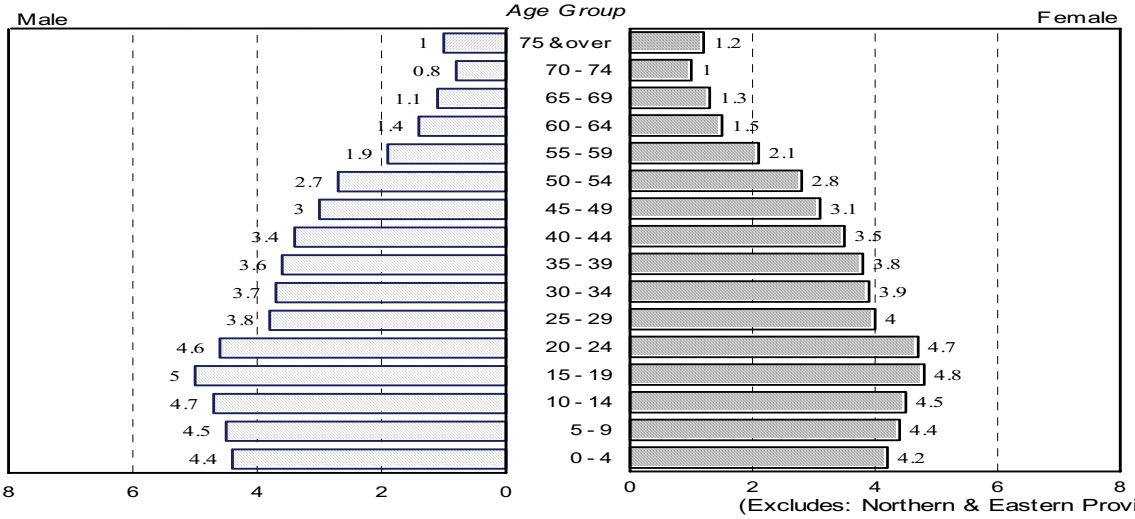
Age composition of population describes the pattern of the distribution of people in different age categories. In comparison with the Census of 1981, the population aged below 15 years has decreased by 10 percentage points during the period 1981 to 2012 whilst the population aged 60 years and over has increased by 5.7 percentage points (Table 1.1). Accordingly, the population of Sri Lanka seems to be gradually shifting to an aging population.

According to report of census of Population & Housing 2012 (Provisional result based on 5% Sample) , Median age of population is 30 years where as the Median age was around 21.3 years untill 1981.

Fig 1.2 : Population of Sri Lanka by Age and Sex, 1981, 2001 and 2012

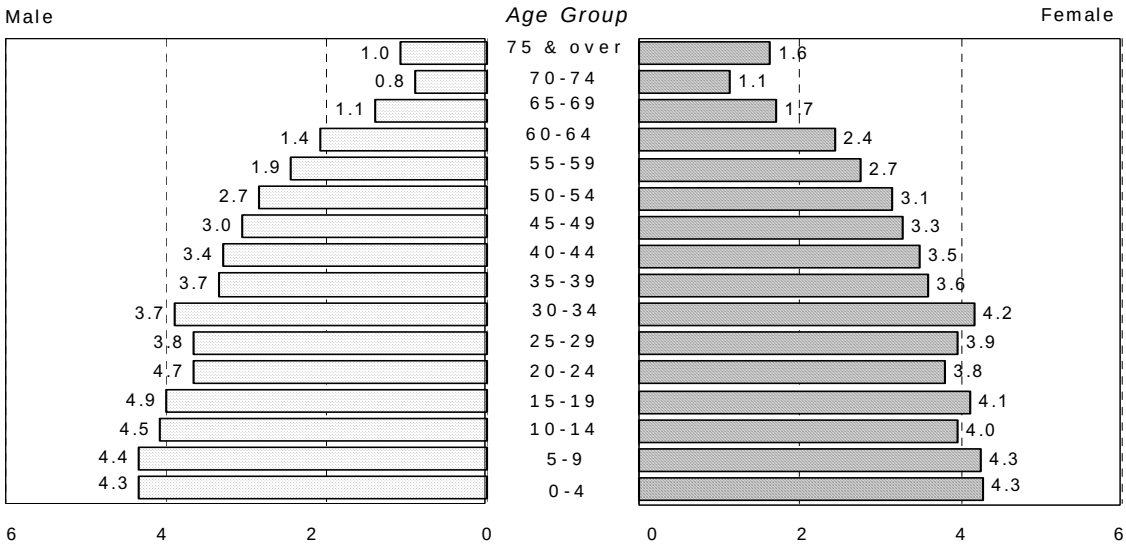


Census 1981
Percentage of population



(Excludes: Northern & Eastern Provinces)

Based on Population Census 2001
Percentage of population



Based on Population Census 2012 (5% sample)
Percentage of population

Source : Department of Census and Statistics

Aging Index defined as the ratio between the 60 years and over population to 0-14 year population in a given year has increased from 18.8 percent in 1981 to 48.8 percent in 2012.

Shifting of median age and increasing trend of aging index are also refering to aging of Sri Lankan population. It is noticeable that dependency ratio which is an approximation of the average number of dependents that each person of working age must support, has decreased from 71.8 in 1981 to 60.1 in 2012 due to relative decline in the proportion of children.

Table1.1 : Percentage Distribution of Population by Broad Age Groups, Aging Index and Dependency ratio

Year	0 - 14 yrs (A)	15 - 59 yrs (B)	60 yrs and over (C)	Aging Index (C/A)	Dependency Ratio (A+C)/B
1911	40.9	54.8	4.3	10.5	82.5
1946	37.2	57.4	5.4	14.5	74.2
1971	39.0	54.7	6.3	16.2	82.8
1981	35.2	58.2	6.6	18.8	71.8
2001[1]	26.3	64.5	9.2	35.0	55.0
2012[2]	25.2	62.4	12.3	48.8	60.1

1. Excludes Northern province, Batticaloa and Trincomalee districts in Eastern Province
2. Census of population -2012, based on 5 % sample

1.3.3 Age-Sex composition

Age -sex composition is clearly shown in Age-sex pyramid (Fig 1.2). Even though the gradual decline of the population below age 10 could be seen in 2001, the base population of 2012 is greater than that of 2001. So, changing patterns of the fertility, mortality and migration which are attribute to population change in the past three decades could be seen through Figure 1.2. A detailed age breakdown is given in Detailed Table 3.

1.3.4 Trends in Age specific Sex Ratio

Sex ratio is the indicator which describes sex composition of the population. Sex ratio, defined as number of males per 100 females was 93.9 in Sri Lanka for the year 2012. It indicates an excess of females over males. When compared with previous censuses, the sex ratio in 2012 shows drastic decrease.

Table 1.2 : Age Specific Sex Ratio 1981, 2001 and 2012

Age Group in years	Sex Ratio in year		
	1981[1]	2001[1,2]	2012[3]
All Ages	103.9	97.9	93.9
Under 1	104.1	104.5	105.5
1 - 4	103.8		102.3
5 - 9	103.6	103.1	102.9
10 - 14	104.1	104.5	102.3
15 - 19	102.7	103.6	96.1
20 - 24	100.3	98.0	96.3
25 - 29	99.8	93.8	93.7
30 - 34	102.0	95.4	92.6
35 - 39	100.6	95.2	93.7
40 - 44	106.0	96.6	95.1
45 - 49	102.0	97.1	93.7
50 - 54	111.1	95.9	90.7
55 - 59	110.2	92.8	90.2
60 - 64	116.2	92.7	85.8
65 - 69	111.0	88.0	82.4
70 - 74	115.7	85.0	76.7
75 and Over	107.3	84.6	67.4

1. Census of Population & Housing
2. Excludes Northern Province, Batticaloa and Trincomalee districts in Eastern Province
3. Census of population -2012, based on 5 % sample

The age specific sex ratios are declining gradually with increasing the age with fluctuations in some age groups.

Sex ratio under 1 year was 105.5 for the year 2012 which reflects more males among infants. According to Registrar Genaral's Department sex ratio at birth is 103.7 (provisional) for the year 2012. However, with the increase of age, the sex ratio shows a decreasing trend indicating more females than males in older age groups.

1.3.5 Trends in Life Expectancy

Life expectancy is the average number of years a person would live under the current pattern of mortality. Life expectancy for both males and females have been increased for the past decades. Gender differences can be seen in Sri Lanka's life expectancy at birth. Before 1963, the life expectancy for males was higher than that of females and this pattern reversed thereafter due to decrease in female mortality. Difference between life expentacy of males and females increased since 1960s and difference is 2.9 years in 1971, 4.4 years in 1981 and 8.4 years in 2001.

Table 1.3 : Life Expectancy at Birth 1920 - 2011

Year	Male	Female
1920-1922	32.7	30.7
1945-1947	46.8	44.7
1952	57.6	55.5
1962-1964	63.3	63.7
1970-1972	64	66.9
1980-1982	67.7	72.1
2000-2002	68.8	77.2
2006	69.9	78.7
2011	70.5	79.8

Source: Registrar General's Department

The figures shown in Table 1.3 are from 'Life Tables for Sri Lanka and Districts,2000-2002' by H.R. Gunasekara, Deparment of Census and Statistics. The figures up to 2002 was calculated using census data and the figures for the years 2006 and 2011 are projected life expectancy at birth.

1.4 Vital Statistics

Vital statistics are the statistics pertaining to births,deaths and marriages.

In Sri lanka, registration of vital events commenced in 1867 with the enactment of civil registration laws.

Under the Births and Deaths registration Act the registration of both births and deaths was compulsory in Sri Lanka from 1897. 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 act 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 1.4 : Vital Statistics, 1960 - 2012

Year	Estimated Mid-year Population	Crude Birth Rate	Crude Death Rate	Maternal Mortality Ratio Per 100,000 Live Births	Infant Mortality Rate	Neo-natal Mortality Rate
	'000	Per 1,000 Population			Per 1,000 Live Births	
1960	9,896	36.6	8.6	302	57.0	34.2
1965	11,164	33.1	8.2	239	53.2	33.3
1970	12,516	29.4	7.5	145	47.5	29.7
1975	13,496	27.8	8.5	102	45.1	27.0
1980	14,747	28.4	6.2	64	34.4	22.7
1985	15,842	24.6	6.2	51	24.2	16.2
1990	17,015	19.9	5.7	...	19.3	...
1995	18,136	18.9	5.8	24	16.5	12.5
2000	19,102	18.2	6.1	20	13.3	9.9
2001	18,797	19.1	6.0	18	12.2	9.6
2002	18,921	19.4	5.9	16	11.4	8.4
2003	19,153	19.3	6.0	19	11.3	8.7
2004	19,435	18.8	5.9	12	9.8	7.2
2005	19,644	18.9	6.7	12	11.2	7.2
2006	19,858	18.8	5.9	14	10.0	7.4
2007	20,039	19.3	5.9	...	8.5	5.9
2008	20,246	18.5	6.1	...	9.0	6.2[a]
2009	20,476	18.0	6.2	22.3	9.7	6.4
2010*	20,653	17.6	6.2	...	...	...
2011*	20,869	17.4	5.9	...	...	...
2012*	20,328[b]	17.5	6.0	...	...	...

* Provisional

Source: Registrar General's Department

Note :

a. Data for Mullaithivu and Killinochchi districts are not available
b. Estimated based on census of population & Housing,2012

1.4.1 Crude Birth Rate (CBR)

CBR is defined as the number of live births in a particular year per 1,000 population. To derive the rate mid year population is used as denominator.Trends in crude birth and crude death rates during the period 1960-2012 are presented in Table 1.4.

The Crude Birth Rate in Sri Lanka between 1900 and 1951 was high, fluctuating between 33 in 1912 and 42 in 1926. As shown in Fig 1.3 ,the first significant decline in CBR began in 1952 . However, the fertility decline gathered momentum in 1960s. In the 1970s, it remained more or less stable around 28. Subsequently, a drastic decline was recorded in fertility in 1980s, where the CBR declined by about 27 per cent from 28.2 in 1981, to 20.7 in 1991 with introduction of family planning programmes. 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.

Crude Birth Rate in 2012 (provisional) is 17.5 per 1,000 persons. The CBR of the districts which was prepared by considering the district of mother's usual residence (Births are distributed according to mother's usual residence not according to placeof occurance) is presented in the Detailed Table4.

Killinochchi district reported the highest CBR (23.3) and the lowest CBR reported was in Gampaha district (14.4) for the year 2012.

1.4.2 Crude Death Rate (CDR)

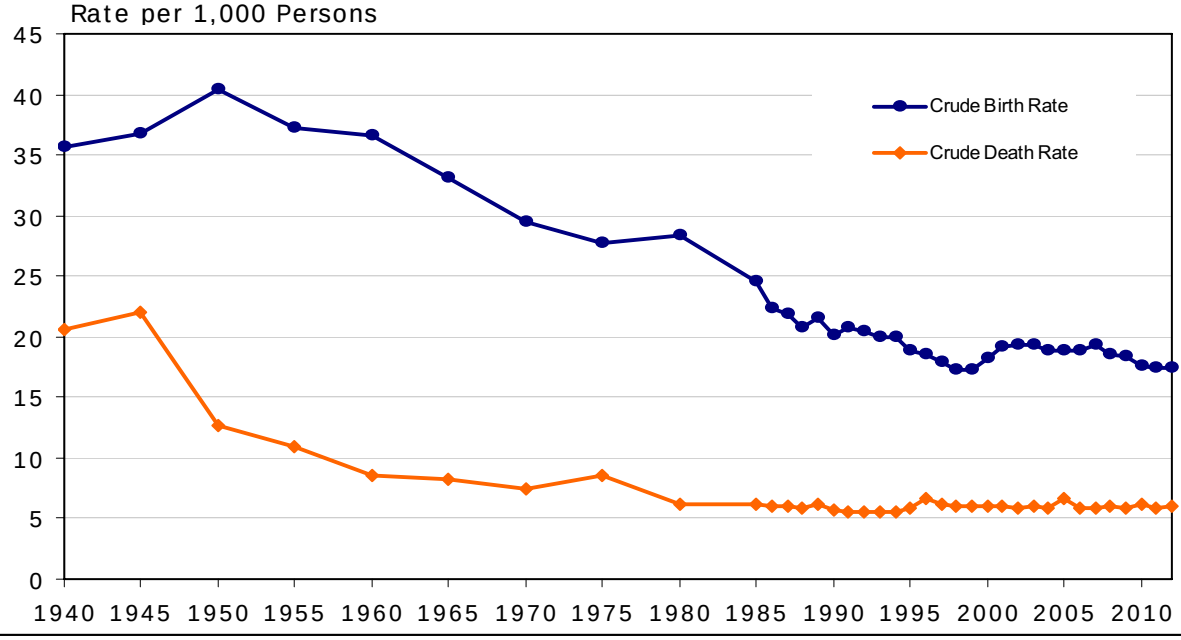
CDR is defined as the number of deaths in a particular year per 1,000 population.

The mortality level during the period 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 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 CDR for 2012(Provisional) was 6.0 per 1,000 persons (Table 1.4).It is important to note that deaths were distributed according to the district of the place of usual residence of the person while calculating district wise CDR. Galle district recorded the highest CDR (7.1) followed by Kandy district(7.0) for the year 2012 (Detailed Table 4).

Fig 1.3 : Crude Birth and Death Rates, 1940 -2012



Source : Registrar General's Department

1.4.3 Maternal Mortality Ratio (MMR)

Maternal mortality ratio is the ratio of the number of maternal deaths (excluding accidental or incidental causes) per 100,000 live births for a specified year. A maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

The maternal mortality ratio (MMR) has been very high in the past, fluctuating between 2,650 in the year 1935 and 1,550 in the year 1946 per 100,000 live births. A dramatic fall in the MMR in the post world war period is observed.

At present maternal deaths are reported to three different institutions by different reporting agents. These institutions are Registrar General's Department, Medical Statistics Unit in Ministry of Health and Family Health Bureau (FHB).

1. The most recent MMR released by the Registrar General's Department is for 2009 and the MMR reported is 22.3 per 100,000 live births (Table 1.4).
2. According to government hospital statistics (government institutions only) the corresponding MMR is 27 per 100,000 live births (Detailed Table 36) for the year 2012.
3. Maternal Mortality Ratio (MMR) reported by Family Health Bureau (FHB) for the year 2012 is 37.7 per 100,000 live births.

FHB has developed a system to monitor maternal deaths and Section 5.1.1.7 gives details of maternal deaths reported to FHB during 2012. It is important to note that more than 90 per cent of registered live births occur in government institutions.

A comprehensive study carried out in the year 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 Registrar General's Department.

1.4.4 Under Five Mortality Rate (U5MR)

The under five mortality rate is the number of deaths of children less than 5 years old per 1,000 live births per year. Latest information on under five mortality published by the Registrar General's Department is given below. Except in the year 2005, under five mortality has shown steadily decreasing trend. The higher rate reported in the year 2005 reflects the deaths due to the Tsunami disaster which occured in 2004.

The child mortality rate (CMR) is defined as the number of deaths of children between the first and fifth birthday, per 1,000 children surviving to age one. According to the Demographic and Health survey 2006/07 child mortality rate was 5 deaths per 1,000 children at age one. The Under five mortality rate as well as child mortality rate reflect the adverse environmental health hazards e.g. malnutrition, poor hygiene, infections and accidents.

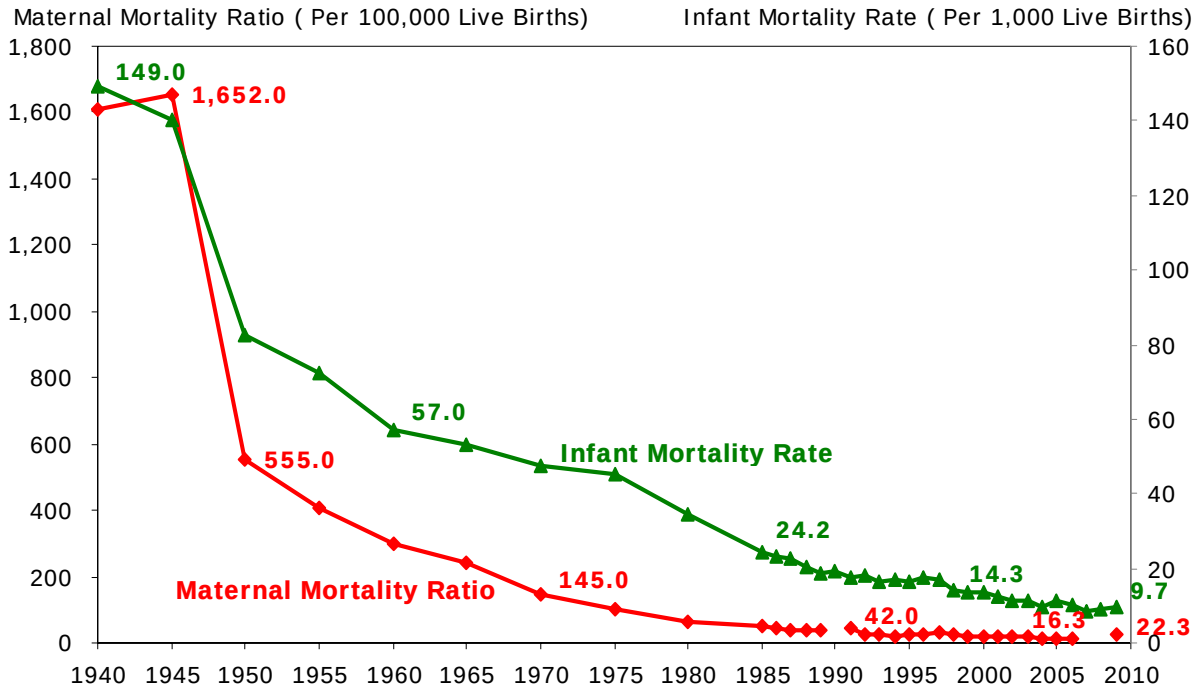
It has been observed that there is a inverse relationship between the mother's educational attainment and the probability of death of the child. Mother's age, birth order and birth interval are some of the key factors affecting child mortality. (Demographic & Health Survey 2006/ 07)

Table 1.5 :Under Five Mortality Rate per 1,000 live births

Year	Under Five Mortality Rate per 1,000 live births
2000	16.3
2001	15.2
2002	13.7
2003	13.5
2004	12.6
2005	19.0
2006	12.0
2007	10.4
2008	11.1
2009	12.1

Source : Registrar General's Department

Figure 1.4 : Trends in Maternal and Infant Mortality Rates, 1940 - 2009



Source : Registrar General's Department

1.4.5 Infant Mortality Rate (IMR)

Infant mortality rate is defined as the number of infant deaths (deaths under one year of age) per 1,000 live births in that year. 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 1.4). Figure 1.4 illustrates the trend graphically.

The IMR for the year 2009 produced by the Registrar General's Department by districts are given in detailed Table 4. IMR for 2009 is 9.7 per 1,000 live births.

1.4.6 Neo-natal Mortality Rate (NNMR)

Neo-natal mortality rate is defined as the number of neonates (an infant of 28 days old) dying before reaching 28 days of age, per 1,000 live births in a given year.

Early neonatal mortality refers to a death of a live-born baby within the first seven days of life, while late neonatal mortality covers the time after 7 days until before 28 days.

A decreasing trend is observed in the neo-natal mortality rate (NNMR) according to the Registrar General's Department.

The NNMR rate recorded for 2009 is 6.4 per 1,000 live births.

1.5 Health Surveys conducted by the Departement of Census and Statistics (DCS)

Demographic and Health Surveys are especially designed to collect information on current fertility and health status of the population in the country. This survey is conducted by DCS once every five years. A brief history of fertility surveys are given below.

Department of Census and Statistics has conducted several surveys related to fertility starting from 'The World Fertility Survey' in 1975.The World Bank Fertility Survey (1979), The Contraceptive Prevalence Survey (1980), and the Sri Lanka Contraceptive Prevalence Survey (1985). Then a series of Demographic and Health Surveys (DHS) was carried out in 1987, 1993, 2000 and 2006/07.

DHS surveys collect information from eligible respondents defined as ever-married women aged 15-49 years and their children below 5 years of age. Several internationally comparable key health indicators were produced including Millenium Development Goals from this survey to monitor the progress of the health sector.

1.6 Current Health Status of Household Population

Department of Census & Statistics under the National Household Survey Programme conducts Household Income and Expenditure Survey (HIES) once in every three years starting from 2009/10. The HIES questionnaire was revised in 2006/07 to capture all household information which helps to understand total living standard of the household including health status of the households.

The latest HIES survey was carried out in 2012/13 covering all districts of the country after 26 years. Generally the HIES is conducted over a period of 12 consecutive months to capture seasonal variations of income and expenditure patterns in Sri Lanka. The general sample size is 25,000 housing units which is adequate to provide reliable information down to district level. The preliminary report of HIES 2012/13 is issued by Department of Census and Statistics based on the data collected by 5,431 households throughout the country during the months July, August and September of 2012. The estimates given are mostly limited to residencial sector level inorder to preserve the reliability of them.

The data related to health situation of the household was collected from each and every person usually residing in the household who has received any medical treatment as out patient in any government or private hospital, medical center or healthcare center and as in-patient at any government or private hospital.

The survey reveals that,

- On an average 17.2 percent of the household population has taken health treatment one month prior to the survey from a government hospital or a health care center and 14.5 percent from a private hospital or a health care center as out patients.
- About 8.3 percent of the household population has taken health treatment during the 12 months prior to the survey period from a government hospital and 1.0 percent from a private hospital as in-patients.
- Out of total household population in Sri Lanka, 14.1 percent has suffered from chronic illness or disability at the time of the survey.

(The preliminary report of the survey is available in the web Site www.statistics.gov.lk).

1.7 Social Indicators

1.7.1. Literacy Rate

A person who has ability to read and write at least one language was regarded as literate. The literacy rate is defined as the percentage of the literate population aged 10 years and over. The 5 percent sample of the Census of population and Housing - 2012 reveals that the litaracy rate is 95.6 percent.

So, the literacy rate has increased by 8.2 percentage points from 1981 (87.2 percent in 1981). The literacy rate of males (96.8 percent) is relatively higher than that of females (94.6 percent). As per the 5 percent sample of the Census 2012, percentage of literate population in the urban sector is 97.6 percent while the corresponding figure for the rural and estate sectors are 95.7 and 85.8 precent respectively.

1.7.2. Level of Education

The results of 5 percent sample of the Census of population and Housing 2012 reveal that 3.8 percent of the population aged 5 years and over had never been to school and corresponding percentage for males and females were 2.7 and 4.8 respectively.

Nearly 97 percent of the population aged 5 years and over who were residing in the urban or rural sector had some form of formal education, in contrast 12 percent of the population aged 5 years or more in estate sector had never been to school.

1.7.3. Physical and Mental Difficulties

The information about both physical and mental difficulties in six domains of seeing, hearing, walking, remembering (cognition), self-care and communication among population were collected in the Census of Population and Housing 2012. According to the results of 5 percent sample of the census, 8.6 percent of the population aged 5 years and over was suffering from any difficulty at least one domain of the above difficulties.

Table 1.6 : Proportion of Population (5 years and over) with difficulties by Type of Difficulty

Type of Difficulty	Proportion of population (5 yrs and over) with difficulties
Population with at least one difficulty	8.6
Seeing	5.3
Hearing	2.1
Walking	3.9
Cognition	1.9
Self care	1.1
Communication	1.0

Source : Department of of Census and Statistics

1.8 Water Supply and Sanitation

1.8.1. Source of Water Supply for Drinking

The Census of Population and Housing-2012 was collected data on source of drinking water from all households in occupied housing units. According to the provisional data based on 5 percent sample of the Census, majority of households drink water from protected wells (46 percent) and the percentage of households getting water from unprotected wells is 4 present. Comparison with previous censuses and surveys reveal that percentage of households using unprotected wells has decreased in contrast to the increase of using piped born water.

Protected well, piped born water, tube well and botteled water are considered as safe drinking water sources. So, around 80 percent of households have access to safe drinking water (Detailed Table 5).

The percentage of households using piped born water for drinking is 31 precent. However significant variations can be seen among districts as well as sectors.

1.8.2 Toilet Facilities

According to the results of provisional data based on 5 precent sample of the Census of Population and Housing 2012, 98 precent of the households have their own toilet facilities; 87 precent have a toilet exclusively for the household and 12 precent are sharing with others or use common toilets. The percentage of households which are not using a toilet at all is 1.7 percent. (Detailed Table 6) The situation is worse in Mullaitivu, Killinochchi and Batticaloa districts.

2. Organization of Health Services

Western, Ayurvedic, Unani, Siddha, Accupuncture and Homeopathy systems of medicine are practiced in Sri Lanka. Of these, Western Medicine is the main sector catering to the needs of a vast majority of 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 with an opportunity to seek medical care from various sources, under different systems of medicine.

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

Allopathic healthcare delivery in Sri Lanka is provided by both public and private sector, while the total preventive care is provided by the state health sector. 95% of the inpatient care and 50% of the outpatient care is provided by the state healthcare system. The remaining 5% of the inpatient care and 50% of the outpatient care is provided by the private health sector.

2.1 National Health Policy

The current national Health policy has evolved over time and an explicit health policy was first declared in 1996. Since that time several policy dialogues have contributed to the preservation of a free health system. The current health policy is based on an evidence based process that was carried out to develop the health master plan of 2007 - 2016. The volume 1 of the Master plan spells out the overarching policy for the sector. Since then National health program policies have been further improved or have developed based on the policy principles stated in this document.

2.1.1 Health Policy Vision

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

2.1.2 Mission

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

The Health Policy principles are designed to support Sri Lanka's overall economic and social goals. It aims to facilitate equity through easey accessibility to health services, improve productivity and ensure that resources invested to health, result in a healthier population that is able to contribute to the economic and social wellbeing of the country. Five strategic objectives are outlined in a framework with the aim of improving health status and reducing inequalities.

2.1.3 National Health Development Plan

The National Health Development Plan was developed after extensive consultation with line and provincial ministry institutions . In addition the Health Master Plan, the Mahinda Chinthana vision for the future were studied and incorporated in to the document. The NHDP is for 2012 - 2017. It covers the future developments in the whole sector under several strategies.

2.1.4 National health policy and its contribution to achieving Government policy

Mahinda Chinthana policy explicitly states Government policy direction for social and economic development in the country. The following statements in the Mahinda Chinthana further contribute to the translation of health policy into action plans.

Analysis of extracts of 'Mahinda Chinthana' stating health direction are as follows

- Providing free health services in an equitable manner that benefit the rural, poor, under served, vulnerable and post conflict communities
- Delivery of a community emphacized healthcare service which fulfils the health needs of the people with special focus on nutrition
- Improving the overall quality of healthcare delivery
- Providing adequate human resources by increasing the numbers trained and for health capacity development
- Reforming organizational and management structures to improve efficiency, effectiveness and accountability
- Allocating more financial and other resources and ensuring that resources for health are optimally utilized
- Prevention and control of both communicable and non-communicable diseases while promoting healthy life styles
- Improving the health information system for better decision making with modern e-health solutions
- Encouraging private sector investments in healthcare provision including private–public partnerships
- Recognizing that health and other sector developments are mutually interdependent

2.2 Organization of the Health Care Delivery System

The Ministry of Health is the main stakeholder providing stewardship to health service provision in Sri Lanka. The Government care system is devolved to provinces to some extent.

The Ministry of Health has a mandate to regulate and improve quality of care in the private institutions providing health. The system is also supported by several institutions that provide other resources for health. Several training institutions provide basic, post basic and in-service training. The public sector is financed mainly through the government tax based system. Out of pocket contribution has been the dominant method for financing private health provision.

The different sections in this bulletin outline the government health care delivery system which include Health administration, Curative care institutions, community health services and public health programs, training institutions, other resources for health care, financing mechanisms.

The Organization Chart of Ministry of Health is given in Fig.2.1. describes the structure for management of health services.

2.2.1 Curative Care Services

There are curative health care institutions belonging to the line Ministry and the Provincial Ministries of health Services. The distribution of healthcare institutions according to hospital categorization is given in Detailed Table 7.

2.2.2 Preventive Care Services

Public health is currently organized and delivered through 24 preventive health care programmes, directorates and units. These national progams also provide specific policy guidance, in-service training, supply of equipments and materials and overall supervision of the programmes. These national programs are further mentioned in chapter 5.

2.2.3 Decentralized Preventive/ Public Health Program

The grassroots level preventive health services are provided by 324 Medical Offices of Health (MOH) Offices distributed throughout the country.and the services are provided through 3500 field Maternal and Child welfare clinics. The average Population for a MOH area is around 60,000. Responsibilities of a MOH office are,

- Maternal and Child Health – Ante Natal Care, Post Natal Care, Immunization, School Health, Family Planning.
- Control of Communicable Diseases
- Health Promotion
- Implementation of Food Act
- Water and Sanitation
- Disaster Management

2.3 Key Developments in the Health Sector in 2012

2.3.1 Improving Quality and Efficiency of Healthcare Services

- Strengthening of Management Committees in all Major Hospitals
- Setting up of Staff Advisory Committees
- Streamlining of Performance Reviews at different levels
- Strengthening of management Information systems
- Introduction of National Health Excellence Awards Programme to be conducted annually
- Introduction of National Guidelines for improvement of quality and safety of healthcare institutions
- Establishment of a Directorate for Quality and Safety

2.3.2 Strengthening Central – Provincial Coordination

- Initiating Provincial Health Ministers Summit quarterly
- Giving authority to Provincial Health Ministers to supervise all healthcare institutions including Line Ministry institutions in relevant provinces
- Regular Provincial Reviews
- Preparation of a National Health Development plan to address priority national health needs including line ministry and provincial institutions

2.4 Organization development Unit

The organization development unit is responsible for the direction and coordination of all activities to improve the organizational effectiveness of the Ministry of Health

The main activities of the organization Development Unit in 2012 as follows.

2.4.1 Coordination of the National Health Development Network

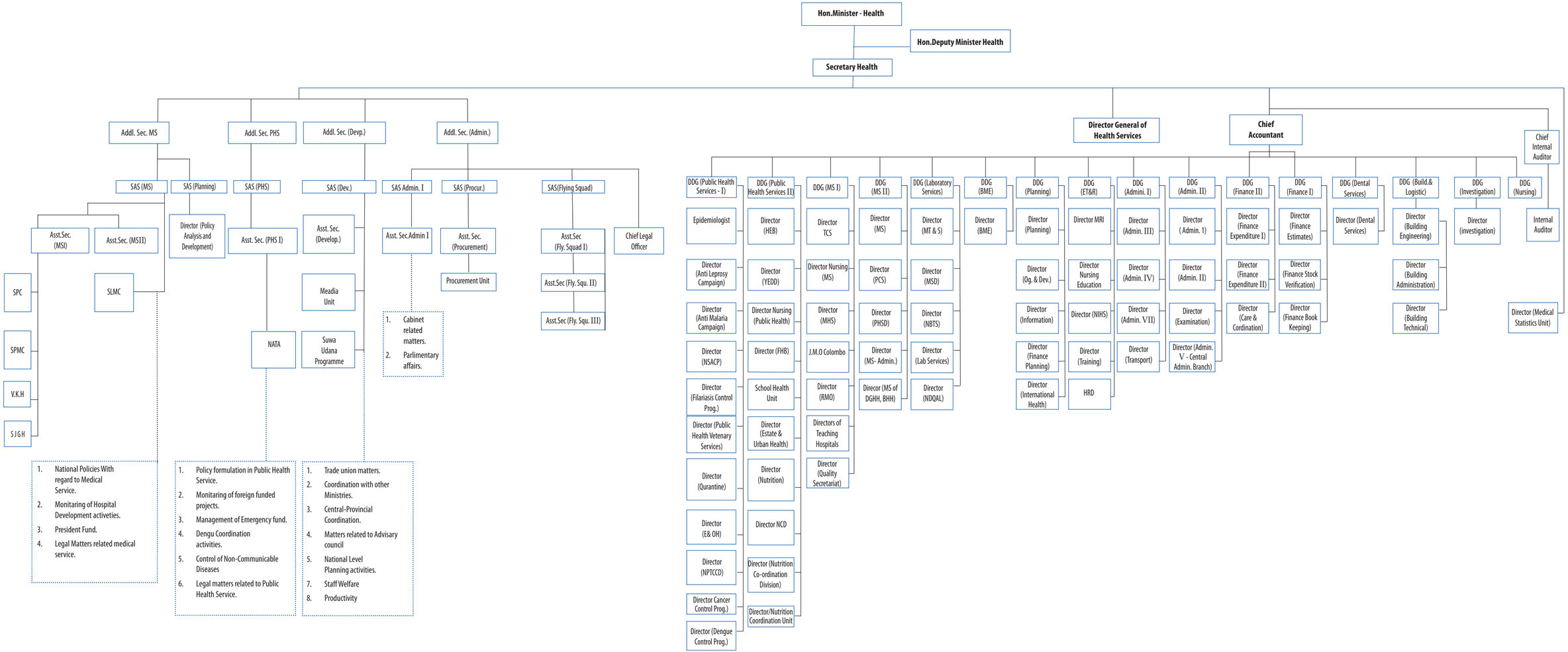
Strengthening the existing health development network at National, Provincial and Local levels through the National Health Development Committee. It also supports improved technical coordination between the central and provincial ministries of health for development of health services through the Health Developmentc committee meetings.

2.4.2 Review and coordination of Hospital Management Committees

Coordination and further strengthening of Hospital Management Committees established under the General Circular issued in September 2011 to enssure quality services to patients.

ANNUAL HEALTH BULLETIN - 2012 *Organization of Health Services*

PROPOSED ORGANIZATION CHART - MINISTRY OF HEALTH



2.5 Health Care Quality and Safety

Sri Lanka is a country known to the world for providing cost effective healthcare free of direct cost to the patient. The maternal mortality ratio, neonatal mortality rate, life expectancy at birth and many more health indices are comparable with those of the developed world. Although these Sri Lankan indicators are the best in the region, much has to be done to ensure quality and safety in the delivery of healthcare, especially in hospitals. Many attempts were made in the past to achieve this, but had little success due to a variety of reasons.

The evolution of a National Quality Assurance Programme in the Sri Lankan Health Services dates back to 1989 and since then, it showed a steady growth. Anyhow, a formal programme was not initiated. Therefore, it was recommended to establish an apex body to facilitate the quality improvement programme throughout the country.

Accordingly, under World Bank – HSDP funds, a building was constructed for the National Quality Assurance Programme. A consultative committee was appointed to decide on the scopes and functions of the Directorate / Healthcare Quality and Safety and the Directorate commissioned functioning in September 2012.Since then, measures have been taken to carry out the quality improvement programme of the Ministry of Health in a planned manner. The Directorate is situated at the Castle Street Hospital for Women premises and comes under the purview of DDG (MS – 1). Currently, this directorate works under the concept of *'Centrally Driven, Locally Led, Clinically Oriented, and Patient Centered Continuous Quality Improvement Programme'.*

The objectives of the Directorate / Healthcare Quality and Safety are;

- To facilitate all Healthcare Institutions towards quality and safety Improvement through a process of consultation
- To develop policy guidelines towards improving quality and safety in healthcare
- To facilitate for Setting up of standards in clinical care practice and management of hospitals towards quality and safety
- To enhance the knowledge of health care personnel through continuous medical education
- To establish a Monitoring and Evaluation mechanism to assess the level of quality and safety in healthcare institutions
- To carry out research on quality and safety in healthcare
- To promote quality and safety in healthcare
- To network with national and international organizations to improve quality and safety of health institutions

It has been identified that in future, an accreditation system for health care institutions should be established where Directorate / Healthcare Quality & Safety will be the focal point. To sensitize the administrators and clinicians, in October 2013, a workshop on patient safety was conducted with the participation of international resource personnel.This was funded by the WHO. Also,100 middle level managers were trained on quality and safety.

2.6 Health Facilities

As at December 2012, there were 621 medical institutions with inpatient facilities. There were 487 Primary Health Care Unit and 337 MOH areas in Sri Lanka in 2012.

The number of beds in the hospitals increased to 76,087 in 2012.

In 2012 patient beds per 1,000 population is 3.7. In total, there are 18 Teaching Hospitals with 21,437 patient beds (Detailed Table 7).

In 2012, the data was analyzed by new Hospital Categories. Teaching Hospitals, Provincial General Hospitals, District General Hospitals, Base Hospitals Type A, Base Hospital Type B, Divisional Hospital Type A, Divisional Hospital Type B and Divisional Hospital Type C. In addition to these types of hospitals there are Primary Care Unit & Maternity Homes with inpatient beds. This is the smallest type of hospital.

Table 2.1 : Number of Health Institutions and Hospital Beds, 1995 - 2012*

Item	2000	2003	2004	2005	2006	2007	2008	2009	2010	2012
Hospitals [1]	558	607	628	608	608	615	647	642	630	616
Patient Beds [1]	57,027	59,262	57,404	61,594	67,024	68,694	67,942	70,842	72,510	76,087
Patient Beds per 1000 Population	2.9	3.1	2.9	3.2	3.4	3.4	3.4	3.5	3.5	3.7
Central Dispensaries	404	400	397	413	428	441	439	443	464	487
MOH Areas	252	280	273	286	288	291	298	303	327	337

Excludes: *Source: Medical Statistics Unit*

[1] Includes Maternity Homes and Central Dispensaries.
*2011 data sets are processing

There are 2 provincial General Hospitals and 17 Distric General Hospitals in the country.

There are a few Specialized Hospitals for the treatment of chronic diseases like tuberculosis, leprosy, mental illnesses, cancer, chronic rheumatological diseases and infectious diseases. These Hospitals are included in other category. There are close to 5,000 beds in these hospitals.

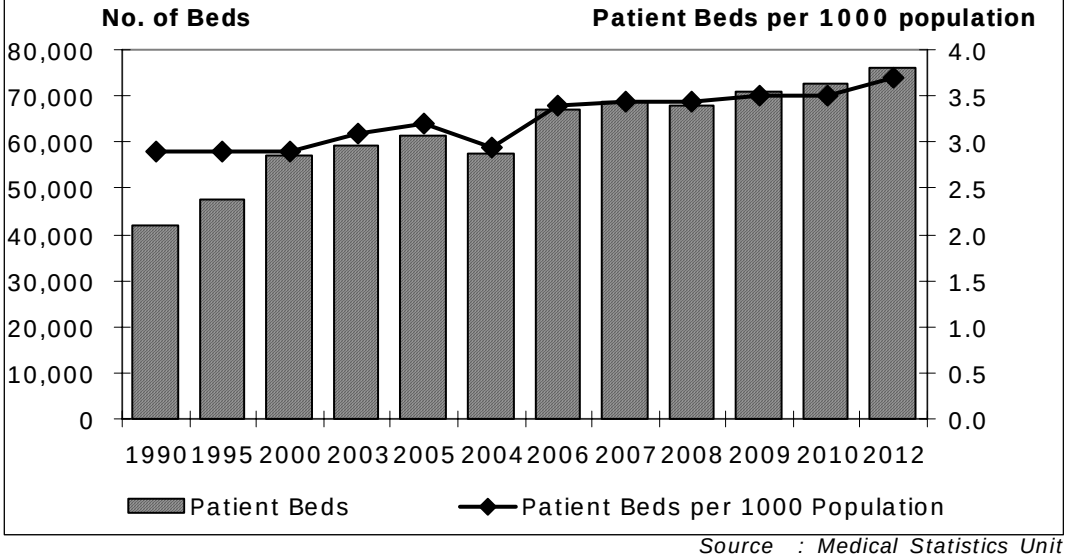
Table 2.2 : Availability of Patient Beds by Type of Institution, 2012

Type of Institution	Total number of institutions	Patient Beds (Range)	Average Number of Patient Beds	Number of Hospitals Having Less Than Average Number of Patient Beds
Teaching Hospitals	18	146 - 3,561	1191	11
Provincial General Hospitals	2	1,123 - 1,375	1249	1
District General Hospitals	17	232 - 1,098	566	7
Base Hospitals Type A	22	106 - 746	353	11
Base Hospital Type B	46	52 - 635	199	35
Divisional Hospital Type A	46	62 - 225	101	14
Divisional Hospital Type B	134	24 - 113	71	59
Divisional Hospital Type C	300	2 - 110	26	114
Primary Care Unit and Maternity Homes	9	2 - 20	17	7
Other 1	27	12 - 1,530	185	8

Source : Medical Statistics Unit

The National Hospital of Sri Lanka (NHSL), located in the city of Colombo is the largest hospital in the island. In 2012, it had more than 3,500 patient beds. This hospital provides for a number of specialties, including subspecialties like neurology, cardio-thoracic surgery, but excluding paediatrics, obstetrics, ophthalmology and dental surgery. A renal transplant service is also provided by a collaborative project of the University Surgical and Medical Units of the Hospital. The NHSL has a well-equipped accident service and several intensive care units. The specialties not found in the National Hospital are provided by the two Maternity Hospitals, Children's Hospital, Eye Hospital and the Dental Institute located in close proximity.

Fig 2.2 : Number of Beds and Patient Beds per 1000 Population, 1990 - 2012



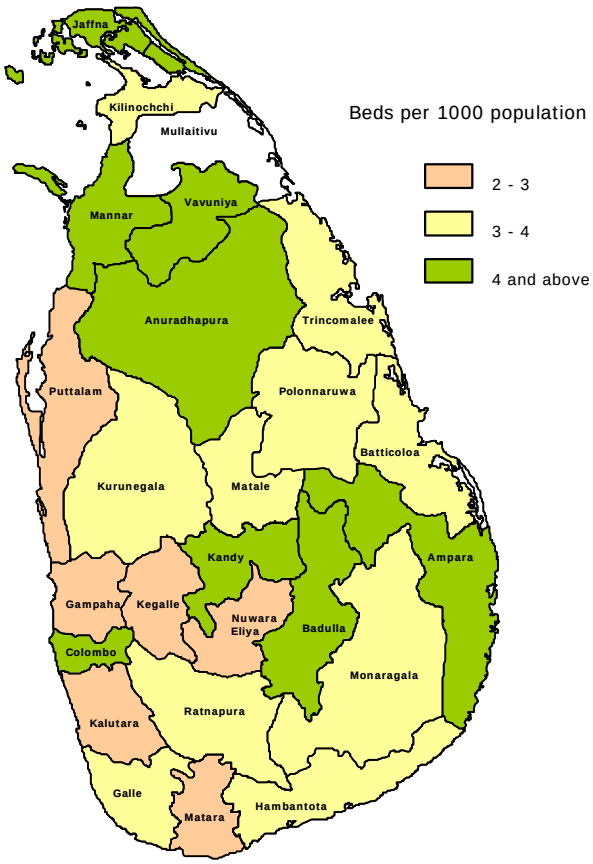
Source : Medical Statistics Unit

During 2012 Sri Lanka had 22 Base Hospitals Type A with a total of 7,759 patients beds and 46 Type B with a total of 9,151 patient beds (Detailed Table 7). The average number of beds in a Type A was 352 and 198 in Type B. More than 75 percent beds less than average bed amount in Base Hospital type B.

The number of beds has gradually increased from 2006 to 2012. The patient beds per 1,000 population have also increased from 2006 to 2012.

In 2012 there were 337 Medical Health Offices headed by Medical Officers of Health, carrying out preventive services in Sri Lanka.

Fig 2.3 : Distribution of Hospital Beds by District December 2012



Source : Medical Statistics Unit

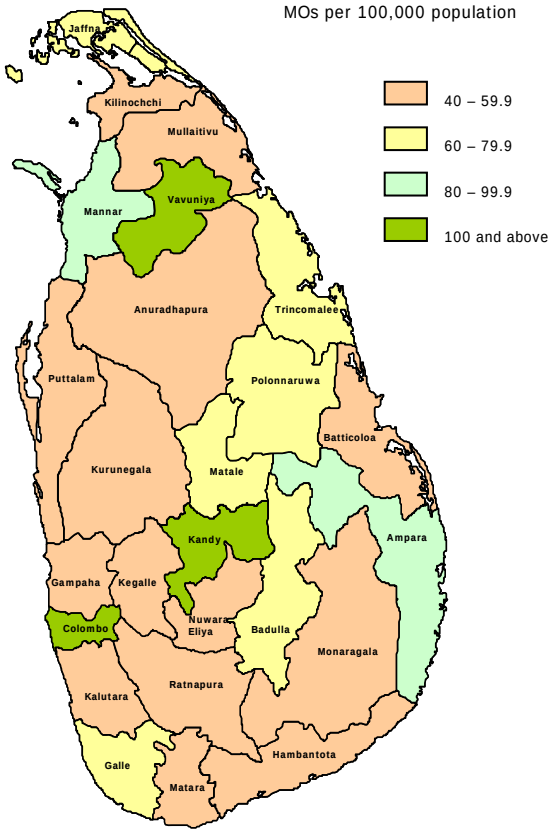
Note: No any bed return from Mullaitivu District

Although, in 2012, the beds per 1,000 population is 4 the bed distribution among all districts are variance. According to the fig 2.3 including colombo, Kandy there are 8 districts, reported over the islend value of 4.

There are 6 districts has reported less than 4 beds per 1,000 population. In these districts there are more population and not enough for the hospital capacity.

2.7 Health Manpower

Fig- 2.4: Distribution of Medical Officers (MO) December 2012



Source : Medical Statistics Unit

The total number of Medical Officers increased to 15,910 in 2012. Accordingly, medical officers per 100,000 population also increased. In 2012 this figure was 78 as compared to 71 in 2010. (Detailed Table 9)

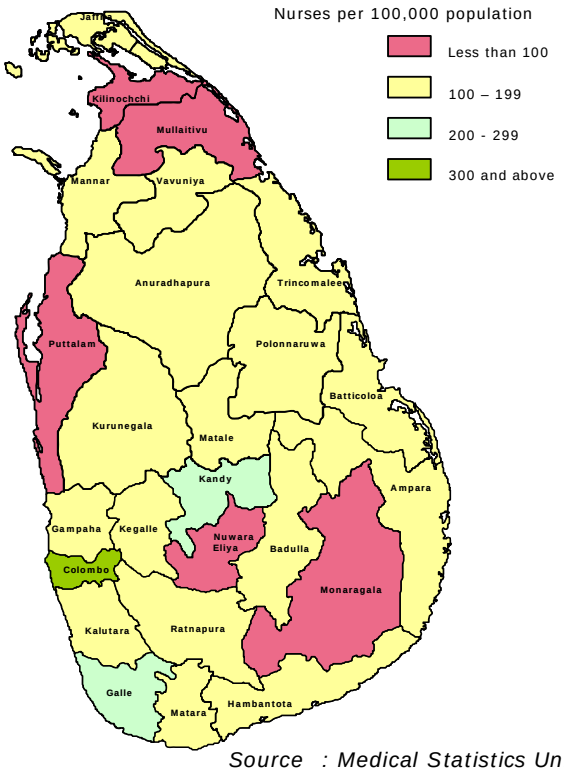
There are 5 districts more than 78 doctors per 100,000 population and among those 3 districts, Colombo,Kandy and Vavuniya, over 100 doctors

per 100,000 population. In Sri Lanka all districts have over 40 doctors per 100,000 population.

The number of Nurses were 36,486 in 2012. This was 180 nursus per 100,000 population has increased from 171 in 2010 to 180 in 2012.

Although the island value is 180 nursus per 100,000 population more than 50 percent of all districts are less than 180 nursus and 5 districts are less than even 100 nursus per 100,000 population.

Fig- 2.5: Distribution of Nursing Staff December 2012



Source : Medical Statistics Unit

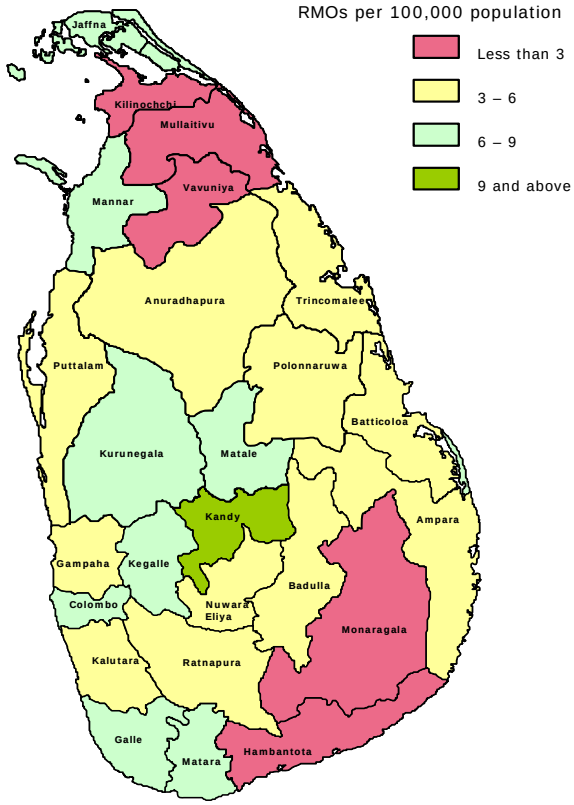
A shortage of qualified paramedical staff, such as Pharmacists, Medical Laboratory Technicians, Radiographers, Physiotherapists and ECG Recordists still exists. (Detailed Table 10)

The distribution of specialists in curative services as of December 2012 is presented in Detailed Table 11. of the specialists, 35 percent of the medical specialist in the curative sector are concentrated in the Colombo district. The districts of Kilinochchi, Mullativu and Mannar did not have a single specialist, and absence of certain common specialties such as general medicine and surgery, obstetrics, and paediatrics in some districts is also noteworthy.

The total Registered Assistant Medical Officers are reported as 1,530 in country. There are no further recruitment for this position and due to the reason it has being decreasing with their retirements and resigning in Government sector.

The highest RMO rate per 100,000 population was reported in Kandy district and it was 9.

Fig- 2.6: Distribution of Registered Medical Officers (RMO) - December 2012



Source : Medical Statistics Unit

2.8 Health Manpower Training

2.8.1 Basic Training

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

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

2.8.2 Postgraduate Training by the PGIM

The PGIM was established by the PGIM Ordinance No. 01 in 1980 and was affiliated to the University of Colombo. This institute is providing instruction training and research in a range of specialties and sub-specialties in Medicine. The PGIM is training both medical and dental graduates for the award of the degrees of Doctor of Medicine and Master of Science and Postgraduate Diplomas and certificates. The PGIM works in close collaboration with the Ministry of Higher Education, Ministry of Health, Faculties of Medicine of Universities and Professional Colleges.

The PGIM has been contributing immensely during the past thirty years towards the development of specialists' doctors needed by the country.

1. PGIM conducted 111 variety of examinations including selection/PG Diploma/MSc/MD Examinations in addition to the in course assessments.

2. New Programmes at the PGIM

   The PGIM obtained the approval of the Senate for the following new training programmes during the year 2012:

   - PG Diploma in Health Sector Disaster Management
   - PG Diploma in Anatomy
   - PG Diploma in Physiology
   - PG Diploma in Elderly Medicine
   - MSc in Human Nutrition
   - MD in Emergency Medicine leading to Board Certification

3. Following curricula/Prospectuses of existing programmes were reviewed:

   - MD and Board Certification in Obstetrics & Gynaecology
   - PG Diploma and MD and Board Certification in Medical Education
   - MD and Board Certification in Medical Parasitology
   - MD and Board Certification in Medical Microbiology
   - Diploma in Family Medicine and MD and Board Certification in Family Medicine by Clinical & training and By theses programmes
   - PG Diploma & MD and Board Certification in Transfusion Medicine

4. Graduate output during the year – 2012

   - PG certificate - 74
   - PG Diploma - 152
   - MSc - 99
   - Doctor of Medicine - 226
   - Board Certification - 212

5. New entrants for year – 2012

   - PG Diploma Programmes - 248
   - MSc Programmes - 94
   - MD Programmes - 234
   - PG Certificate courses - 45

6. Institution of Ethical Review Committee

7. Introduction of an Evaluation Mechanism for PG Trainees - Peer Team Rating (360 degree)

8. Workshops for trainers/Examiners - 07

9. Workshop for trainees - 13

10. Research – Theses / dissertations done by PG trainees in 2012
    - Theses - 14 (Com. Med/Dentistry)
    - Dissertations - 39 (Com. Med/Dentistry)
      - 19 (Med. Administration)
    - Research Reports - 14 (Pathology)

11. Publications – Compilation of annotated bibliography of Research reports, Dissertations, Theses and case reports done by PG trainees from 1982 to 2010.

12. Reconstitution of Boards of Study, Specialty Boards and other committees at the PGIM.

2.9 Health Finance

The total Government health expenditure for 2012 was Rs. 89,291 million, which is an increase of 8.65 percent as against the previous year. During 2012, the proportion of public expenditure on health services was 1.2 per cent of the GNP and 4.07 per cent of the national expenditure. The per capita health expenditure was Rs. 4,392 in 2012.

In 2012 the total recurrent health Expenditure was 74,184 millon rupees (national level expenditure was 74184 million rupees and provincial protion was 16325 million rupees). The recurrent health expenditure accounted for 83.08 per cent of the total expenditure. (A major proportion of the health expenditure is utilized by the patient care services.

The Capital health expenditure accounted for 16.91 per cent (Rs. 15,107 Mn) of the total expenditure whilst national level and provincial level portions were 90.3 % (Rs 13,647 Mn) and 9.7 % (Rs. 1,460 Mn) respectively.

2.9.1 Sri Lanka National Health Accounts System

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

SLNHA have identified the financial burden that falls upon the key players such as government, the private sector including households, the insurers and non-governmental bodies. It provides information of the health spending over the years in the context of the political, economic and social structure of the country. In the framework these expenditures are classified into three dimensions which according to ICHA is source of funding, functional use of expenditure and provider entity.

SLNHA estimates are derived from multiple data sources consisting of state accounts, household surveys, and census of service providers, enterprises, insurance agencies and direct contacts on other surveys.

2.9.1.1 Total Health Expenditure

Total expenditure on health (TEH) is defined to include all expenditure on personal health services, community (Public health and preventive) health services and gross capital formation in health care providers. Total expenditure on health (TEH) were estimated to be Rs.238,613 Millionin 2012, and Total expenditure on health (TEH) 3.1 Per centof the GDP.(WHO)

2.9.2 Foreign Aid Utilization

Each year, The Ministry of Health receives foreign aid in the form of money, materials, drugs, medical equipment and technical input. During 2012 the foreign component of the health expenditure was Rs. 7,510 million (National) and this accounted for 8.41 percent of the total health expenditure. Meantime, the foreign aid component during 2011 was 3.34 per cent of the total health expenditure.

2.10 Medical Statistics Unit (MSU)

Medical Statistics Unit has been established in the Ministry of Health around 1960s.

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

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

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

After receiving statistical returns to the Medical Statistical Unit, data entry, editing and processing is carried out by the staff of MSu in order to provide statistics for the Annual Health Bulletin.

In addition to the above task MSU is responsible for various activities such as preparing and printing returns and registers for the relevant year, and distribution to the relevant institutions, provide data for various user requirements, conduct training / awareness programmes to all the staff handling data in hospital record rooms and carry out hospital reviews to identify data lapses.

In addition, the MSU prepare the Population estimates for all Medical Offices of Health (MOH) areas. Also the unit prepare the list of health institutions and update it in every year.

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

The MSU has many challenges. For instance it tries to update its data collection procedures to carter to the needs of the current demands of users jointly with other units of the Ministry of Health.

Since 1960 The MSU has collected data using manual systems and published Annual health bulletins from 1980 to 2010 continuously excluding few years. Although the Unit tries to produce these bulletins on time, it has been delayed due to many inherent drawbacks of the manual data collection mechanism.

In 2010, Medical Statistics Unit has taken a initiative to develop Electronic Indoor Morbidity and Mortality System (eIMMR) to overcome the drawbacks of the Indoor Morbidity and Mortality Return. eIMMR is a web based system design to facilitate collecting, storage, analysis and dissemination of inward patients statistics to improve efficacy, efficiency and accuracy.

Introduction of eIMMR is expected to ensure the timely publication of the annual health bulletin with accurate and validated data. This system will have the sophistication to cater for numerous analytical requirements and will also function as a disease surveillance system. The recurrent costs incurred for data collection will significantly be reduced due to the reduction in printing, postage and logistical costs.

The system is developed by two medical officers of the MSc in Biomedical Informatics (BMI) course in collaboration with the Medical Statistics Unit, using open source software. It was designed as a web based software, in order to bring down the cost and ease of implementation, improve accessibility and availability, make data centralised, provide ease of administration and to encourage use.

The system was piloted in six hospitals for about one year. There were Lady Ridgeway children's Hospital, Castle Street womens Hospital, De Soyza Hospital, Sri Jayawardenepura Hospital, Base Hospital Panadura, Rehabilitation Hospital Ragama.

At the end of the piloting phase a user satisfaction survey and a comparison study was done to find the effectiveness of the eIMMR. The secretary of Health has issued a general circular mentioning the guidelines for implementation of eIMMR.

3. Morbidity and Mortality

Introduction of Mortality

In demography, Mortality refers to the incidence of death or the number of deaths in a population.

Mortality plays a vital role in determining the size, growth and structure of national population. It is considered as the most striking demographic event all over the world.

Mortality trends reflect health statistics of any country. Mortality Statistics, are used in areas such as public health administration to identify health sector needs and to evaluate the progress of public health programmes in different areas.

Further more, collecting and analysis of mortality information would help:

(a) To identify levels and trends of mortality

(b) To identify patterns and trends in the causes of death and their impact on mortality

(c) To observe age patterns of mortality

(d) To identify deferentials in mortality between populations

(e) To identify the demographic, social, economic, behavioural and environment factors which influence levels and trends in mortality

(f) To compare mortality levels between different populations.

(g) To measure the strengths and weaknesses of hospitals.

The Mortality rate can be distinguished into crude death rate, the maternal mortality rate, child mortality rate, Standardized mortality rate and age specific mortality rates.

Mortality statistics are mainly collected from vital registration system. However, in some countries if there is no proper vital registration system, mortality data collection will be done through census or surveys.

In Sri Lanka hospital mortality information are collected using the IMMR (Indoor Morbidity and Mortality Return) in each government hospital and processed by the Medical Statistics Unit (MSU). This system has been collecting morbidity and mortality data since 1985.

Mortality information collected from the vital registration system was established in 1867. It was actually implimented in 1897 to collect all births, deaths and marriages of the Sri Lankan population. The main mortality indicators computed are age-sex specific mortality rates and number of deaths.

Introduction of Morbidity

Morbidity refers to the state of being diseased or unhealthy within a population. Morbidity refers an incidence of ill health in a population. Morbidity information reflects the disease patterns of the population.

Morbidity data is collected according to the diseased type, gender, age and area. Collecting and analysis of morbidity information would help

(a) To identify health situation of the country and patterns of diseases.

(b) To plan or improve the sectors which need high priority.

(c) To plan future health programmes.

(d) To compare morbidity trends and patterns across countries.

(e) To identify social and spatial circumstances and variations of morbidity within countries.

(f) To formulate health policies and financing of health services.

The main morbidity indicators computed include incident rates and prevelence rates.

In addition, various indicators are computed using both morbidity and mortality information such as cause-specific death rates, Cause-Specific death rates and leading causes of hospital deaths etc.

3.1 Hospital Morbidity and Mortality

Morbidity data is available only for patients seeking treatment as inpatients in government hospitals in Sri Lanka. Morbidity data of patients attending the outpatient departments of government hospitals, ayurvedic institutions and the private sector are not routinely collected. However, the limited information collected through surveys, registers are 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 the main source of morbidity data. This return is collected quarterly from all government hospitals except for Primary Health Care Units and Maternity Homes and prossesed by the Medical Statistics Unit.

The IMMR used since 1996 is based on the 10th revision of the International Classification of Diseases (ICD-10 version).

The final diagnosis recorded in the patients' records is analyzed in order to complete this Return. In the Teaching Hospitals, Provincial and some Base Hospitals, the IMMR is prepared by Medical Record Officers and the Medical Record Assistants. Planning, Programming and Development Officers and Planning,Programming and Development Assistants are also engaged in recording statistics. Registered /Assistant Medical Officers are still utilized to do the compilation of inpatient statistics in the hospitals and these officers are mainly employed to attend to patients care, and so, they perform the statistical activities as an additional duty.

During the year under review, in government hospitals, 6.1 percent of the discharges and 7.3 per cent of the deaths are reported as uncoded. Even though reported percent of uncorded morbidity have increased the reported percent of deaths have decreased and still these are considered as a big problem for health information.This was more pronounced in the large hospitals. This lapse is mainly due to reasons such as incomplete patient records, shortage of statistical staff, lack of supervision at all levels, lack of facilities, patient records retained in wards for a long period and not sent in time to be analysed, etc. It is also attributed to poor commitment and data not being used for the management of the hospitals by those involved.

It should be noted that repeat visits, transfers and multiple admissions of the same patient for the same disease are reflected in the morbidity data as additional cases. Therefore, the morbidity data available in Sri Lanka should be interpreted with caution, considering the above limitations.

3.1.1 Inpatient Morbidity

Detailed Table 16 gives trends in hospital morbidity and mortality by ICD broad disease groups for the period 2004 – 2012.

All disease groups are seen trends in increasing or decreasing in hospitalization , considering past 5 years.

Increasing trend:

- Group of neoplasms is shown an increasing trend during the past 5 years (1.6% in total hospitalization in 2012)
- Diseases of the circulatory system has been shown an increasing trend last 5 years (5.3% in total hospitalization in 2012)
- Diseases of the respiratory system has been also shown an increasing trend considering last 5 years (10.1% in total hospitalization in 2012)
- Group of diseases of the digestive system were reported an increasing trend during last 5 years (5.0% in total hospitalization in 2012)
- Group of diseases of Genitourinary system were also shown an increasing trend during last 5 years (5.5% in total hospitalization in 2012)
- Group of injury, poisoning and certain other consequences of external causes were increased during this period (32.6% in total hospitalization in 2012)

In spite of the effort taken to improve the quality of the final diagnosis and cause of death given by doctors in the patient record, symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified has increased and it is 92.0 per cent of total discharges in 2012. Lack of hospital supervision, and delay in writing the final diagnosis on discharge of the patients, have mainly contributed to this situation.

Decreasing Trend

- Group of certain infections and parasitic diseases has being decresing during past 5 year. (8.2% of total hospitalization in 2012)
- Group of congenital malformations, deformations and chromosomal abnormalities has shown a decreasing trend during last 4 years. (0.2% of total hospitalization in 2012)

According to the Detailed Table 16, highest number of deaths per 100,000 population has been reported due to diseases of the circulatory system which was 65 followed by deaths due to diseases of the respiratory system (25), neoplasms (22), Diseases of the genitourinary system (12) and injury, poisoning and certain other consequences of external causes (14) per 100,000 population.

Detailed Table 17 shows the trends of some selected diseases. Increase is shown in hospitalization per 100,000 population due to following diseases compared to last five years.

- Septicemia (33.6 per 100,000 popualtion in 2012)
- Anaemias (105.6 per 100,000 popualtion in 2012)
- Hypertensive diseases (486.4 per 100,000 popualtion in 2012)
- Abortions (959.3 per 100,000 females of the reproductive age group in 2012)

3.1.1.1 Leading Causes of Hospitalization

Detailed Table 18 gives the leading causes of hospitalization of the country and Detailed Table 22 indicates the district profile of the same. Detailed Table 20 presents trends in leading causes of hospitalization during the period 2001-2012. There is no change in the ten leading causes of hospitalization for 2012, compared with 2010, except for the change in the rank position of a few diseases.

Traumatic injuries ranked as the first leding cause while Symptoms, signs and abnormal clinical and laboratory findings which was the third leading cause from 2001 to 2009, ranked as the second. Diseases of the respiratory system has become the third leading cause and it was second from 2001 to 2008 and recorded as third in 2009 and 2010. Hospitalization due to viral diseases have remained as the fourth leading cause in 2012, from 2006.

During 2012, diseases of the gastro-intestinal tract remained as the fifth leading cause of hospitalization. It was in the same place since 2006 and it was one of the major causes of hospitalization in many districts. (Information on leading cause of hospitalization by district is given in Detailed Table 22).

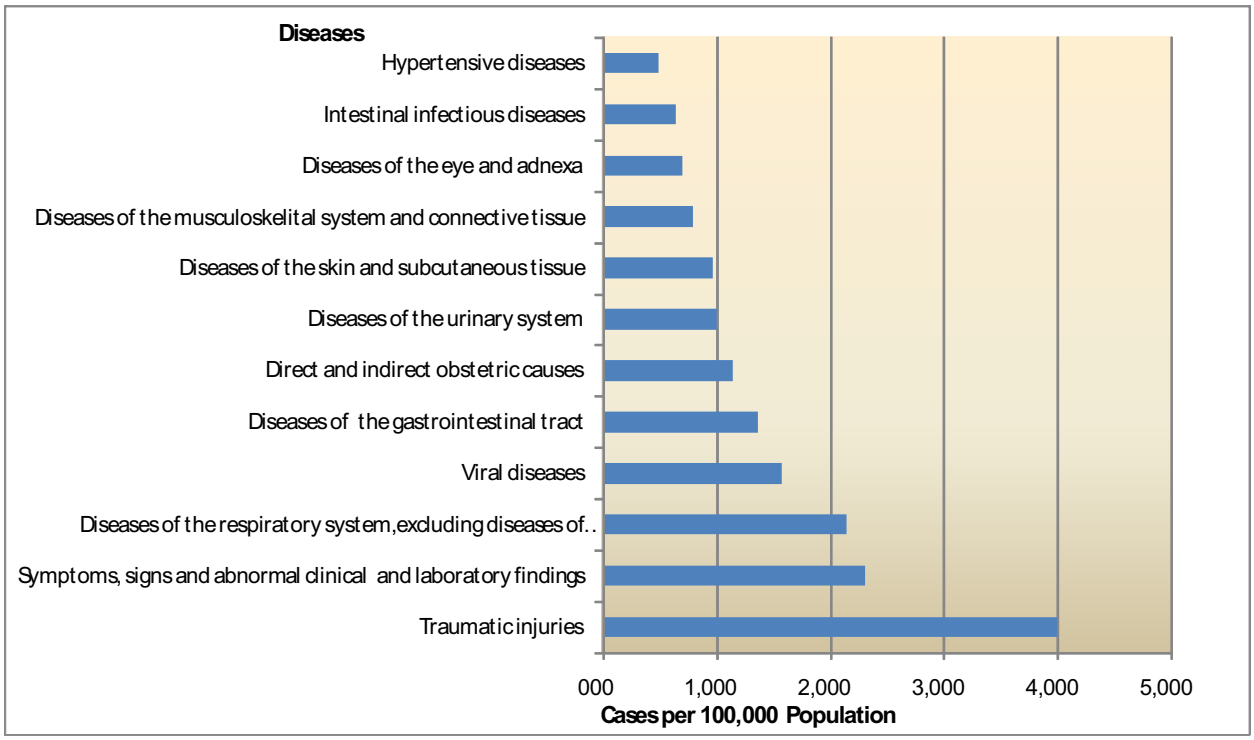
Diseases of the urinery system are being important cause of hospitalization and it ranked as seventh in 2012. Intestinal infectious diseases are still an important cause of hospitalization. It ranked as the eleventh leading cause of hospitalization and accounted for 2.7 per cent of the analyzed discharges in 2012.

Symptoms, signs and abnormal clinical and laboratory findings or diseases of the respiratory system are ranked as second or third for most of the districts in 2012 and 2010.

During 2012, Poisoning and toxic effects excluding toxic effects of pesticides, snake bites, mental and behavioral disorders and other diseases of the circulatory system have not ranked within the first ten leading causes in all districts except in Mullaitivu in which snake bite is in the tenth position.

Hypertensive diseases, and diseases of the upper respiratory tract ranked within the first ten leading causes of hospitalization in a few districts.

Fig 3.1 : Leading Causes of Hospitalization 2012 Rate per 100,000 Population



Source: Medical Statistics Unit

3.1.2 Outpatient Morbidity

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

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 in the country, the trends and the district distributions are given in Detailed Tables 19, 21 and 23 respectively.

According to Detailed Table 19, Ischaemic heart diseases, Neoplasms, Pulmonary heart disease and diseases of the pulmonary circulation and Cerebrovascular disease, ranked as the first few leading causes of hospital deaths. These diseases accounted for about 44 per cent of analyzed deaths. Additionally, these diseases together with the diseases of the respiratory system have become one of the ten leading causes for all districts except Kalutara, Hambantota, Puttalam and Moneragala in which neoplasm is in the fifteenth position in Moneragala and the eleventh position in the others.

Diseases of the ischemic heart ranked as the first leading cause of death since 1995. Neoplasms ranked as the second leading cause of death in 2012 and 2010.

A higher death rate associated with neoplasm in Colombo, Kandy, Galle, Jaffna, Mullaitive and Anuradhapura districts is a result of cancer patients being transferred to the Teaching Hospitals in Maragama (Colombo District), Kandy, Karapitiya Jaffna, Mullaitive and Anuradhapura where advance facilities for the treatment of neoplasms are available. In addition, the morbidity rate has also increased during last five years.

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. Since then it was not included to the Top ten Leading position.

Pesticide poisoning is among the first ten leading causes of death in Hambantota, Mannar, Kilinochchi, Mullaitive, Polonnaruwa and Moneragala.

Conditions originating in the perinatal period (excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition) is ranked among the first ten leading causes of mortality in some districts highly in Batticaloa.

3.2 Mortality (Registered Deaths)

Registration of births and deaths was made compulsory in 1897. In Sri Lanka 80 percent of Registrars who register deaths, are Non-Medical Registrars. The cause of death given by the Non-Medical Registrars may not be as 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.

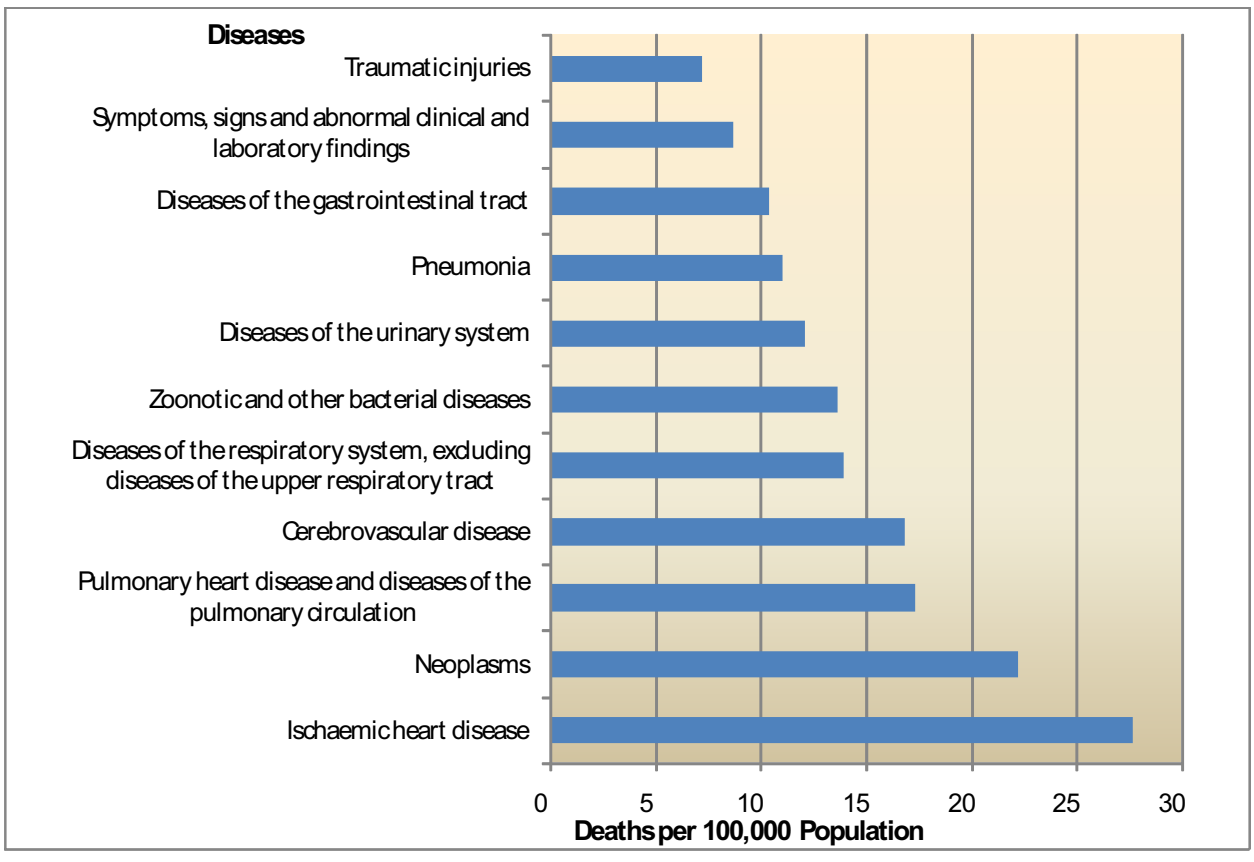
3.2.1 Trends in Mortality

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, whereas a substantial increase in the death rates associated with diseases of the circulatory system and injury and poisoning are evident.

3.2.2 Case Fertility Rate

According to 2012 hospital statistics, septicaemia case fatality rate reported the higest rate of 37.6 and it was 40.6 in 2010 (Detailed Table 26). The next highest case fatality rate was due to disease of the liver, with a case fatality rate of 13.2.

Fig 3.2 : Leading Causes of Hospital Deaths, 2012, Rate per 100,000 Population



Source: Medical Statistics Unit

4. Patient Care Services

4.1. Hospital Services

In Sri Lanka patient care services are provided to patient under two categories namely inpatient care and out-patient care. During the past five years the government curative care institutions have been providing annually, services to around 5 million inpatients, 50 million out-patients and about 20 million patients attending various clinics. The hierarchy of institutions providing patient care services is given in chapter 2, section 2.3.

In 2012, data is available in all districts in Sri Lanka, but due to the lack of corresponding staff in some districts during that period 100 percent receipt of returns were not recieved.

Table 4.1 : Trends in Inpatient and Outpatient Attendance and Rates Per 1,000 Population, 1990 -2012

Year	Inpatients Treated		Outpatient Attendance [1]	
	Number '000	Rate	Number '000	Rate
1990 [2]	2,533	174.6	28,401	2,000.5
1995 [3]	2,953	179.3	32,084	1,947.7
1996 [4]	3,339	184.5	35,348	1,953.2
1997 [5]	3,454	191.7	38,078	2,114.0
1998	3,791	201.9	41,071	2,187.7
1999	3,825	200.9	41,323	2,170.1
2000	4,015	207.4	43,329	2,238.2
2001	4,092	218.6	43,350	2,315.6
2002	4,032	212.7	45,681	2,409.9
2003	3,993	207.4	43,765	2,273.3
2004	4,242	218.0	43,392	2,229.6
2005	4,345	220.9	42,482	2,160.0
2006	4,463	224.4	41,429	2,083.3
2007	4,609	230.3	43,073	2,152.6
2008	4,898	242.3	45,381	2,219.2
2009 [4]	5,474	267.7	48,782	2,385.4
2010	5,591	270.7	49,871	2,414.7
2011	..	..	..	..
2012	5,840	287.3	50,631	2,490.7

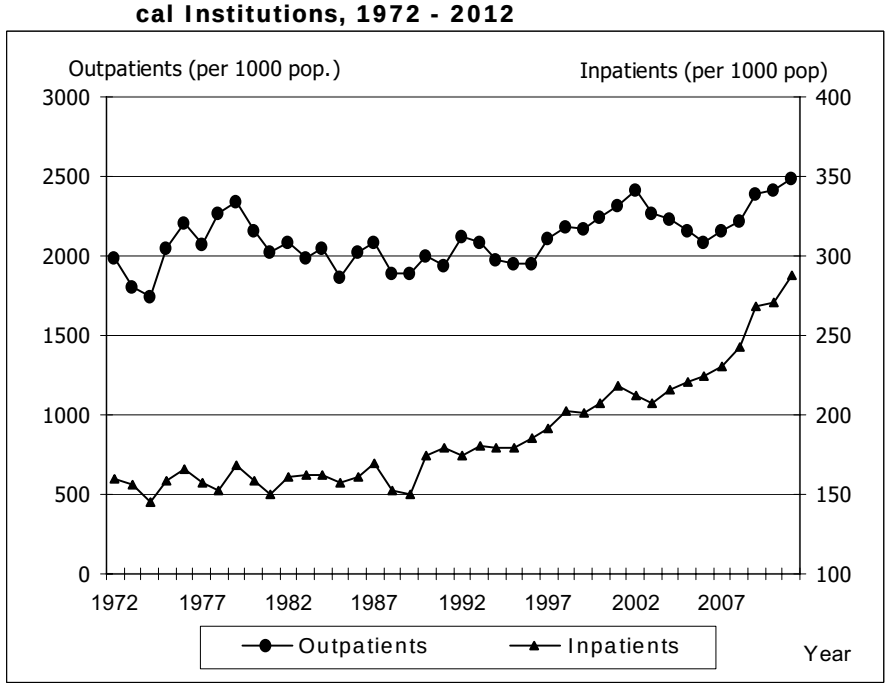
Source : Medical Statistics Unit.

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

Between 2000 to 2012 inpatient admissions showed slight incrase over the period and it was over 5 million in 2009 after that in 2012, it is close to 6 million. Outpatient visits increased by 1.5 percent in the year 2012 when comparing with 2010 (Table 4.1).

According to Detailed Table 27, in 2012, Colombo district recorded the highest inpatients per 1000 population. There are thirteen districts which recorded higher rates than the national figure of 287 inpatients per 1,000 population for the year 2012. (Detailed Table 27).

Fig 4.1 : Inpatient and Outpatient Attendance in Government Medical Institutions, 1972 - 2012



Source : Medical Statistics Unit

Excludes :
1 : Northern & Eastern Province in 1990
2 : Jaffna, Kilinochchi, Mullaitivu & Ampara districts in 1995
3 : Kilinochchi and Mullativu Districs in 1996 and 2009
4 : Ampara District in 1997

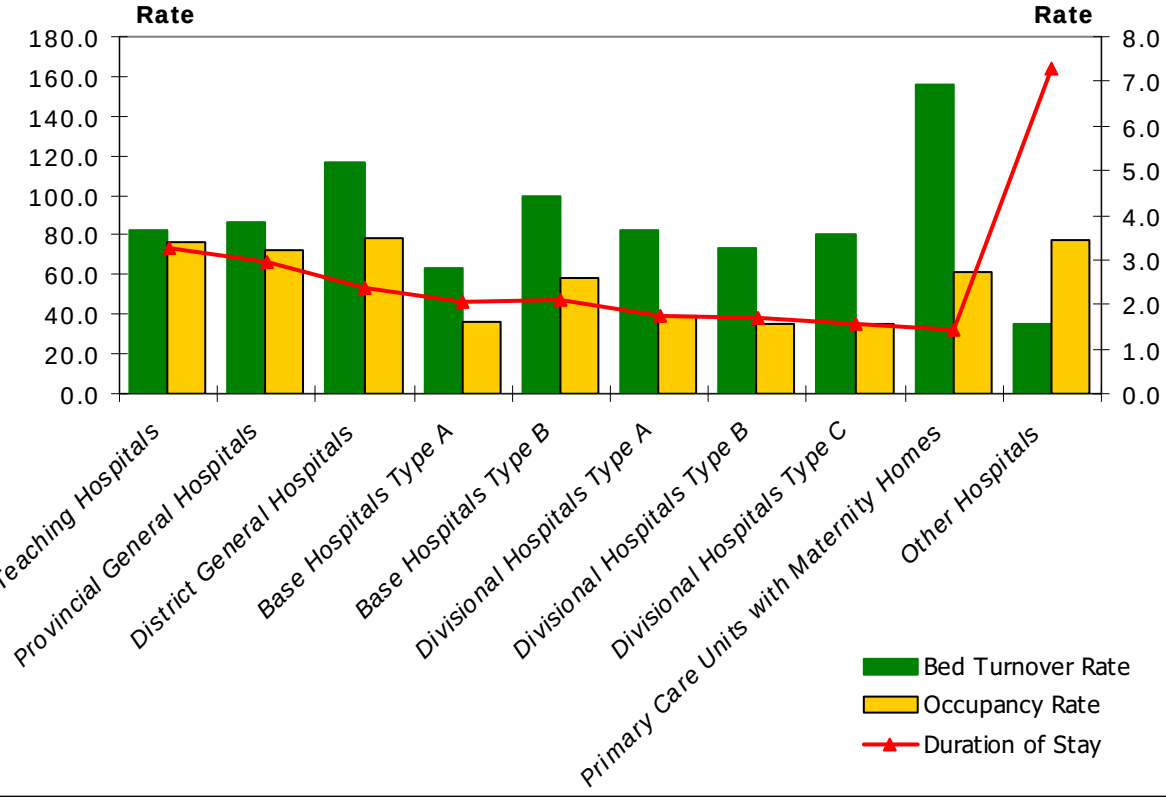
Highest outpatient attendence per 1,000 population is observed in Mannar district in 2012 which was 3,744.5 followed by the Ampara district which was 3,515.6. Moneragala district shows the third highest outpatient attendance per 1,000 population in 2012 which was 3,415.2 (Detailed Table 29). Gampaha district shows the least outpatient attendance per 1000 population. There were sixteen districts which recorded higher rates than the national figure of 2,490.7 out patient attendance per 1,000 population. The highest out patient attendance can be seen in Divisional Hospital Type C followed by Divisional Hospital Type B. Primary Medical care Units show the third highest outpatient attendance in 2012. (Detailed Table 30)

Information on clinics visits in 2012 shows an increasing trend compared to previous years and visits are higher in Teaching Hospitals (Detailed Table 32).

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.

The average duration of stay varies with the type of hospital and accordingly, average duration of stay is higher in Teaching Hospitals than hospitals in other categories except "Other Hospitals" (Detailed Table 33). Average Duration of Stay is significantly longer in the specialized hospitals such as Mental, Chest, Cancer, Leprosy and Rehabilitation. However, the long-term trend shows a decline in the duration of stay in almost all types of hospitals except a very few special hospitals as Mental, leprosy etc. upto 2007 but the situation changed from 2008 to 2009 in some hospitals. Again decreasing trend can be seen in Average Duration of Stay from 2009 to 2010 in almost all hospitals except Leprosy. In 2010, average duration of stay in Menatal Hospitals show an apperant decrease when compared to previous years while it has increased in Leprosy Hospitals (Detailed Table 34). It can be seen that slight increase in Average Duration of stay in Mental Hospitals and slight decrease in Leprosy Hospitals in 2012(Table 34).

Fig 4.2 : Utilization of Medical Institutions , 2012



Source : Medical Statistics Unit

As shown in Detailed Table 33, Teaching Hospitals, Provincial General Hospitals, District General Hospitals and Other Hospitals have a higher bed occupancy rates which is more than 70, while in 2012, Base Hospitals and Divisional Hospitals have comparatively a low figure which is less than 50. Specialized hospitals that are in "Other Hospitals" category show the most signifiant value in Bed Occupancy in 2012 when compared to the all hospitals.

In 2012, bed occupancy rates are higher in all Teaching hospitals in all districts and, Teaching hospitals in Kandy district indicate bed occupancy rates more than 90 percent. Provincial General Hospitals also show higher value in Bed Occupancy in 2012.Though District General Hospitals indicate a fairly high bed occupancy rates, among them hospitals in Kalutara, Mannar and Mullaitivu districts show more than 100 percent Bed Occupancy (Detailed Table 33).

Base Hospitals "Type A" in Nuwera Eliya and Rathnapura districts show more than 100 percent Bed Occupancy in 2012 while Base Hospitals "Type A" in Hambantota district indicate Bed Occupancy close to 100 percent. Base Hospitals "Type A" of Mathale District have a fairly very low Bed Occupancy Rate (4.43 percent) when compare with other Base Hospitals "Type A". It can not be seen more than 100 percent bed occupancy rates of Base Hospitals "Type B" in all districts in 2012. The highest Bed Occupancy Rate is recorded from Base Hospitals Type "B" in Matara district among all Type B Base Hospitals. All Divisional Hospitals Type A or B or C do not indicate higher Bed Occupancy Rates in 2012.

Among the hospitals in Other Category, Kegalle District shows a higher bed occupancy (Detailed Table 33)

As previous years, in 2012, specialized hospitals are the most overcrowded institutions in Sri Lanka. Among these hospitals, Dental Institute is the most overcrowded hospital with a bed occupancy rate of 116.7, followed by Dematanpitiya Mental Rehabilitation Centre (116.5) and Cancer Hospital Colombo (107.8).

According to the Detailed Table 33, it is also noteworthy that utilization of hospitals varies from district to district, irrespective of the type of hospitals.

Because of changing the type of health institutions in 2012, it is difficult to describe the trend of changing the rates.

Table 4.2 illustrates the maternal services provided by type of hospital. When compared with 2010, an increase in total number of delevaries occured in all government institutions is observed in 2012. (Total number of delivaries in 2010 is 333,684)

Table 4.2 : Maternal Services by Type of Institutions - 2012

Type of Institution	Outcome of Delivery			Total Deliveries		Method of Delivery			
	Single	Twin	Other	Number	%	Normal	Forceps	Caesarean	
								Number	%
Teaching Hospital	116,898	1,294	38	118,230	34.9	74,579	1,834	41,817	35.4
Provincial General Hospital	17,379	222	4	17,605	5.2	11,732	102	5,771	32.8
District General Hospital	81,730	751	9	82,490	24.4	54,550	611	27,329	33.1
Base Hospital Type A	68,437	523	6	68,966	20.4	47,422	377	21,167	30.7
Base Hospital Type B	34,132	185	1	34,318	10.1	26,781	371	7,166	20.9
Divisional Hospital Type A	3,815	16	-	3,831	1.1	2	2	-	-
Divisional Hospital Type B	8,677	12	-	8,689	2.6	12	12	-	-
Divisional Hospital Type C	3,723	7	-	3,730	1.1	1	1	3	0.1
Primary Madical Care Units and Maternity Homes	616	-	-	616	0.2	-	-	-	-
Sri Lanka	335,407	3,010	58	338,475	100.0	231,912	3,310	103,253	30.5

Source: Medical Statistics Unit

Significant difference can be seen in number of deliveries in Teaching Hospitals when compared with other Type of Categories for the year 2012. Total number of delivaries occured in Teaching Hospitals are 333,684 in 2010 and 338,475 in 2012. The Teaching Hospitals including the four Maternity Hospitals accounted nearly 35 percent of the deliveries.

Because of changing the type of institutions, an increase in the number of deliveries is observed in Provincial General Hospitals and District General Hospitals when compared with 2010. But when the delevaries in Base Hospitals "Type A" are considered, number of delivaries occured in these hospitals are higher than the other types of hospitals except Teaching and District General hospitals (Table 4.2).

The caesarean section rate was highest in the Teaching Hospitals followed by the District General Hospitals. Provincial General Hospitals also had a value close to the rate in District General Hospitals in the year 2012 (Table 4.2).

As in previous years, Sri Jayawardenapura Teaching Hospital recorded a comparatively higher caesarean section rate of 55 per 100 deliveries.

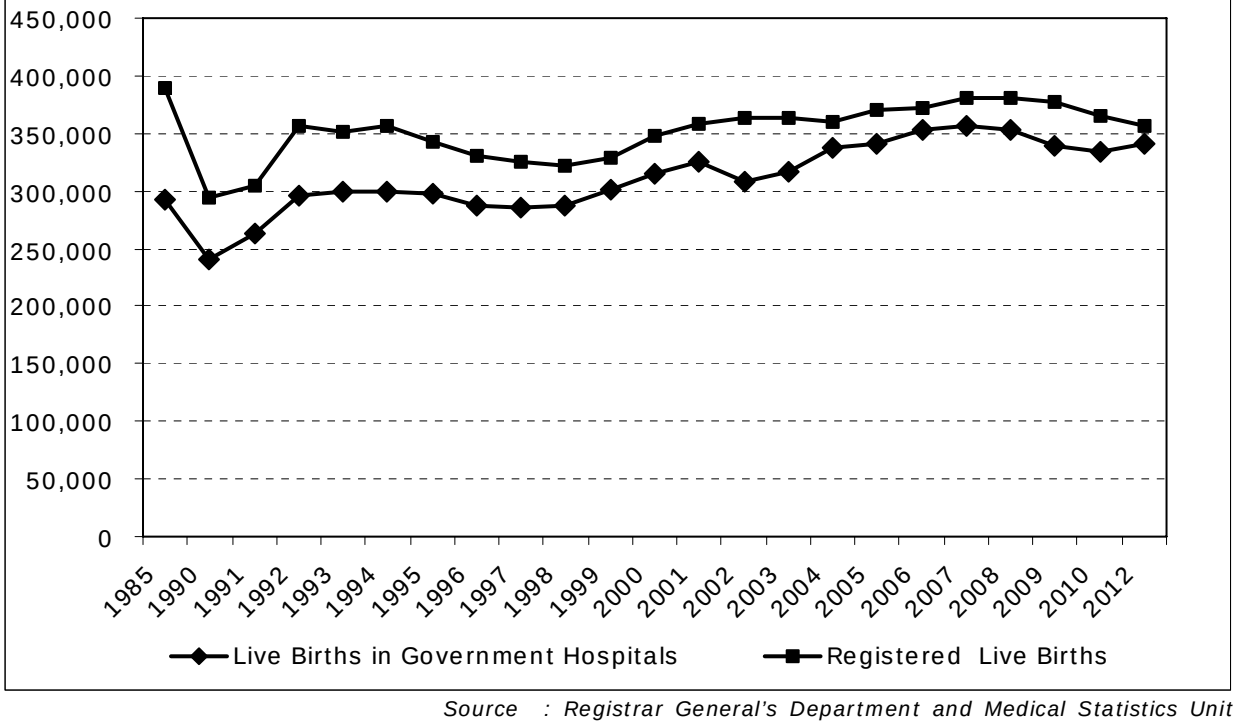
Over all caesarean section rate has increased when compared to the year 2010 and same patern can be seen in all types of institutions (Processed from maternal returns, 2012). Caesarean section deliveries did not take place in Divisional Hosptals A or B and Primary Medical Care Unit & Maternity Homes in 2012 (Table 4.2).

Forceps deliveries are higher in Teaching Hospitals as in prevoius years and significant numbers can be seen in the Provincial General, District General and Base Hospitals.

During 2012, a total of 340,800 live births and 2,388 still births took place in government hospitals (Detailed Table 36).

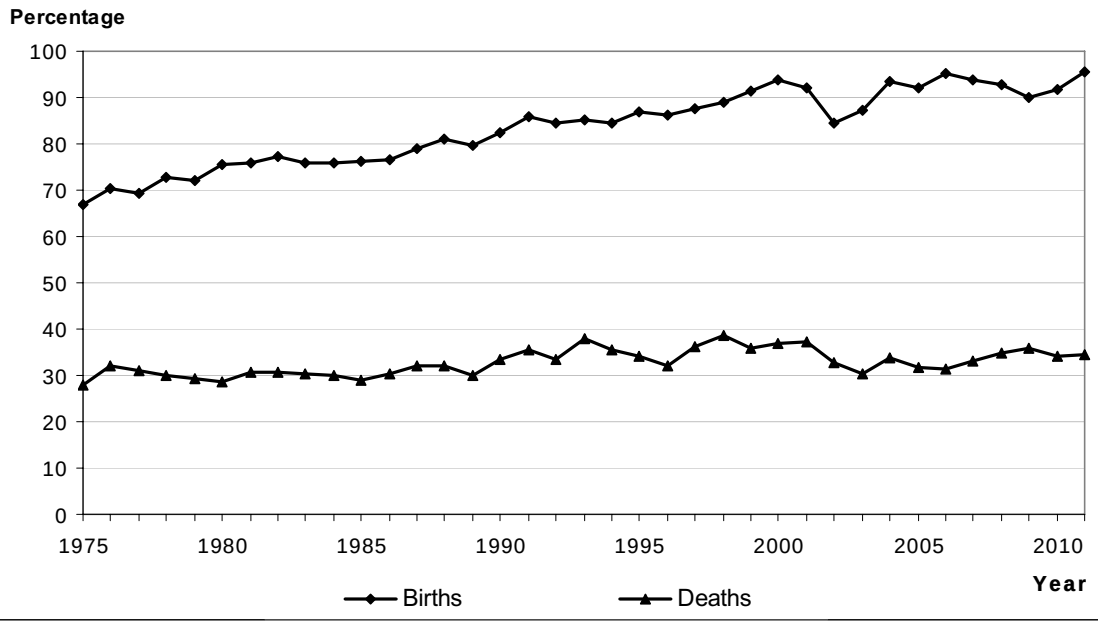
The (population of) births occurring in government hospitals has increased from 2010 to 2012. As previous years the registered live births has decreased further in 2012. According to the government hospital information, 95 percent of the live births occured in the government hospitals in 2012 (Detailed Table 35). Fig 4.3 shows the trends in registered live births in the Registrar General's Department vs live births occured in government hosptals.

Fig 4.3 - Registered Births Vs Hospital Births, 1985 - 2012



Source : Registrar General's Department and Medical Statistics Unit

Fig 4.4 - Percentage of Live Births and Deaths in Government Hospitals, 1974 - 2012



Source : Medical Statistics Unit

Excludes :

1 : Northern & Eastern Province in 1990
2 : Jaffna, Kilinochchi, Mullaitivu & Ampara Districts in 1995
3 : Kilinochchi and Mullativu Districts in 1996 and 2009
4 : Ampara District in 1997

The still birth rate per 1,000 births in government hospitals is 7.0 for this year 2012 and it is lower than the rate in 2010. (Detailed Table 36).

A slight decrease in Low Birth Weight Rate of 16.3 is observed in government hospitals in 2012 when compared to 2010 it was 17.2 (Detailed Table 36).

Fig 4.4 shows the trends in live births and deaths in government hospitals. It is important to note that still births were not included in the live births or death distribution.

According Fig 4.4 percentage of live births occuring in government hospitals has an increasing trend from the past. In 2001, a slight decrease in the distribution was observed and in 2002, a further decrease was observed. From 2003 the percentage began to increase untill 2007 and a slight decrease has been observed in 2008 and then to 2009. From 2010, it began to increase again and in 2012 it tends to further increase.

The percentage of deaths occuring in the government hospitals does not show an apparent increase or decrease in trend. It was around 30 percent in the past and in 2008, the percentage distribution of deaths occuring in government hospitals increased to 35 percent of registered deaths.

In 2009 ,percentage of deaths occuring in government hospitals is arround 36 percent. But from 2010, it has decreased to 34 percent and in 2012 the percentage of deaths occuring in government hospitals tends to increase again. At a glance of the graph, fluctuations could be observed in the trend line but these fluctuations are not highly significant.

4.2 Dental Health Services

In 1925 the Government started its first dental clinic in Colombo followed by clinics in Galle, Kandy, Jaffna, Batticalo and Kurunagala.
Since then public sector Dental services was expanded throughout the country focused mainly on treatment. These services are provided mainly by Dental Surgeons who are attached to the Government Hospitals and Adolescent dental clinics. Having identified the heavy disease burden among children a dental service for school children of age group 3 to 13 was started in 1955 with School Dental Therapists attached to MOH offices. Nearly 3-4 percent of the service is provided by universities, security forces and nongovernmental organizations.

Curative care services are provided through clinics located in Government Hospitals of different categories such as primary medical care units, divisional hospitals, base hospitals, District General & Provincial Government hospitals and Teaching Hospitals.

Preventive care services are provided through School Dental Clinics, Adolescent Dental clinics and Community Dental Clinics.

The School Dental Clinics are located in school premises providing oral health care to children between 3-13 years. During the year 2012, there were 408 School Dental Clinics and 393 SDTs. Sixty two ADCs were manned by Dental Surgeons catering to children above 13 years of age and complicated cases referred by SDTs. Community Dental Clinics are located in highly populated metropolitan areas as well as MOH areas and the Dental Surgeons working in these clinics concentrate on providing preventive care for all age groups of population.

The management of the entire oral health care delivery system in the Ministry of Health Sri Lanka and Provincial Ministries have been brought under the purview of Deputy Director General of Dental Services (DDG/DS) which was created in the year 2002.

168 new dental graduates were recruited during the year 2012 and at the end of the year 2012, a total of 1462 Dental Surgeons perform in the public sector. Approximately there are 795 dental surgeons are working in the Private sector.

4.2.1 Specialist Services

There are five main Specialist Categories in oral health care service, Oral and Maxillo-facial Surgery (OMF), Orthodontics, Community Dentistry, Restorative Dentistry and Oral Pathology. At the year 2012, there were 59 Dental specialists belonging to these four specialties serving in various institutions. They were attached to Teaching, General and some Base Hospitals and were distributed as follows:

Table 4.3 : Distribution of Dental Specialists by Speciality

Specialty	Number
Oral & Maxiilo-facial Surgery	28
Orthodontics	15
Community Dentistry	8
Restorative Dentistry	8
Total	59

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

4.2.2 Mobile Dental Services

In addition to different types of dental clinics located in hospitals, mobile oral health programmes cover the entire island. The Mobile Dental Unit at the Dental Institute, Colombo is deployed to any destination of the country on request. During the year 2012 the unit has conducted more than 150 mobile dental clinics and provided dental care for about 15,000 individuals from different age groups. Treatment modalities carried out were deciduous and permanent extractions, fillings, scaling and oral hygiene instructions.

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

4.2.3 Improvement of Quality of Oral Health Care

During the year 2012, dental equipment worth Rs. 107.9 million were distributed to healthcare institutions island wide in view to improve the patient care services.

Slim Light boxes and pennants carrying common oral health messages and demonstration models worth Rs. 18.2 million were distributed to all health regions including Health Education Bureau, Institute of Oral Health Maharagama & NIHS.

4.2.4 Oral Disease Trends

Ministry of Health in collaboration with the World Health Organization has conducted three National Oral Health Surveys including the present survey in 1983/84, 1994/95 and 2002/ 2003. These surveys indicate overall declining trend in prevalence and severity of dental caries yet marking a substantial problem among all age groups.(4th National Oral Health Survey in process)

Table 4.4 : Prevalence and Severity of Dental Caries by National Oral Health Surveys

Age group	Prevalence & severity	1983/84	1994/95	2002/2003
6 yrs	Prevalence (%)	78	76.4	65.5 (5-yrs)
	DMFT	4.4	4.1	3.6 (5-yrs)
12 yrs	Prevalence (%)	67	53.1	40.0
	DMFT	1.9	1.4	0.9
35 - 44 yrs	Prevalence (%)	92	91.1	91.5
	DMFT	9.2	10.1	8.4

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

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

Table 4.5 : Prevalence of Healthy Gums in 12 and 35-44 Years Old

Age group	1983/84 (%)	1994/95 (%)	2002/2003 (%)
12 years	12	13.3	27.2
35 - 44 years	65	2.1	10.1

In addition to the above mentioned dental diseases, dental fluorosis can be very commonly seen in adolescents in certain districts such as Anuradhapura, Polonnaruwa, Kurunegala and Monaragala.

4.2.5 Perceived Awareness about Presence of Oral Disease

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

4.2.6 Oral Health related Behaviors

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

4.2.7 Teeth Present, Tooth Loss and Prosthetic Treatment Need

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

Table 4.6 : Percentage of Children 5 years and 12 years with Caries, Active Caries and Treat Caries

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

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

4.2.8 On going Preventive Oral Health Care Activities

- Oral health care programme for Pregnant Mothers– Pregnant mothers are being screened in at the first trimester of the pregnancy to identify the prevailing oral health problems and provide the treatments accordingly.
- "Save molor project" - Initially pilot project is carried out in selected MOOH areas. From 2013 onwards this will be expanded in and scale up manner island wide to preserve the sound permanent molor teeth to achieve the ultimate goal of "20 teeth at 80 years of age".
- Prevention of early childhood caries– Children under 3 years of age will be screened for high risk for caries in milk teeth and if found fluoride varnish will be professionally applied.
- Prevention of flourosis - Initially colorimeters were distributed among high fluoride areas to identify the wells with high fluoride contents. By doing people are motivated to access the wells with standard concentration of 0.7ppm. Flouride 0.7ppm be in drinking water to be suitable for drinking.
- Oral cancer prevention programme
- Distribution of tooth brushing demonstration models.
- Production of Oral Health wall chart

4.2.8.1 Plans for 2013

- Recruitment of dental surgeon to fill all the vacancies in the government sector
- Training of School Dental Therapists
- Establishment of IOH
- National Standard of performance and regional variations
- Review of dental surgeons' returns
- New dental hospital project at Ward Place
- Oral cancer programme
- Yearly 75 – 85 dental doctors join the workforce (call Medical council)

4.2.9 Oral Health Care Service

Oral health care services of the country are managed under a Deputy Director General of Health Services (DDG) at the central level with the assistant of 25 regional dental surgeons and dental surgeons in charge in major hospitals. Following are the major sections available for the administration of human and technical resources coming under DDG (Dental Services).

1. Director Dental Services-Ministry of Health
2. Dental Institute, Colombo
3. Institute of Oral Health, Maharagama
4. Dental Hospital (Teaching), Peradeniya

The island wide dental care service is provided by the dental surgeons in various categories in all types of hospitals under line ministry and provincial hospitals and school dental therapists. The basic services are provided by the dental surgeons while specialised care is given in oral maxillo facial, restorative, orthodontic and community dental consultants.

4.2.10 Performance for the last 5 years based on Selected Performance Indicators

4.2.10.1 Human Resource Development

Cabinet approval was obtained for the recruitment of 100 new dental surgeons for the Ministry of Health and out of them 98 accepted the appointments. Apart from that in-service training programmes were organised for dental surgeons, nurses in charge, dental therapists and dental technicians.

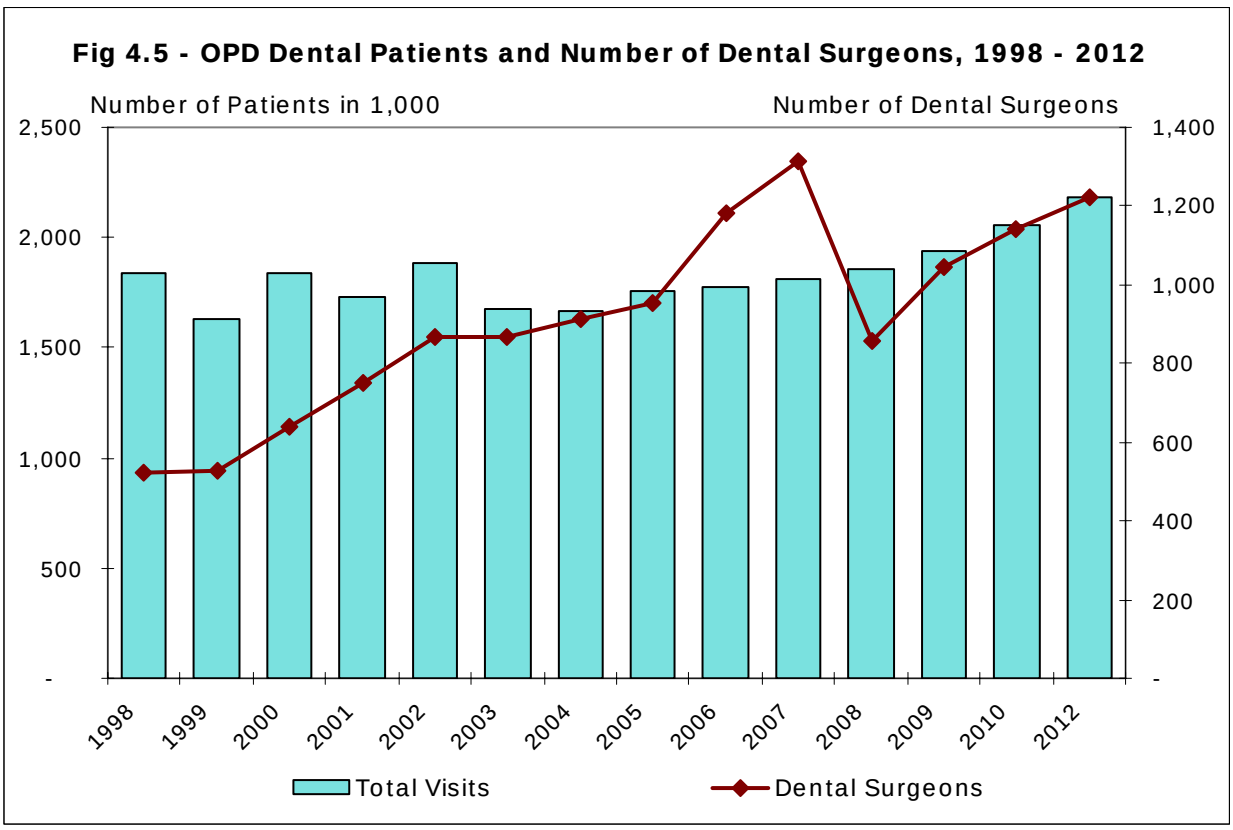
4.2.10.2 Physical Resource Development

From 2011 budget allocation granted for the office of DDG (Dental Services) 66 percent expenditure for purchasing of dental equipments and 30 percent expenditure for maintenance of already available equipments were done.

Table 4.7 : Physical resources given for Dental services , 2008-2011

	Indicator	2008	2009	2010	2011
1	Number of Dental Surgeons recruited	-	192	52	98
2	Percentage expenditure for purchasing of Dental equipments (%)	54	44	56	66
3	Percentage expenditure of maintenance and service agreement (%)	20	75	35	30
4	Number of School Dental Therapists recruited	-	-	-	66
5	No of new specialist units	-	-	4	6

Fig 4.5 - OPD Dental Patients and Number of Dental Surgeons, 1998 - 2012



Source : Medical Statistics Unit

Note :

All PGIM trainees were included in Dental Surgens category in 2007 based on 2006 estimates which was not correct. In 2008, this was revised by including PGIM trainees in Medical Officers category. Therefore the Total Dental Surgeons category has reduced in 2008.

5. Public Health Services

5.1 Community Health Services

5.1.1 Family Health programme - Family Health Bureau

The National Family Health Programme (NFHP) is a community health programme which is implemented islandwide, and offering services which are well established ,accepted and utilized by the Sri Lankan community. The Programme is based on evidence based effective interventions delivered through several service packages that are aimed to promote the health of families around the country with a special emphasis on mothers and children. Those interventions are being implemented to reach target groups through continuum of care across the life cycle and health system. The origin of the Family Health Programme dates back to 1926 and hence the current programme reflects the success of a programme which has evolved over a period of more than 85 years.

Family Health covers a wide spectrum of services comprising:

1. Women's health incorporating perimenopausal care and gender concerns
2. Maternal and newborn health
3. Infant and child health including child nutrition, development and children with special needs
4. School and adolescent health
5. Family planning

The Family Health Bureau (FHB) is the national focal point responsible for the planning, coordination, direction, monitoring and evaluation of National FHP in the country. The roles and responsibilities of FHB are,

- Advocate and provide guidance and technical expertise to the Ministry of Health and other relevant ministries on matters related to policy, finance, infrastructure and other resource requirements relevant to national FHP.
- Develop strategies based on national policies
- Formulate national medium term and annual plans of maternal and child health (MCH) and facilitate the development of provincial/ district plans relevant to MCH
- Identify, pilot test and integrate best practices on MCH into the national health system
- Establish and maintain partnership networks within and between government ministries, private organizations, development partners and NGOs
- Direct, guide, coordinate and support the provincial/district system/managers to implement national programmes
- Build capacity of relevant staff at pre-service, in-service and post graduate level on MCH.
- Manage logistic requirements related to FHP service delivery
- Advocate for mobilization of funds from government and other national and international sources
- Ensure the restoration and functioning of MCH services in emergency and special situations
- Maintain surveillance systems relevant to MCH
- Monitor and evaluate MCH/FP programme at central level
- Identify the areas that need investigation and conduct operational research

FHB has several sub units that covers the different components of the National FHP. These include

a) Maternal Care
b) Maternal Morbidity and Mortality Surveillance
c) Intrapartum and Newborn care
d) Child Development and Special Needs
e) Child Nutrition
f) School Health
g) Adolescent Health
h) Gender and Women's Health
i) Family Planning
j) Planning, Monitoring and Evaluation
k) Oral Health
l) Research and Development.

Each of these units is manned by a public health specialist, who is the national programme manager for areas under the unit's purview.

The implementation of the Family Health Programme is carried out by the Medical Officer of Health (MOH) teams under the administrative supervision of the Provincial and Regional Directorates of Health. Medical Officer Maternal and Child Health (MOMCH) and team support them technically at regional level.

In performing these roles, it works in close collaboration with the other health units in the Ministry of Health, provincial health authorities, development partners, professional bodies and other related organizations.

5.1.1.1 Decision making fora

National Steering Committee on Family Health (NCFH) is the apex body to take decisions related to national FHP which meets once in three months and chaired by the Secretary to the Ministry of Health. Policy, technical and other related matters discussed at following technical advisory committees and working groups are forwarded to NCFH for discussion and approval.

- National advisory committee on Maternal care and Family Planning – chaired by DDG/ PHS 11
- National advisory committee on newborn and child health – chaired by DDG/PHS 11
- Working group on School health - chaired by DGHS
- Working group on young people – chaired by DGHS
- Working group on well women clinics – chaired by DGHS
- Subcommittee on Maternal and Child nutrition (MCN) - chaired by DDG/PHS 11
- Monitoring committee on Sri Lanka Code for Promotion, Protection and support of breast Feeding& Marketing of Designated products - chair by Secretary Health

Issues related to maternal and child nutrition are also forwarded to the Nutrition Steering Committee chaired by Secretary Health and from there to the Presidential Nutrition Secretariat.

5.1.1.2 Reporting of the performances of Family Health Programme

The basic units of service care provision are eligible families and the schools in a given heath area. An eligible family is defined as a family with a couple either legally married or living together where the woman is between 15 to 49 years of age or with a child under 5 years of age. A family with a pregnant or a cohabiting woman irrespective of marital status and age or a single women either widowed, divorced or separated are also considered under an eligible family.

Services provided to the target population by the Public Health staff at MOH level is being captured though Reproductive Health Management Information System (RH-MIS) and Maternal Mortality Surveillance system. Information collected is used for monitoring and evaluation of the programme while timely operational researches provide supportive evidence for programme management.

Summary of care services received by the target groups through the National FHP is given in this section and the detailed information is available in the Annual Report on Family Health which is the annual publication of FHB of the Ministry of Health.

5 .1.1.3 Prepregnency care

Interventions in improving maternal and child health should be started from the pre-conception stage. A new package of interventions for "pre-conception care" has been piloted and introduced to the Family Health Programme in 2012 to promote health of women and their partners to enter pregnancy in optimal health, and to maintain it throughout the life course. The main strategy used to fulfil this is by ensuring women of childbearing age and their partners receiving a comprehensive package of pre-conception care. The care includes creating awareness, health promotion, screening and appropriate mediations to reduce risk factors that might affect future pregnancies of the reproductive aged women.

This package is introduced to extend the maternal health continuum prior to pregnancy to reduce indices such as maternal mortality, infant mortality and low birth weight into lower indices.

The package focuses on the newly married couples as the name implies.

The new package would

- Improve knowledge and attitudes of men and women especially in relation to pre-conception health which would lead to behavioural changes.
- Ensure that all newly wedded couples receive pre- conception care services. (health promotion, evidence based risk screening, interventions ..etc)
- Improve the health of women before pregnancy by giving pre-conception care.
- Detect the health problems of the couple to prevent, minimize, treat or correct the health problems before they attain parenthood.

5.1.1.4 Maternal and Newborn Care

Maternal care has been one of the main focus of the Programme from its inception. Hence the public health system of Sri Lanka is well-geared for providing services for pregnant and postpartum mothers. Maternal care package was revised to include best evidence into practice and scaled up implementation was done during the year 2012.

5.1.1.5 Maternal Care

The care for pregnant mothers begins with the registration of pregnant mothers with field PHM either at field or clinic and a standard package of interventions is offered to them.These interventions include, preliminary clinical assessment and screening for health and clinical risks in pregnancy, monitoring of maternal and foetal wellbeing in subsequent visits, tetanus immunization, nutrition supplementation,referral of high risk pregnancies for specialist care, providing information and counseling for pregnancy related issues and delivery planning.

The very high percentage of pregnant mothers registered with Public Health Midwife (PHM) for care during 2012 (94%) indicates that the majority of pregnant women are in contact with the services offered by the FHP. Of them over 90 percent registered for care before 12 weeks of amenorrhea and this number has been rising over the last few years.

Protection for Rubella with immunization before pregnancy, protection for Tetanus, antenatal screening for Syphilis and testing for blood group at the time of delivery has reached almost universal coverage. However proportion of teenage mothers among the registered pregnancies has been stagnated around 6 percent.

Table 5.1.1 : Pregnant Mothers Registration and Care Received through Family Health Programme(FHP) - 2012

Indicator		2008 %	2009 %	2010 %	2011 %	2012 %
Pregnant mothers registered by PHMs out of estimated births		89.8	90.0	85.9	94.3	94.0
Pregnant Mothers registered	< 8 weeks	61.4	66.0	69.8	72.6	75.2
Pregnant Mothers registered between	8- 12 weeks	28.5	25.0	22.6	20.3	18.3
Teenage pregnant mothers out of all registered pregnancies		6.7	6.5	6.5	6.1	6.0
Pregnant mothers protected with Rubella at registration		93.3	94.8	95.4	95.9	96.8
Pregnant mothers tested for VDRL at the time of delivery		93.9	97.8	96.0	97.0	99.3
Pregnant mothers blood group tested at the time of delivery		99.5	99.9	99.8	99.6	100.0
Pregnant mothers protected for Tetanus out of reported deliveries		99.8	100.0	99.9	99.6	99.9
Mothers with low BMI at clinic visit before 12 weeks		26.3	25.4	25.4	24.6	23.8

Body Mass Index (BMI) measured before 12 weeks of amenorrhea is approximated for prepregnant BMI and approximately one forth of pregnant mothers were found to be having a low BMI (less than 18.5) (Table 5.1.1)

Post partum care given during these field visits includes, assessment of general health, breast feeding, signs of post partum complications and common illnesses, followed by relevant advise and referrals if necessary.

Table 5.1.2 : Health Contact with Public Health Staff -2012

Indicator	2008	2009	2010	2011	2012
	%	%	%	%	%
Registered pregnant mothers visited at least once at home by PHM	96.1	94.4	92.9	91.7	90.2
Registered pregnant mothers paying at least one field clinic visit	96.1	95.6	94.7	95.9	95.2

Source : Family Health Bureau

A greater majority of registered mothers (95%) visited a field antenatal clinic at least once during pregnancy and average field clinic visit per mother was 7.

Registered pregnant mothers were visited at least once at home by PHMs and average number of home visits per mother by PHMs was 5 (Table 5.1.2).

5.1.1.6 Pregnancy Outcome and Postpartum Care

PHM reports the pregnancy outcome of the pregnant mothers registered with her for care, and pay a recommended number of follow up visits to ensure the health and wellbeing of the

Pregnancy outcome was reported for 89.4 percent of pregnancies registered with PHM . Almost all reported deliveries had taken place in institutions and three out of ten reported deliveries were Caesarean sections (Table 5.1.3). Approximately 77 percent of mothers were visited at home by PHMs at least once during the first 10 postpartum days and the average number of postpartum home visits was 2 per mother.

Tab.5.1.3 : Pregnancy Outcome and Postpartum Care for Mothers Registered during 2008-2012

Indicator	2008 %	2009 %	2010 %	2011 %	2012 %
Pregnancy outcome reported out of registered pregnancies	89.1	89.3	88.0	88.7	88.8
Institutional deliveries out of total reported deliveries	99.6	99.7	99.8	99.9	99.9
Caesarean sections out of total institutional deliveries reported	24.3	25.8	27.0	27.7	28.7
Postpartum mothers receiving at least 1 visit by PHM during 1st 10 days out of estimated births	79.4	75.9	75.0	77.4	77.3
Prcentage LSCS out of total reported deliveries	25.8	27.0	27.7	28.7	30.5
Average number of home visits during first 10 postpartum days	1.8	1.8	1.8	1.8	1.7

Source : MCH Quarterly return H 509 Family Health Bureau

5.1.1.7 Maternal Mortality

Sri Lanka has shown a remarkable improvement in reducing the Maternal Mortality Ratio (MMR) consistently since the 1940s. The contribution made by the National FHP in this regard is substantial.

Maternal Mortality Surveillance and Review which comes under the purview of a FHB not only provides the valid maternal mortality rates for the country but provides a platform to learn lessons from the mistakes done over each maternal death.

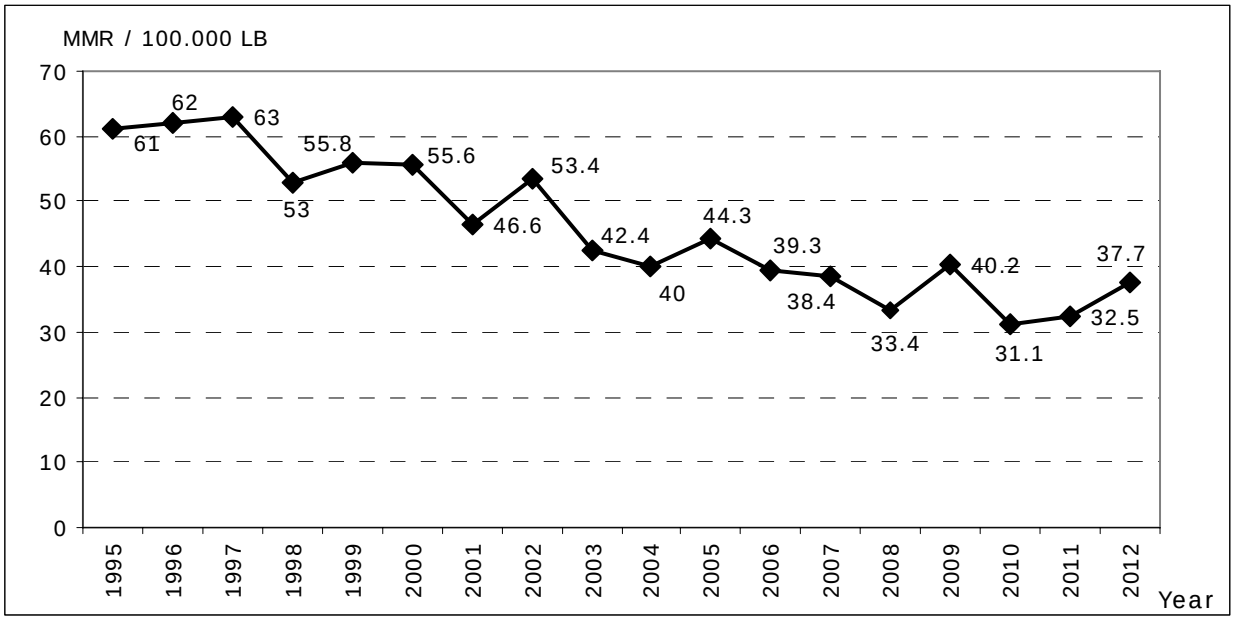
Maternal deaths occurring in all over the country are notified to FHB within 24 hours of occurrence. These deaths are annually reviewed and discussed in detail at the National Maternal Mortality Reviews conducted by FHB in collaboration with the Sri Lanka College of Obstetricians and Gynaecologists and other relevant professional bodies. The cause of death is confirmed and the associated factors that may have contributed to the deaths are discussed to prevent such deaths in the future. It is encouraging to note that there has been a marked improvement in the reporting of maternal deaths through the present surveillance system.

The surveillance reported MMR of 37.7 for 100,000 live births for year 2012. Sri Lanka has achieved one of the lowest maternal mortality rates in the developing world at a very low cost. Out of the confirmed 134 deaths, the majority (62.7%)was direct maternal deaths and Obstetric haemorrhages, septic abortions and hypertensive disorders were among the leading direct causes of maternal deaths in 2012. Indirect causes accounted for 37.3% of deaths and heart disease complicating pregnancy was the main indirect cause. Intrapartum deaths were minimal(4%) while the highest number of reported maternal deaths occurred during postpartum period (69.0%), highlighting the importance of concentrating on postpartum interventions to prevent maternal deaths.

The leading causes of maternal deaths were Obstetric Haemorrhage, Septic abortions, Heart disease complicating pregnancy and Hypertensive disorders. Obstetric Hemorrhage remains the main cause of maternal deaths in most of the years since 2001.

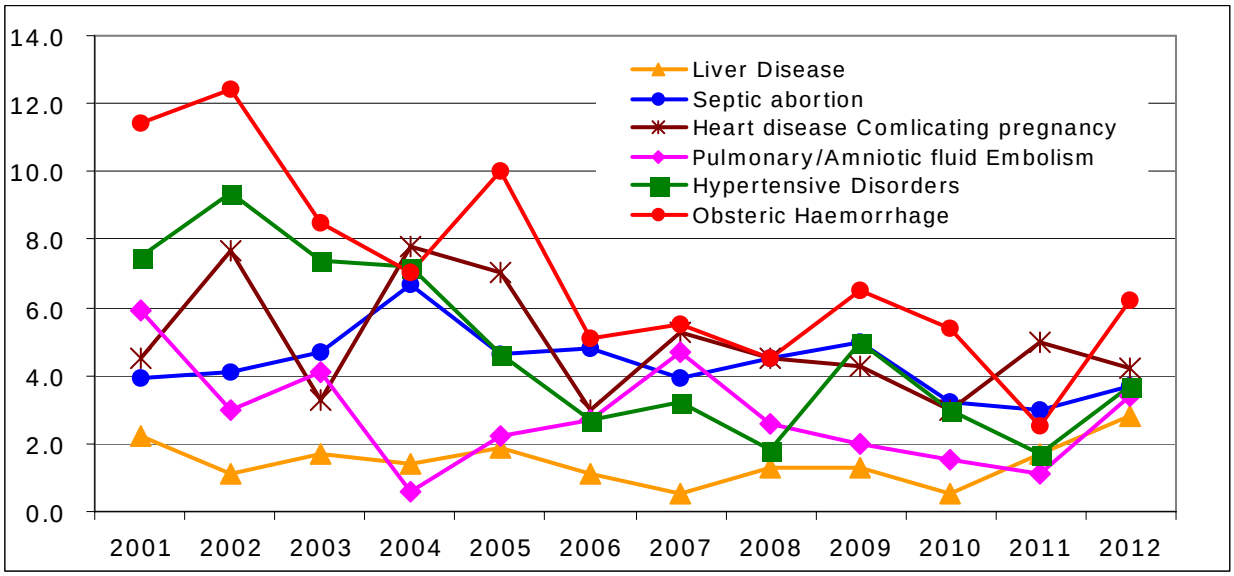
The Cause Specific Mortality Rate (CSMR) for septic abortions has shown an upward trend becoming the second main cause contributing to maternal deaths in 2010. CSMR for all others causes showed a downward trend.The figure 5.1.2 indicates the cause specific maternal mortality rates from 2001.

Fig. 5.1.1 : Maternal Mortality Ratio in Sri Lanka 1999 to 2012



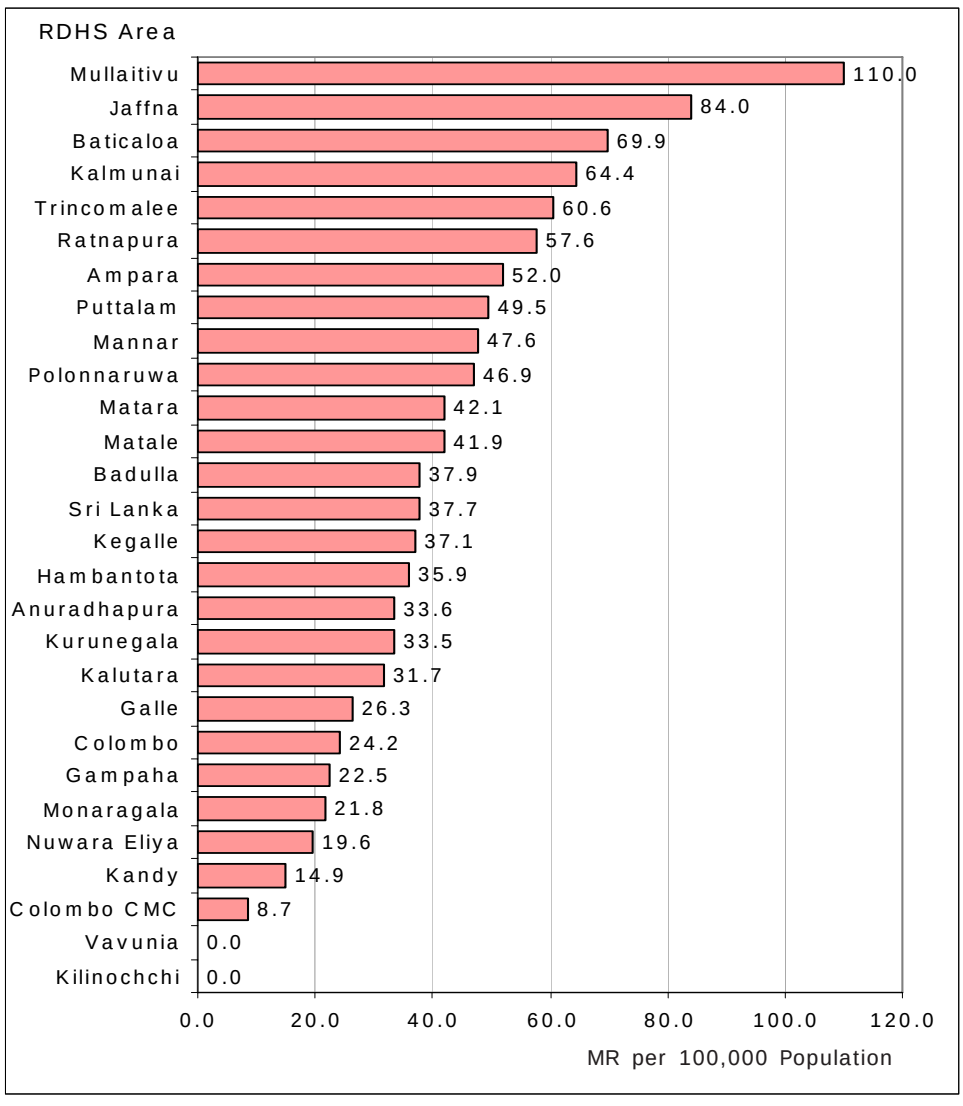
Source : Family Health Bureau

Fig. 5.1.2 : Cause Specific Maternal Mortality Rates 2001- 2012



Source : Family Health Bureau

Fig. 5.1.3 : Maternal Mortality Ratios by RDHS Area 2012



Source : Maternal mortality Surveillance - Family Health Bureau

MMR by RDHS areas during year 2012 are illustrated in figure 5.1.3. It is obvious that there is a wide disparity in regional MMRs. The highest MMR for the year 2012 was reported from Mullathivu district. Vavuniya and Kilinochchi did not have any confirmed maternal deaths.

5.1.1.8 Infant and Child Care

Child care is also an integral component of the programme from its origin. PHM should register infants for domiciliary and clinic care which includes immunization,growth assessment and promotion, breastfeeding and complementry, feeding counseling, assessment and promotion of development, food and vitamin supplementation.

Almost all registered infants had at least one field clinic visit and on average they made 5 clinic visits.Children receiving Vitamin A mega dose at selected age groups are given in Table 5.1.4, where approximately three forth of estimated children in specified groups had received it.

As an attempt is made to reach the whole population of under five children during this month the assessment coverage of nutrition month is understandably higher than the routine assessment when these children are measured at assigned intervals only and not on a monthly basis.

During the nutrition month – 2012 more than 90 percent of all under five children had been assessed for their growth.

The trends of under nutrition among under five children during the period from 2009 to 2012 according to nutrition month data are shown in Figure 5.1.4. It is heartening to note that the figures show a declining trend in all three indices, underweight (weight for age), stunting (length/ height for age) and wasting (weight for length/ height) over the years.

Table 5.1.4 : Care for Infants and Pre Schoolers - 2012

Indicator		2008	2009	2010	2011	2012
		%	%	%	%	%
Infants registered by PHMM		87.1	87.0	81.6	89.9	88.2
Percentage of Infants making at least one clinic visit (of registered infants)		99.7	99.6	98.3	97.9	100.0
Vitamin A supplementation given for estimated children at	6 months	93.0	79.5	75.4	80.3	76.4
	18 months	88.9	85.2	84.0	82.0	74.7
	3 years	86.5	83.7	87.5	85.3	78.8

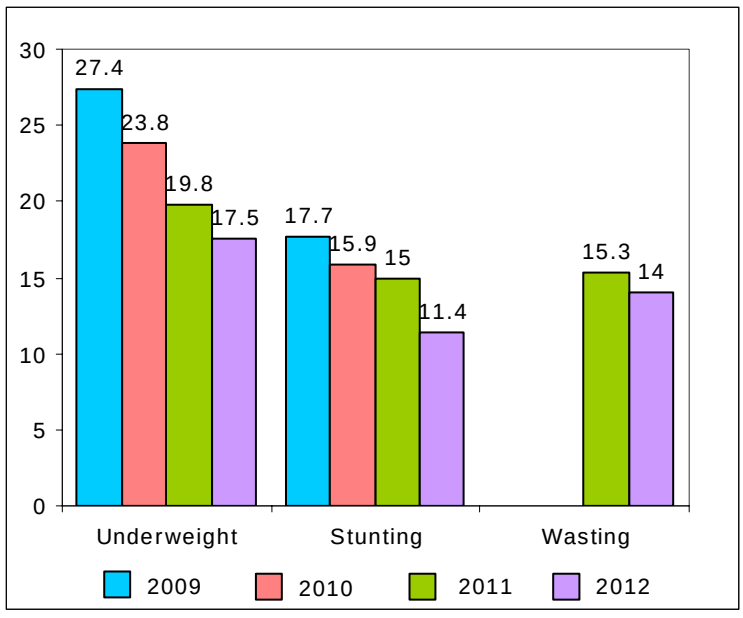
Source : H 509 Family Health Bureau

5.1.1.9 Under Nutrition among Under Five Children

Growth monitoring and promotion of children under five is of priority concern of the National FHP. PHM assess the length/height and weight of under five children at assigned time intervals in the routine programme to monitor growth in order to make timely interventions in conjunction with promotion of breast feeding and complementary feeding.

In addition, every year during the "nutrition month", a month designated for intensive growth promotional activities of mothers, children and adolescents, all under five children are assessed for their weight and length/height.

Fig. 5.1.4 : Under Nutrition among Under Five Children from 2009 to 2012



Source : Family Health Bureau

5.1.1.10 Child Development and Care for Children with Special Needs

The concept of early child care and development (ECCD) has been introduced to the child health component of Family Health programme in year 2000. Subsequent policy and strategic reviews indicated the need of a comprehensive revision of child development and special need care interventions. In response, initiatives were taken to revamp the relevant components of the child health component with the following objectives.

1. Enable all children under five years of age to reach their full potential for development through provision of optimal care
2. Enable children with special needs to optimally develop their mental, physical and social capacities to function as productive members of society

Family Health programme aims to ensure that all children receive appropriate early child care and stimulation by their parents and other care givers, so that children have an optimal environment that facilitates the realization of their genetic potential. The programme also tries to address the health needs of children with special needs by incorporating a package of intervention to existing child health program.

The main strategy used to achieve aim is the enhancing of the capacity of parents on provision of appropriate early child care and psychosocial stimulation. This will be accomplished by providing the relevant knowledge and skills to parents throush an instructional guide compiled in to a booklet given to each mother and interactive educational sessions conducted in mother's classes. PHC workers are supposed to boost these initial knowledge and skills in subsequent field visits.

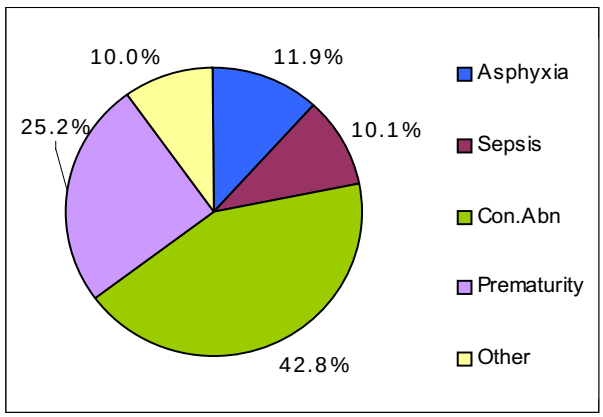
Integrating a systematic development screening system to the present child care programme is the first strategy that initiates the care of children with special needs. Measures are being taken to develop a series of country specific developmental indicators that will be included in the Child Health Development Record, and screening check lists of PHC workers.

The second strategy relevant to special need care is the establishment and integration of a new instituitional arrangement comprising of Primary and Secondary Child Development Centers. These institutions are supposed to provide appropriate care for the children diagnosed of social need conditions.

5.1.1.11 Under Five Child Mortality

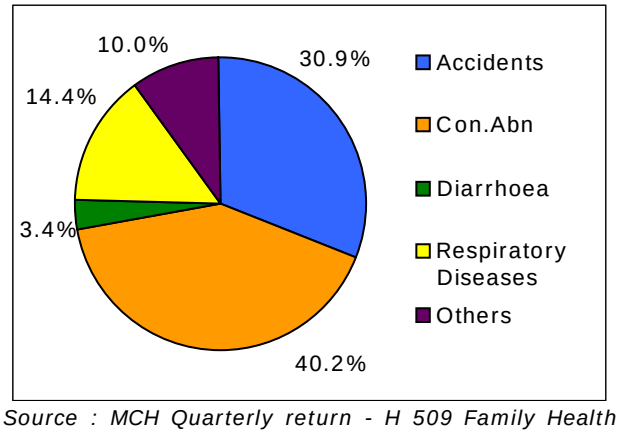
More than 96 percent of the infant deaths reported through civil registration system was identified and reported by the field PHM. All under five deaths are reported by PHMs and field investigation of all death are done at filed level by the Public Health Staff. Neonatal, infant and under five mortality reported for year 2012 by the field staff were 6.8, 9.2 and 10.4 per 1000 live births respectively. Causes for infant and 1-5 year child deaths identified during field investigation are given in figure 5.1.5 and 5.1.6

Fig.5.1.5 : Percentage Distribution of Causes of Infant Deaths, 2012



Source : MCH Quarterly return - H 509 Family Health Bureau

Fig.5.1.6 : Percentage Distribution of Causes 1 - 5 year Child Deaths, 2012



Source : MCH Quarterly return - H 509 Family Health Bureau

5.1.1.12 Care for School Children and Adolescents

As far back as from 1918 Sri Lanka has taken an effort to deliver school health services in an organized manner. School health is a shared responsibility of both Health and Education ministries. FHB is the focal point for school health programme in Sri Lanka. The services are delivered through primary health care infrastructure in collaboration with provincial health and educational ministries with the MOMCH being the chief coordinating officer at regional level. Designated officers are being assigned as School Medical Officers (SMO) in some districts; Kandy, Galle, Colombo to conduct school health activities in urban areas of respective districts.

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

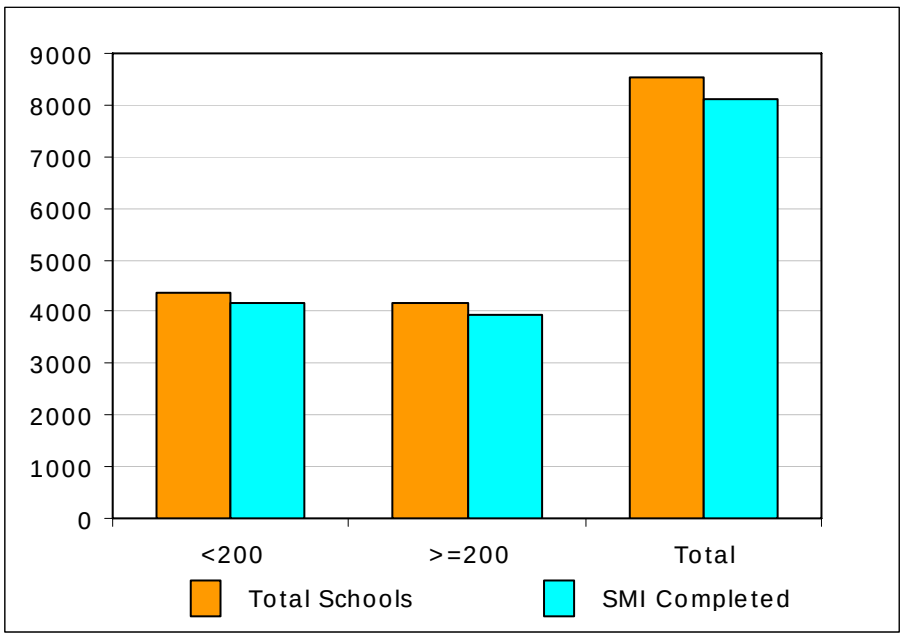
1. Healthy School Policies
2. School Medical Inspection (SMI) and counseling
3. Health Education and development of life skills for reduction of risk behaviour
4. Healthy School Environment
5. School Community Participation

In 2012 Sri Lanka had approximately 4 million of school population. About 65 percent of them are in the adolescent age group (10-19 years). They were distributed among 9905 government schools island wide and of these 52.5 percent of schools had less than 200 children enrolled.

5.1.1.13 School Medical Services

SMI and referrals is one of the main interventions under the programme to promote the health of the school children. Public Health Inspectors are responsible for annual sanitary survey in schools, organizing SMI and carrying out the initial screening of children prior to SMI in schools of their designated areas. MOH then conducts the Medical inspection. In small schools (enrolment less than 200 children), all the children are examined once a year while in the larger schools where enrolment is more than 200, all students in grades 1, 4, 7 and 10 are examined annually.

Fig 5.1.7 : Total Number of Schools and Number of Schools where SMI were conducted- 2012

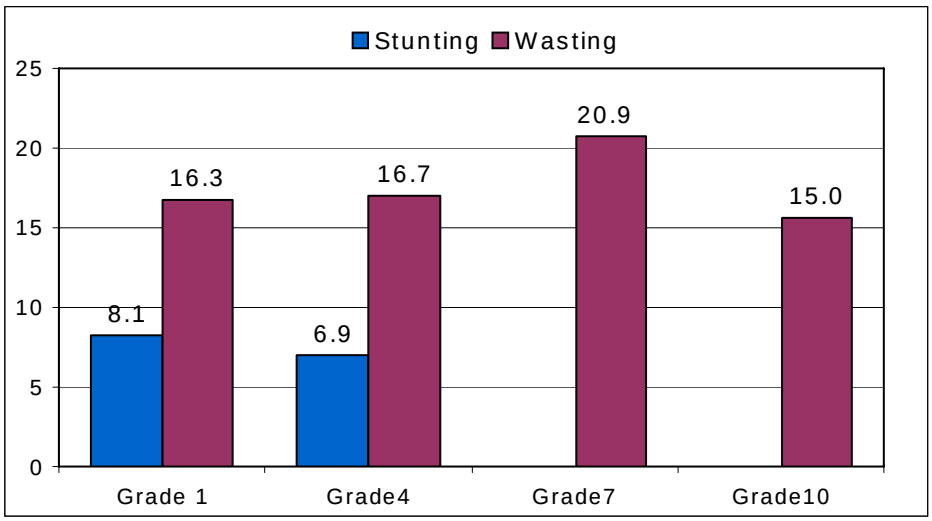


Source : School Health return - H 797 Family Health Bureau

Assessment of nutritional status, detection and correction of health problems or referral when necessary, providing immunization and worm treatment, provision of micronutrient supplementations (weekly iron folate) to children are carried out during the SMI.

In 2012, only 281 out of 328 MOH areas(85.7 %) submitted Quarterly School Health Returns (H 797) for all four quarters. There were 8,544 schools and 3,898,259 children under the purview of those MOH areas who reported their progress.The SMIs were conducted in 8,099 schools resulting in overall school coverage of 94.8 percent. The coverage of schools with less than 200 and more than 200 students were 95.4 percent and 94.2 percent respectively.

Fig.5.1.8 : Percentages of School Children in Different Grades with Stunting and Wasting- 2012



Source: School Health return - H 797 Family Health Bureau

5.1.1.14 Malnutrition among School Children

During SMIs students are assessed for their nutritional status.Stunting is assessed in grades 1 and 4 only. In 2012 around 7-8 % of children in grades 1 and 4 were stunted.

Wasting was higher compared to stunting which ranged from, the lowest around 17% in grades 1 and 4 and the highest (20.8%) in grade 7.

In addition, Body Mass Index (BMI) of all students in grade 10 is assessed and necessary nutritional interventions are done during the nutrition month. A total of 85,564(85%) grade 10 students were assessed for their BMI during year 2012.Prevalence of low BMI among male and female students in year 2012 was 27.8 and 20.7 percent respectively. Prevalence of overweight among male students was 3.1% while that for females was 4.3% for the same year.

5.1.1.15 Family Planning Services

Family planning (FP) was accepted as a part of the national health policy in 1965, and its service components were integrated into MCH services. The programme offers a wide range of modern contraceptive methods enabling all couples to have a desired number of children with optimal spacing whilst preventing unintended pregnancies.FP services also include services for sub-fertile couples.

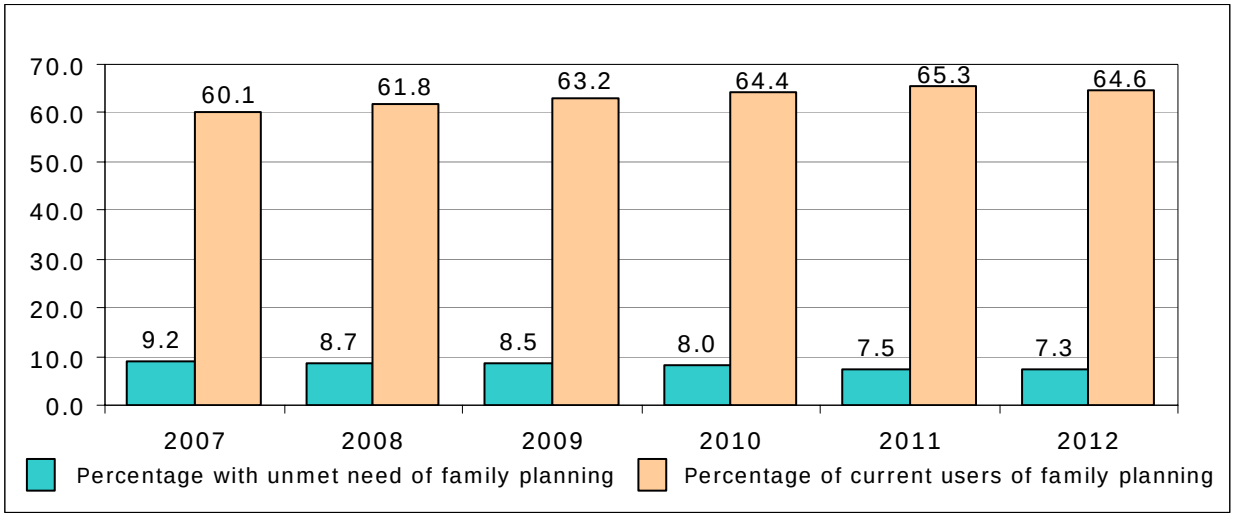
According to RH-MIS 64.6 percent of eligible families had been using some contraceptive method (current users) during year 2012. Proportion of modern method and traditional method users were 55.1% and 9.5% respectively. The trend in proportion of current users and unmet need for family planning among eligible families are given in Figure 6.1.9.

A family not expecting a child in next two years yet does not use any contraceptive method is considered as a family with unmet need.

Sri Lanka records the best family Planning performances in the region. However, since of late, stagnation can be observed.The issue that may have contributed to it includes insufficient supply of certain contraceptive commodities during the year.

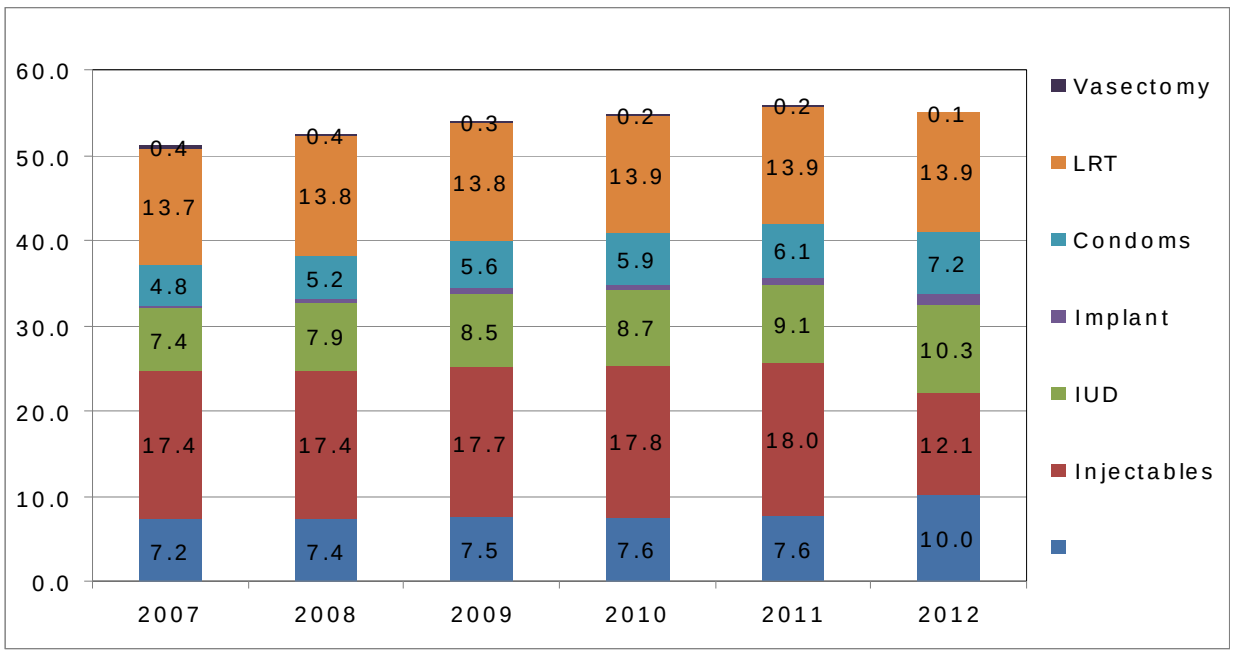
The method mix of the contraceptive use among eligible families is given in Figure 5.1.10. Injectable is the commonly used modern temporary and there had been 6 percent reduction in the injectable users in year 2012. Non availability of the supply and reporting of adverse reactions may have contributed to that.

Fig.5.1.9 : Trend in Proportion of Current User and Unmet Need for Family Planning among Eligible Families 2007-2012



Source : H 509 Family Health Bureau

Fig. 5.1.10 : Modern Contraceptive Methods used by Eligible Families 2007-2012



Source : MCH Quarterly return - H 509 Family Health Bureau

5.1.1.16 Gender and Women's Health

The Government of Sri Lanka was a signatory to the Program of Action adopted at the International Conference on Population and Development (ICPD) in Cairo in 1994. The concept of Reproductive Health (RH) has been introduced to the Family Health programme since then and the programme was reorganized to address gender equity and equality in RH and specific reproductive health issues of women and their partners throughout the life course and women with special needs.

5.1.1.17 Well Woman Clinic Services

Well woman clinics (WWC) services were incorporated into the Family Health Services in 1996 encompassing RH along life cycle. At the end of year 2012, 939 well women clinics were functioning in the country, mostly based at MOH offices. These clinics provide screening services for peri-menapausal women against common non-communicable diseases (NCDs).The diseases screened in the clinics are Diabetes Mellitus, Hypertension, Breast and Cervical cancers.

Table 5.1.5 : Clinic Attendance and Problems detected at Well Woman Clinics - 2008-2012

Activity	2008 %	2009 %	2010 %	2011 %	2012 %
First time attendees					
Under 35 years	19.5	15.9	16.1	10.2	8
35 years	16.1	19.4	23.6	39.4	46.3
Above 35 years	64.4	64.7	60.3	50.4	45.6
35 year cohort coverage with pap smear screening	8.2	10.6	12.4	25.5	28.9
Cervical smears reported as high and low grade lesions	0.15	0.3	0.5	0.25	0.2
Cervical smears reported as malignant (Carcinoma)	0.02	0.02	0.06	0.04	0.02
Cervical smears reported HPV	0.3	0.2	0.5	0.2	0.1
Breast abnormalities detected	1.8	1.5	1.4	105	1.4
Diabetes Mellitus detected	2.2	2.1	2	1.8	2
Hypertension detected	4.4	3.9	4	4	3.7

Source : MCH Quarterly return - H 509 Family Health Bureau

Women in 35-year age cohort are the special target population for cervical cancer screening with Pap smear. The 35 year age cohort coverage with pap smear testing is 29 percent for year 2012.

The problems detected among the women screened at WWC for different NCDs are given iin the Table 5.1.5.

5.1.1.18 Care for Women with Special Needs

There is an important group of women with special needs, who do not have access to the routine reproductive health services, but requiring special attention and care. This group includes institutionalized women, migrant women, displaced and marginalized women etc. A programme has been developed to address the reproductive health issues of migrant women and their family members, and this programme will be implemented in the field by the primary health care team.

5.1.1.19 Health Sector Response to Gender-based Violence (GBV)

Establishment of Gender-based Violence (GBV) care centres by the name of "*Mithuru Piyasa*" at state hospitals, which provides essential services for GBV survivors was a major step taken towards addressing Gender-based Violence. The term "*Mithuru Piyasa"* in Sinhala means "Friendly Haven" and was selected after much thought, and the aim is to establish such centres in all the state hospitals throughout the island.

Also, the primary health care teams are trained on their roles and responsibilities on prevention and management of GBV. On this aspect, the team members are sensitized on gender issues and gender stereotyping and creating awareness among individuals, families and the community as a whole on these issues so as to prevent or minimize such issues, which would lead to the prevention of gender based violence. Further, the team members are trained on identifying GBV survivors and providing befriending services and referring them for other services.etc.

5.1.1.20 Oral Health Services

Since 2007, the Oral Health component was integrated into the National FHP and the services have been through MCH and School Health Services. The main aim is to improve oral health from early years of life.

5.1.1.21 School Dental Services

The main objective of the School Dental Services is to reduce morbidity due to common oral diseases in preschool and school children between the ages of 3-13 years by provision of oral healthcare services with emphasis on prevention.The services are delivered by 393 School Dental Therapists (SDTT) who work in School Dental Clinics (SDC). Their target group includes students of grades 1, 4 and 7in schools with more than 200 students and all students below the age of 13 years in schools with less than 200 students.

Table 5.1.6 : Work Performances of School Dental Services 2012

Number of SDTT	Number of children per SDT	Percentage of schools screened	Percentage of caries				Percentage of calculus			Percent of children screened[2]	Coverage percentage[3]
			Gr 1	Gr 4	Gr 4[1]	Gr 7[1]	Gr 1	Gr 4	Gr 7		
393	3,085	63	57	61	9	20	3	15	23	65	56

[1] Permenent teeth

[2] Percentage of children who are healthy and whose treatment has been completed out of the target group

[3] Percentage of children screened out of the target group

In year 2012, the SDTs could screen 65 percent of the total children in the target group. Of the target group, 56 percent of children were identified as either healthy or their dental problems were successfully treated by SDTs. Therefore the unmet need in terms of screening and those awaiting treatment after screening was around 44 percent of the target group (Table 5.1.6). According to the data dental caries percentage of permanent dentition has increased from grade 04 to grade 07 by 11 percent.

5.1.1.22 : Dental Health Services for Pregnant Mothers

Dental services for pregnant mothers were oriented to improve the oral health of mothers and young children by providing comprehensive care during the, antenatal period, in order to reduce;

- Complications of dental diseases during pregnancy
- The risk of transmission of 'harmful' bacteria to the newborn (to minimize the risk of Early Childhood Dental Caries)

It is expected that all antenatal mothers should be receiving: oral health education at ANC, compulsory dental screening by Dental Surgeons (DSS) and necessary clinical management of existing oral diseases. Only 36 percent of registered pregnant mothers were screened by Dental Surgeons during the year 2012. Out of them 21 percent were found to have healthy dental hygiene, 56 percent had dental caries and 41 percent had gum diseases (Table 5.1.7).

5.1.1.23 Oral Health Care for Infants and Early Childhood

It has been identified high burden of dental caries among children under 03 years. Hence it is planned address this issue in the next year by introducing a screening programmes for infants and young children.

Table 5.1.7 : Provision of Oral Health Care Services to Antenatal Mothers – 2012

Percentage screened[1]	Percentage Healthy[2]	Percentage with Caries[2]	Percentage with Gum Disease[2]	Treatment Coverage
35	21	37	42	21

[1] *of all mothers registered during 2012*

[2] *of number of mothers screend by DSS*

Source : Family Health Bureau

5.1.1.24 Programme Review

The programme performances are reviewed at district level quarterly. In addition annual reviews conducted at each RDHS area with the participation of national level experts provide the forum to discuss issues related to programme implementation.

5.1.1.25 Research in Family Health

Operational research provides evidence for policy and programmatic concerns. A National Survey on Adolescent and youth health was initiated during 2012 with the objective of obtaining a profile of Sri Lanka Adolescent and youth in terms of selected aspects of their health with the support of GOSL,UNICEF and UNFPA.

An island wide Emergency Obstetric and Neonatal Care needs assessment survey was conducted during 2012. This survey comprised of facility assessment, morbidity estimation and assessment of knowledge of relevant health workers.

5.1.1.26 Family Health Programme related Millennium Development Goals (MDGs)

Sri Lanka was signatory to Millennium Declaration in 2000 and the FHP is geared to achieve the Goals directly related to the programme; Goals 1, 4 and 5. The Table 5.1.8 gives the indicators used to assess those and the targets set for 2015.

Table 5.1.8 : Targets for Millennium Development Goals 1,4 and 5

Goal		Target	Indicator	Baseline	Current	Target (2015)
Goal 1	Eradicate extreme poverty and hunger	1C: Halve , between 1990 and 2015, the proportion of people who suffer from Hunger	Prevalence of underweight children under age 5 (%)	38% (NCHS)(1993)	26.9 %(NCHS) [2] 21.1%(WHO)(2006/7)	19%(NCHS) 15%(WHO)
Goal 4	Reduce Child Mortality	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Under-five Mortality rate (Per 1000 live births)	22.2 (1991)	11.3 (2009) [1]	8
			Infant Mortality rate(Per 1000 live births)	17.7 (1991)	9.0(2009) [1]	6
			Proportion of 1 year-old children immunized against measles	84 % (1990)	97.2% (2006/7) [2]	100%
Goal 5	Improve Maternal Health	5A : Reduce Maternal Mortality	Maternal Mortality ratio (per 100,000 live births)	92 (1990)	31 (2010) [3]	23
			Proportion of births attended by skilled health personnel	94%(1993)	98%(2006/7) [2]	99%
		5 B: Achieve, by 2015, universal access to reproductive health	Contraceptive Prevalence rate			
			Modern Method	45% (1993)	52.5% (2006/7)[2]	57%
			Any Method	66%(1993)	68% (2006/7)[2]	72%
			Adolescent birth rate (ASFR 15-19)	35 (1993)	28 per 1000 women (2007)[2]	24
			Proportion of Teenage pregnancies		6% (2012)[3]	5%
			Antenatal care coverage			
			At least one visit		96% (2006/7)[2]	100%
			4 or more		93%(2006/7)[2]	100%
			Unmet need for family planning		7.4.% (2006/7)[2]	7.00%

5.1.1.27 Major Events in National Family Health Programme during 2012

- National Maternal and Child Health policy was approved by the Cabinet of Ministers in January 2011 and the plan of action for MCH was approved by the cabinet in May 2012.
- National Strategic plan on Maternal and Newborn Health was formulated and launched in June 2012.
- Close monitoring of Sri Lanka Code for the Promotion, Protection and Support of Breast Feeding and Marketing of Designated Products was ensured with regular meetings of the monitoring committee chaired by Secretary Health.
- The new package of intervention on pre pregnancy care has been introduced to cater for the needs of newly married couples.
- The revised maternal care package was launched in February 2012. The implementation of new package was completed in 7 provinces by 2012.
- During 2012, the maternal death surveillance activities were expedited and streamlined. Foeto infant death reviews were incorporated into the existing Maternal death review mechanism.
- Micronutrient supplementation for the maternal and school health programme was streamlined and the GOSL is providing the total amount of micronutrients for the programmes.
- SAARC Development Fund Project on Maternal and Child Health was initiated to strengthen newborn care services across the country. Equipment distributed to hospitals in 12 districts to improve newborn care and newborn care units were upgraded with infrastructure development.
- A new unit has been established in the FHB for Adolescent Health.
- Development of country specific age specific development windows of infants and young children.
- Pretesting a potential special need project in the Puttlam district and designing a national plan of action on special need care.
- School dental services were streamlined with effective implementation of a Management Information system and monitoring of service delivery.
- Drafted a guideline on post abortion care and for the service providers on jadella.
- Conduct expert consultation on side effects to DMPA including anaphylaxis and suspected quality issues.
- Assessment of the current cervical cancer screening programme by an external evaluator in March 2012.
- Short Programme review process was piloted in Puttlam district.
- Commencement of “MCH quarterly” quarterly newsletter on Family Health Programme.
- Initiated the setting up of Breastfeeding Rooms in places of employment to facilitate IYCF recommendations on breastfeeding through circular by Secretary Health to health institutions and communication by Secretary Health to other government institutions.
- Circulation of Deworming Guideline and initiation of procurements of mebendazole through MSD prior to implementing the Deworming programme in Sri Lanka 2013-2016.
- Expansion of implementation of the Nutrition Rehabilitation Programme (NRP) islandwide to cover all the districts and changing the modality of the programme confining the management of under 5 children with severe acute malnutrition with therapeutic food to institutions.

5.1.2 Directorate of Environmental and Occupational Health

5.1.2.1 Environmental Health

Environmental health encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments. Following programmes and activities have been carried out by the directorate in improving environmental health in Sri Lanka during 2012.

5.1.2.2 Water Supply and Sanitation Programme

Ministry of Health strongly advocates supply of adequate safe water to the Public and raise awareness among public through public health staff on the importance of consuming safe water. Water quality surveillance is carried out by Ministry of Health in collaboration with the Water Board. Public Health Inspectors send water samples for testing of microbial parameters on a regular basis and chemical parameters in special cases.

5.1.2.3 Health Care Waste Management

Management of healthcare waste is a responsibility of the institution that generates it. There is a Steering Committee on Healthcare Waste Management with representation from all the relevant stakeholders. Disinfection of waste by autoclaving is identified by the Ministry of Health for the Colombo CMC area which is now in operation. The national colour code on healthcare waste has been established for waste separation. Technical guidance and financial assistance had been provided to selected provinces as an initial step to improve existing waste management practices which will be extended to the whole island based on the National Policy. Methods for final disposal of clinical waste are being explored for implementation. Budgetary allocation is provided for hospitals for healthcare waste management under the regular budget. Training programmes are conducted for Base, District and Teaching Hospitals.

5.1.2.4 Inter Agency Co-ordination

Technical guidance and awareness is provided to other ministries, relevant agencies and the general public on environmental health. Inter ministerial coordination activities were carried out in the areas of solid and hazardous waste management, water supply, sanitation, climate change and in international conventions held in Basel, Stockholm, and Rotterdam to strengthen the environmental health conditions in this country.

5.1.2.5 Drafting of Environmental Health Policy

Environmental Health Policy draft was developed in order to address the issues faced in the future, due to rapid economic and industrial development, as new environmental issues are emerging now. This draft is pending cabinet approval.

5.1.2.6 Capacity Building of Health Staff on Environmental Health

Public Health staff was trained on current environmental issues such as climate change, indoor air pollution, solid and hazardous waste management. Training programmes on Healthcare Waste Management were conducted in collaboration with the Department of Community Medicine giving priority to the health institutions with issues and Environmental Authority.

5.1.2.7 Climate Changes and Health

Technology needs assessments on climate change for health sector has been carried out in collaboration with the Ministry of Environment. Three technologies from health sector have been prioritized and a plan of action has been developed during 2012. A new project has been initiated to manage industrial carcinogens.

5.1.2.8 Occupational Health

A healthy workforce is considered the corner stone for sustainable development in any country and Sri Lanka is no exception. The Ministry of Health is responsible for the health of all citizens of Sri Lanka and recognizes that the health of workers is an integral part of general health and daily life. The Directorate of Environmental and Occupational Health is the focal point for Environmental and Occupational Health at the Ministry of Health dealing with occupational health of approximately 8.5 million labour force in our country.

The Ministry of Health has embarked on a programme to develop occupational health in Sri Lanka and the main objectives of the programme are

- ✓ The promotion and maintenance of the highest degree of health among workers
- ✓ The prevention of adverse effects on health caused by the working conditions among workers
- ✓ The protection of workers from occupational risks resulting from factors adverse to health
- ✓ The adaptation of work to humans

All workers in Sri Lanka have access to free health services at the curative as well as preventive health sectors. Treatment of occupational diseases and injuries and rehabilitation of occupational injuries are integrated into the existing curative health system. Occupational medical problems are taken care of by the medical units, occupational surgical problems by the surgical units and rehabilitation by the physiotherapy and rehabilitation units.

The implementation of occupational health activities in the preventive health sector are done mainly through the MOH offices. The Medical Officers of Health (MOOH) and the Public Health Inspectors (PHII) carry out occupational health activities at the grass root level.

The MOOH and PHII are expected to visit workplaces and identify occupational health issues, advise on remedial measures, carry out activities to promote health targeting the workforce and the management and look into basic facilities such as safe drinking water, sanitary latrines, meal and changing rooms and adequate washing facilities at workplaces. It is planned to establish occupational health units at district level to better facilitate the implementation of the occupational health programme and to strengthen the coordination between the Directorate of the Environmental and Occupational Health and the grass root level.

In achieving the above mentioned objectives, the Directorate of Environmental and Occupational health has carried out several activities on occupational health in the year 2012.

5.1.2.9 Capacity Building of Public Health Staff to Upgrade Occupational Health Services at District Level

Three day training workshops were conducted to educate Medical Officers of Health (MOOH) and Public Health Inspectors (PHII) in Kegalle, Kalutara, and Kandy districts on occupational health during 2012. Eighty five Public Health Inspectors and twenty MOOH were trained. Two day training workshops were conducted for MOOH and PHII in Hambantota and Kegalle districts on occupational health and safety and fifteen MOOH and forty five PHII were trained. Single day training was conducted on environmental and occupational hazards for district level public health staff and ten MOOH and fifty PHII were trained during 2012. It is intended to address occupational health issues of the informal sector as well as small scale industry workers through them.

5.1.2.10 Generating Evidence to Plan Interventions on Occupational Health and Safety

Small scale industries contribute considerably to the economy of Sri Lanka. However, the occupational health of workers in small scale industries remains at a sub standard level and evidence is needed to plan interventions for them. A research project was conducted in Gampaha and Kalutara districts to identify health and occupational issues among them in 2012. A descriptive cross-sectional study was carried out among four categories of small scale industries namely food and beverages, apparel, non metallic mineral and fabricated metal products in Gampaha and Kalutara districts. A sample of 102 factories was randomly selected using probability proportionate to size of industries according to Census of Industry 2003/2004. Interviewer administered pre-tested checklist was used as the study instrument. The working environment was found to be accident prone in 38.2 percent (n=39) of industries in Gampaha district. In conclusion, the working environment of small scale industries in Gampaha and Kalutara districts were found to be unhealthy. It is intended to plan and implement an intervention to improve the health of small scale industry workers in these districts in 2013/ 2014.

5.1.2.11 Awareness raising on Occupational Health and Safety among Different Categories of Workers

Municipal solid waste handlers and hospital staff are at great risk of developing occupational health problems. Awareness programmes on occupational health and safety were conducted for 120 Municipal solid waste handlers in Ampara district. Occupational health and safety awareness was done for different categories of hospital staff at Castle Street Hospital for Women and 60 officers were trained. It is expected to address occupational health issues of high risk groups and to expand occupational health services for them in 2013.

5.1.2.12 Undergraduate and Post Graduate Training

Training of MSc and MD Community Medicine students attached to the Post Graduate Institute of Medicine Colombo and Undergraduate Medical Students on Occupational health and safety.

5.1.2.13 Inter Sectoral Coordination

Technical guidance and awareness was provided to Ministry of Labour and other agencies on occupational health.

5.1.2.14 Food Safety and Hygiene

The Food Control Administration Unit (FCAU) of the Ministry of Health is the entity charged with the administration aspect of the Food Safety activities of the country. The main tasks entrusted are implementation of the provisions of the Food Act, Regulations and related issues.

1. Food Safety & Hygiene activities through the Food control Administration Unit (FCAU) are aimed at ensuring the availability of safe and wholesome food to consumers. While the Health sector plays the major role, the contributions from other government and non-government sectors are of immense value.
2. The main Food Law is the Food Act No. 26 of 1980 with its related regulations published in terms of section 32 of the Food Act. The Act was amended by Food (Amendment) Act No. 20 of 1990 and No. 29 of 2011. At present there are 37 Food Regulations framed under the Food Act.
3. The Food Advisory Committee (FAC) established in terms of the Act advises the Hon. Minister on policy matters relating to food safety and looking to the matters arising out of implementation of the Food Act. Several Food regulations were reviewed/framed / drafted and published.
   - Food (Hygiene) Regulation
   - Food Antioxidant
   - Food Colouring
4. The following regulations have been reviewed under a special (WHO) programme for publication. The Legal Draftsmen is being consulted for finalization of these regulations.
   - Food (Sweetener) Regulations
   - Food (Irradiation) Regulations
   - Food (Sugar & Sugar products) Regulations
   - Food(Additives-Emulsifying) Regulations
   - Food (Milk & Milk products) Regulations
   - Food (Additives-General) Regulations
   - Food (Tea, Coffee, Cocoa, and their products) Regulations
   - Food (Additives-Emulsifying) Regulations
5. The FCAU also conducts training Programmes on Food Safety for health personnel as part of the routing activities. The following training programmes were conducted during the period in review.
   a) 5 Days Training Programmes on Food Safety and Hygiene for PHII = 01
   b) 3 Days Training Programmes for MOOH = 02
   c) Awareness programmes for Food Handlers = 22
6. The FCAU being the administrative arm of the Chief Food Authority, facilities conducting of the Food Advisory Committee (FAC) meetings and implement decisions taken at the FAC meetings.
   a) No. of FAC meetings held during the period = 12
   b) No. of Food Advisory Sub Committee meetings held during the period = 24
   c) No. of Labelling & Advertising Sub Committee meetings held during the period = 12

7. The FCAU is directly involve in the Import/ Export inspection and certification of food and also in registration of bottled or packaged water manufacturing premises in addition to the administrative work. Under these programmes the following activities were carried out:

I. Imports

a) No.of consignments of imported food items inspected : 20,985
b) No.of consignments rejected : 11
c) No.of samples taken for analysis : 4,200

II. Exports

a) No of Health certificates issued : 6,663
b) Revenue collected to consolidated fund : Rs.6.82 million

III. Registration of Bottled of Packaged Water Manufacturing Premises

a) No of Applications received = 21
b) No. of assessment carried out = 21
c) No. of premised registered = 36
d) Total amount of collected fees credit to the consolidated fund = Rs.21,000.00

IV. Elimination of Iodine Deficiency Disorders (IDD)

As per the Food (Iodization of Salt) Regulations, importing, selling and manufacturing of non iodized salt is prohibited in implementing the universal iodization of salt programme. It is therefore necessary that appropriate authorization be issued for obtaining required quantities of salt for various industries including iodization of Salt.

a) No of application received = 07
b) No. of application for renewals= 07
c) No.of inspection carried out = 15
d) No .of permits issued = 07
e) Quantity of salt for which permits issued = 52,900 M/T

V. Island wide Food Safety Activities (MOH,F&DI and PHII)

a) Total No.of sample taken = 15,057
b) Number Satisfactory = 7538
c) Number unsatisfactory = 3427
d) Number prosecuted = 2413
e) Amount of fine imposed = Rs.21,357,550/

VI. Health Education Programmes conducted by Authorized Officers (MOOH,PHII,FDII)

		No. of programmes	No. of participants
For owners of food handling establishments	=	2,796	63,402
For field officers	=	513	13,037
For community / Consumer societies	=	3,762	112,828
For teachers & Students	=	3,945	287,021

8. Under the assistance of the WHO funds the following programmes were conducted successfully by the FCAU

a) Training of staff(Three months training course on food &drugs inspection)
b) Consultative work shop on food safety regulations
c) Technical support to food safety regulations

5.1.3 Epidemiology Unit

Epidemiology Unit is responsible for prevention and control of communicable diseases at the Ministry of Health. The Unit carries out this task by monitoring of communicable diseases in the country through a disease surveillance system, developing prevention and control strategies and monitoring the implementation and effectiveness of such interventions. Epidemiology Unit is the focal point on implementation of the National Immunization Programme (NIP). Developing policy and strategies for vaccine introduction, coordinating logistical supplies of vaccines and injection safety items, monitoring and evaluation of the programme are the main functions carried out by the Epidemiology Unit in relation to the NIP. The Unit acts as the emergency response unit for disease control activities during disasters, emergencies and handles outbreak investigation and control. Further the Epidemiology Unit carries out training for undergraduates, postgraduates and clinical and field health staff. The Unit carries out research on burden of communicable diseases, on evaluating effectiveness of interventions and on many other related areas with collaboration of other national institutions and international agencies.

5.1.3.1 Disease Prevention and Control

Disease surveillance is one of the main strategies in disease prevention and control in communicable diseases. It guides proper monitoring and controlling diseases through accurately collected epidemiological data. It helps to face the challenges of public health emergencies of disease outbreaks. Cases presented here are categorized as; notified/ reported cases (cases reported by routine notification using H544 / H399 or reported by sentinel surveillance sites; these cases are considered as clinically suspected cases) or as clinically or/and laboratory confirmed cases (cases reported by using H399/ H411a following field investigations).

AFP Surveillance : Poliomyelitis Eradication No Poliomyelitis cases have been reported in Sri Lanka since 1993. Acute Flaccid Paralysis (AFP) surveillance is carried out aiming at identifying all poliomyelitis cases and excluding all other AFP cases as non polio cases conforming to other differential diagnoses.

A total of 75 non polio AFP cases were notified to the Epidemiology Unit in 2012. The highest number of AFP cases has been reported from districts of Colombo, Gampaha and Nuwara Eliya with more than 5 cases from each district. Sixty seven hospitals were functioning as sentinel sites for AFP surveillance during 2012. The sentinel site for AFP surveillance is defined as a hospital with availability of a Consultant Paediatrician's service. Twenty three AFP cases were reported from Lady Ridgeway Children's Hospital (LRH) during the Year. Teaching Hospital Karapitiya, T.H.Kandy and Sirimavo Bandaranayake Specialized Children's Hospital (SBSCH) have reported more than five patients from each hospital.

5.1.3.1.1 Chickenpox

A total of 4,473 chickenpox cases were reported in 2012 and the highest numbers of cases were reported among age groups of 20-30 years (29.4%) and both males and females were equally affected. Five deaths were reported in year 2012.

Colombo (561 cases) was the district reported the highest number of cases followed by Kurunegla (464 cases), Kegalle (335 cases), Galle (281 cases), Matara (270 cases), Anuradhapura (252 cases), Gampaha (225 cases), and Kalmunai (218 cases).

5.1.3.1.2 Cholera

No cases of cholera were reported to the Epidemiology Unit during the year 2012. The last case of clinically and laboratory confirmed cholera was reported in 2003.

5.1.3.1.3 Dengue Fever(DF) / Dengue Haemorrhagic Fever (DHF)

During the year 2012, 44,461 cases of DF/DHF and 181 deaths were reported (0.40% CFR). The highest ever recorded number of cases in a given year was recorded in 2012. Despite an increase in the number of cases the reduction of CFR from 0.7% in 2011 was substantial. Special surveillance data on 9363 confirmed cases showed that the highest number of age distribution groups were age of 20 - 29 years (23. 78 %) and 30 - 39 years (15. 60 %).

A close surveillance of the disease including early identification of the number of cases, distribution, seasonality, characteristics of patients, disease pattern and deaths were closely monitored. In addition to routine surveillance special surveillance was continued for close monitoring of disease severity with the assistance of Infectious Control Nurses (ICN) of all major hospitals island wide. The proportion of Dengue Haemorrhagic Fever (DHF), the more severe form of dengue illness, was reported in more than 10% of patients at national level. Consultative meetings of senior clinicians and other relevant experts were held throughout the year in order to reduce the caseload and prevent deaths due to dengue. Revised and updated national guidelines on management of DF and DHF for children and adults were developed and distributed to all healthcare institutions including the private sector. Special audits were carried out on case management and deaths by a team of experts. Dengue deaths were reviewed both at institutional as well as at national level through technical reviews in order to identify and rectify any preventable causes. Over 30 clinical management training programmes were conducted by the Epidemiology Unit during the year. Circularized instructions were issued in order to standardize case management from the preliminary care settings to tertiary care hospitals.

5.1.3.1.4 Dysentery

In the year 2012, a total of 4085 cases of Dysentery were reported: Ratnapura (319 cases), Batticaloa (314 cases), Kalmunai (296 cases), Trincomalee (282 cases), Jaffna (270 cases), and Kurunegala (263 cases) were the leading districts reported. Majority of Dysentery cases reported during the year were among males (53.22 %) and belongs to the age group of 1-4 years (50.29%).

5.1.3.1.5 Enteric Fever

A total number of 1403 cases of Enteric fever were reported in 2012. The district of Jaffna (438 cases) had reported the highest number of cases of enteric fever, followed by Colombo (232 cases), Kurunegala (107 cases) and Mannar (74 cases). Majority of Enteric fever cases reported during the year were among males (54.27 %) and belongs to the age group 5- 9 years (18.12%).

5.1.3.1.6 Human Rabies

Thirty eight confirmed cases of Human Rabies were notified in 2012. Out of the total reported, 31 (81.58%) were males. Colombo (5 cases), Kurunegala (4 cases) and Batticaloa (4 cases) were the leading districts reported.

5.1.3.1.7 Influenza

Influenza surveillance in humans and animals is conducted in the country as part of the Pandemic/Avian Influenza Preparedness Programme. Influenza surveillance in animals is carried out by the Department of Animal Production and Health (DAPH) of the Ministry of Livestock Development and human influenza surveillance is conducted in selected sentinel hospitals by the Epidemiology Unit.

Human Influenza surveillance comprises of 2 components; Influenza like illness (ILI) surveillance and Severe Acute Respiratory tract Infections (SARI) surveillance.

ILI Surveillance: A total of 80,660 ILI visits to OPD of sentinel hospitals had been reported in 2012; 1.7 percent of all OPD visits to sentinel hospitals were ILI patients. Fifty percent (50%) of all ILI patients were under 14 years old.

SARI Surveillance: A total of 2580 patients that were treated inward for severe respiratory tract infections in the selected SARI sentinel hospitals were reported within 2012; 3 percent of total admissions were due to SARI in 2012.

5.1.3.1.8 Japanease Encephalitis

During the year 2012, 210 cases suspected for Encephalitis were reported, but only 154 (73%) cases were clinically confirmed as encephalitis and 60 were found to be laboratory confirmed as Japanese encephalitis. Ratnapura (12 cases), Kurunegala (8 cases), Puttalam (7 cases), Kegalle (6 cases) and Gampaha (5 cases) were the leading districts which reported Japanese encephalitis cases in year 2012. Seventy seven percent of the laboratory confirmed Japanese encephalitis cases were among age group more than 20 years.

5.1.3.1.9 Leishmaniasis

Number of notified cases to the Epidemiology Unit was 1219: Anuradhapura (434 cases) had the highest number reported, followed by Hambantota (336 cases), Polonnaruwa (143 cases), Matara (92 cases), Kurunegala (56 cases), Matale (46 cases) and Ratnapura (35 cases). Majority of Leishmaniasis cases reported during the year were among males (64.44 %) and belongs to the age groups 25 - 44 years (around 40%).

5.1.3.1.10 Leptospirosis

A total of 2663 cases and 52 deaths (CFR 1.9%) due to Leptospirosis were notified in 2012. Majority of Leptospirosis cases reported during the year were among males (85.18 %) and belongs to the age groups 25 – 55 years (around 70%).

Administration of Doxycycline prophylaxis treatment is a strategy recommended only for well recognized high risk groups. This prophylaxis is not made a substitute for primary prevention activities such as rat control measures.

5.1.3.1.11 Measles

Eighty three (83) suspected cases of Measles were reported during 2012 but only 51 cases were clinically confirmed as measles. No outbreak of measles was reported during the year. Majority of Measles cases reported during the year were among males (64.86 %) and belongs to the age groups 1—4 years (18.91%) , 5 - 9 years (16 .21%) and 20—29 years (21.62%).

Laboratory investigations of 84 fever and maculopapular rash patients suspected of Measles or Rubella were carried out in the WHO accredited virology laboratory at the Medical Research Institute (MRI) and 7 cases were serology positive for Measles *IgM* antibodies.

5.1.3.1.12 Meningitis

During the year 2012, 865 cases suspected for Meningitis were reported, but only 625 (75%) cases were clinically confirmed as Meningitis. Kurunegala (86 cases), Ratnapura (71 cases), Anuradhapura (67 cases), Kalutara (49 cases), Gampaha 38 (38 cases) and Colombo (37 cases) were the leading districts which reported clinically confirmed meningitis cases in year 2012. Majority of Meningitis cases reported during the year were among males (61 %) and belongs to the age groups less than 1 year (40%) and 1 – 4 years (20%).

5.1.3.1.13 Mumps

A total of 4330 cases of Mumps were reported in year 2012. Majority of Mumps cases reported during the year were among males (53.77 %) and belongs to the age group 5-9 years (31.76%). Kalutara (387 cases) was the district reported the highest number of cases followed by Kegalle (346 cases), Kalmunai (339 cases), Kurunegala (310 cases), Colombo (297 cases), Anuradapura (283 cases), Ampara (218 cases), and Polonnaruwa (218 cases).

5.1.3.1.14 Rubella

Sixty two (62) suspected cases of Rubella were reported during 2012 and 52 of them were clinically confirmed. One laboratory confirmed outbreak was reported in a factory from the district of Gampaha (in Minuwangoda MOH area). The total number affected in the outbreak was 30 and the majority (60%) of them were male and adult (over 20 years).

Eighty four (84) fever and maculopopular rash patients suspected of Measles or Rubella were investigated at the Virology laboratory at MRI and 23 of them were serology positive for Rubella *IgM* antibodies.

5.1.3.1.15 Congenital Rubella Syndrome (CRS):

Twelve infants were reported with CRS and all of them were positive for Rubella IgM at the Virology laboratory (MRI).

5.1.3.1.16 Tetanus

A total of 14 tetanus cases were reported in 2012; Colombo (2 cases), Kalutara (2 caes), Hambanota (2 cases), and Jaffna (2 cases) were the districts which notified the highest number of cases. Majority of Tetanus cases reported during the year were among males (60%) and belongs to the age group over 55-59 years (40%).

5.1.3.1.17 Viral Hepatitis

A total of 2146 cases of Viral Hepatitis were reported: Kegalle (608 cases), Gampaha (336 cases), Moneragala (178 cases), Matara (149 cases), Ratnapura (139 cases), Kandy (137 cases), and Kurunegala (135 cases) were the leading districts reported. Majority of Viral Hepatitis cases reported during the year were among males (70.01%) and belongs to the age groups 15 - 24 years (32.17%) and 25 - 34 years (32.77%).

5.1.3.1.18 Whooping Cough

A total of 102 suspected Whooping cough cases reported in 2012, but not a single case was confirmed by laboratory testing. Majority of Whooping cough cases reported were among males (39, 13 %) and below 1 years of age (86.95 %).

5.1.3.2 National Immunization Programme

Combined Measles-Mumps-Rubella (MMR) vaccine and Live Japanease Encephalitis (LJE) vaccine were introduced into the EPI programme from October 2011 following the recommendation of the National Advisory Committee on Communicable Diseases (NACCD). These two newly introduced vaccines and all other EPI vaccines have kept continuing near 100% coverage as maintained over a decade. The unit was able to ensure timely and adequate supplies of Vaccines Island wide and no shortage of vaccines was reported in the country. Vaccine wastage for all liquid vaccines was less than 5%, indicating a good vaccine management practise in the country. District level immunization coverage and vaccination problems were reviewed quarterly with Regional Epidemiologists and joint detailed district level EPI reviews were conducted in all districts in the country.

In 2012, special attention was made to improve and maintain the quality and safety of vaccination. Adverse Events Following Immunization (AEFI) surveillance was expanded to the private sector through introducing a uniform AEFI reporting form for both public and private sector institutions.

A total of 6,445 AEFIs were reported in 2012 and the highest number of AEFI reported for Penatavalent vaccine (n= 2735) followed by DPT (n=1238). High fever > 39^0C (n= 1933) and allergic reactions (n=1720) are the leading reported AEFI. National guideline on surveillance of AEFI was developed and made available at all MOH offices. Guidelines on performing paediatric autopsies on deaths following immunization and vaccination of high risk infants with severe congenital heart diseases were developed and circulated to all medical institutions. A newly developed WHO causality assessment algorithm was introduced to the National AEFI Expert Committee and all Regional Epidemiologists to ensure proper causality assessment of all serious AEFI reported in the country.

The Epidemiology Unit has completed revision of the National Immunization Guide with updated information on vaccines and immunization. Printed copies of the 2012 edition of the National Immunization guide were distributed to all medical institutions, where immunization services are provided. In addition it is available on the web site of the unit. The Unit has developed a comprehensive Multi Year Plan (cMYP) on national Immunization Programme for 2012-2016. The cMYP includes programme achievements, plans for new vaccine introduction and costing of the programme in detail.

The Unit has given special attention on training of both public and curative sector staff on immunization services. The training was based on WHO Middle-Level-Manager (MLM) training modules.

The Epidemiology Unit functions as the main national research and surveillance centre for new areas in decisive stages. Burden study and study on assessing cost effectiveness of chicken pox in Sri Lanka was started in 2012 and will be completed in 2013. Also in collaboration with CDC, Epidemiology Unit is conducting a surveillance programme on influenza in Sri Lanka. Accomplishment of these new research activities will provide baseline data in imperative stages of decision making on need of vaccines, priority groups in Sri Lanka.

Table.5.1.9 : Distribution of Notified Cases of Selected Notifiable Diseases by RDHS Division - 2012

RDHS Division	Dengue	Dysentery	Encephalitis	Enteric Fever	Food Poisoning	Human Rabies	Leptospirosis	Typhus Fever	Viral Hepatitis
Colombo	10,017	161	12	232	69	5	226	9	120
Gampaha	8,006	97	20	65	47	1	329	23	336
Kalutara	2,791	228	5	57	28	2	307	4	36
Kandy	2,517	139	4	25	58	0	85	125	137
Matale	596	146	5	14	54	2	52	3	35
Nuwaraeliya	342	188	3	29	9	1	43	67	20
Galle	1,513	132	7	18	17	0	148	76	4
Hambanthota	604	59	3	12	30	0	100	59	30
Matara	1,835	120	9	22	52	0	213	86	149
Jaffna	894	270	14	438	83	2	3	364	21
Kilinochchi	93	66	3	39	45	1	4	31	4
Mannar	186	94	4	74	17	0	30	45	2
Vavuniya	104	63	21	14	27	2	19	3	3
Mullativu	42	40	1	17	3	0	3	5	1
Batticaloa	717	314	5	16	308	4	12	0	9
Ampara	155	107	3	6	22	0	29	0	3
Trincomalee	168	282	2	16	15	0	43	20	5
Kurunegala	3,537	263	18	107	45	4	160	41	135
Puttalam	1,800	112	9	14	12	2	42	17	6
Anuradhapura	493	110	7	14	30	2	102	31	63
Polonnaruwa	289	93	2	4	129	1	75	3	48
Badulla	430	144	4	52	6	0	38	120	44
Moneragala	287	180	6	28	24	2	79	86	178
Rathnapura	3,938	319	29	53	15	3	315	45	139
Kegalle	2,705	62	12	29	20	0	196	66	608
Kalmunai	402	296	2	8	94	3	10	1	10
Sri Lanka	**44,461**	**4,085**	**210**	**1,403**	**1,259**	**37**	**2,663**	**1,330**	**2,146**

Source = * H399 Notified

Source : Epidemiology Unit

Table 5.1.10 : Age Distribution of Selected Notifiable Diseases - 2012**

Age Group	Chickenpox	Dengue	Dysentery	Encephalitis	Enteric Fever	Human Rabies	Leptospirosis	Measles	Meningitis	Mumps	Rubella	Tetanus	Viral Hepatitis	Woophing cough
Under 1	79	141	418	3	5	-	1	5	200	10	2	-	1	32
1 - 4	183	1,381	867	13	107	-	6	7	113	347	-	-	18	8
5 - 14	496	5,779	476	32	253	3	43	10	106	1,358	1	1	186	6
15 - 24	804	6,343	170	24	132	3	220	9	25	373	1	-	483	-
25 - 49	1,505	9,785	365	34	261	9	855	4	52	1,017	5	2	750	-
50 - 59	162	1,907	106	11	78	6	290	2	11	71	1	4	36	-
60 & Over	100	1,223	153	10	41	7	144	-	18	26	-	3	27	-
Total	3,329	26,559	2,555	127	877	28	1,559	37	525	3,202	10	10	1,501	46

Source = ** H411 clinically Confirmed cases

Source : Epidemiology Unit

Table 5.1.11 : Distribution of Selected Notifiable Diseases by Month, 2012

Month	Chickenpox	Dengue	Dysentery	Encephalitis	Enteric Fever	Human Rabies	Leptospirosis	Measles	Meningitis	Mumps	Rubella	Tetanus	Viral Hepatitis	Woophing cough
January	334	3,986	308	34	185	4	260	3	71	343	41	1	161	7
February	489	3,145	247	25	145	3	182	6	56	314	1	1	213	10
March	755	2,628	244	31	130	2	288	9	65	753	4	1	183	7
April	442	2,028	171	15	85	4	172	3	51	531	0	1	152	10
May	396	2,550	241	10	95	3	194	5	67	410	2	1	172	6
June	338	5,955	319	17	92	5	229	6	113	425	3	0	261	8
July	174	5,193	274	23	85	1	191	4	50	269	2	3	183	9
August	302	5,266	390	11	130	4	201	6	80	437	1	0	220	10
September	291	2,857	367	11	99	3	196	7	87	309	4	2	190	15
October	311	3,181	331	6	95	1	191	10	71	187	1	1	145	6
November	372	4,034	796	13	128	4	325	7	85	187	2	1	164	7
December	269	3,638	397	14	134	3	234	20	69	165	0	2	102	7
Total	**4,473**	**44,461**	**4,085**	**210**	**1,403**	**37**	**2,663**	**86**	**865**	**4,330**	**61**	**14**	**2,146**	**102**

Source : Epidemiology Unit

Table 5.1.12 : Cases, Incidence, Deaths and Case Fatality Rate (CFR) of Dengue Fever (DF) / Dengue Haemorrhagic Fever (DHF),Leptospirosis and Encephalitis 1996 - 2012

Year	DF/ DHF				Leptospirosis				Encephalitis			
	Cases		Deaths	C. F. R. (%)	Cases		Deaths	C. F. R. (%)	Cases		Deaths	C. F. R. (%)
	No	Incidence Rate			No	Incidence Rate			No	Incidence Rate		
1996	1,294	7.8	54	4.2	637	3.5	ND	-	295	1.8	44	14.9
1997	346	1.9	17	4.9	472	2.6	ND	-	109	0.6	19	17.4
1998	421	2.3	8	1.9	1,280	6.9	ND	-	93	0.5	3	3.2
1999	628	3.3	14	2.2	1,106	5.9	ND	-	90	0.5	3	3.3
2000	5,213	27.5	37	0.7	1,144	6.0	ND	-	123	0.6	2	1.6
2001	5,999	31.4	54	0.9	1,402	7.3	ND	-	59	0.3	9	15.3
2002	8,931	46.9	64	0.7	991	5.2	ND	-	68	0.4	15	22.1
2003	4,805	25.3	32	0.7	2,235	11.8	ND	-	165	0.9	20	12.1
2004	15,463	81.3	87	0.6	1,447	7.6	ND	-	112	0.6	9	8.0
2005	5,994	30.5	28	0.5	1,552	7.9	ND	-	60	0.3	6	10.0
2006	11,980	60.2	46	0.4	1,582	8.0	ND	-	130	0.7	1	0.8
2007	7,332	36.9	28	0.4	2,198	10.8	ND	-	203	1.0	6	3.0
2008	6,607	32.2	27	0.4	7,423	36.2	207	2.8	261	1.3	6	2.3
2009	35,095	171.2	346	1.0	4,980	23.8	145	2.9	223	1.1	4	1.8
2010	34,188	163.3	246	0.7	4,554	21.8	123	2.7	217	1.0	3	1.4
2011	28,473	144.1	186	0.7	6,694	31.2	100	1.5	166	0.8	3	1.8
2012	44,461	218.5	181	0.4	2,663	13.1	52	2.0	210	1.0	12	5.7

Incidence Rate = Incidence Rate per 100000 population

C.F.R. = Case fatality Rate

ND = No data

Source : Epidemiology Unit

Table 5.1.13 : Cases and Deaths of Dengue Fever / Dengue Haemorrhagic Fever and Leptospirosis by Age Group, 2012

Age Group	Dengue				Leptospirosis			
	Cases **		Deaths		Cases		Deaths	
	No	%	No	%	No	%	No	%
Under 1	141	0.5	7	3.9	1	0.1	0	0.0
1 - 4	1,381	5.2	11	6.1	6	0.4	0	0.0
5 - 14	5,779	21.8	24	13.3	43	2.8	0	0.0
15 - 24	6,343	23.9	21	11.6	220	14.1	5	9.6
25 - 49	9,785	36.8	86	47.5	855	54.9	23	44.2
50 - 59	1,907	7.2	18	9.9	290	18.6	8	15.4
> 60	1,223	4.6	14	7.7	143	9.2	16	30.8
Total	26,559	100.0	181	100.0	1,558	100.0	52	100.0

Source : Epidemiology Unit

Table. 5.1.14 : Incidence of EPI Target Disease - 1955 - 2012

Year	Diphtheria		Measles		Poliomyelitis		Tetanus		Tetanus Neo-natorum		Tuberculosis		Whooping cough	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
1955	1,179	13.5	3,499	40.1	155	1.8	873	10.0	ND	-	ND	-	1,941	22.2
1960	1,042	10.5	3,060	30.9	303	3.1	1,435	14.5	ND	-	10,519	106.3	1,786	18.0
1965	1,232	11.0	2,037	18.2	494	4.4	1,812	16.2	ND	-	6,927	62.0	2,109	18.9
1970	986	7.9	4,086	32.6	405	3.2	1,441	11.5	847	230.2	5,762	46.0	1,651	13.2
1975	310	2.3	5,000	37.0	396	2.9	1,186	8.8	812	216.0	7,324	54.3	1,341	9.9
1980	37	0.3	5,032	34.1	262	1.8	892	6.0	351	83.9	6,212	42.2	542	3.7
1985	10	0.1	9,398	59.3	40	0.3	405	2.6	76	19.5	5,889	37.2	536	3.4
1986	3	0.0	6,235	38.7	34	0.2	453	2.8	49	13.6	6,596	40.9	161	1.0
1987	-	-	3,508	21.4	149	0.9	258	1.6	37	10.3	6,411	39.2	31	0.2
1988	-	-	2,650	16.0	25	0.2	273	1.6	39	12.8	6,092	36.7	25	0.2
1989	-	-	780	4.6	16	0.1	295	1.8	19	5.3	6,429	38.2	61	0.4
1990	-	-	4,004	27.6	9	0.1	183	1.1	5	4.7	6,666	39.2	271	1.9
1991	1	-	1,896	12.8	1	0.0	188	1.3	10	3.7	6,174	35.7	25	0.2
1992	-	-	701	4.0	12	0.1	231	1.3	14	2.6	6,802	39.0	6	0.0
1993	1	-	558	3.2	15	0.1	196	1.1	11	3.7	6,885	39.0	18	0.1
1994	-	-	390	2.2	-	-	156	1.1	11	2.0	6,121	34.3	34	0.3
1995	-	-	465	2.6	-	-	167	1.0	2	3.0	5,869	31.5	171	1.0
1996	1	-	158	0.9	-	-	97	0.7	6	4.8	5,366	29.3	33	0.2
1997	-	-	66	0.4	-	-	23	0.5	4	3.5	6,547	35.6	205	1.8
1998	-	-	23	0.1	-	-	24	0.1	4	4.5	6,925	36.9	94	0.5
1999	-	-	2,341	12.5	-	-	23	0.1	3	4.0	7,157	37.6	61	0.3
2000	-	-	4,096	21.2	-	-	38	0.2	1	0.3	8,129	42.9	88	0.5
2001	-	-	309	1.7	-	-	75	0.4	3	0.9	8,418	45.0	52	0.3
2002	-	-	139	0.7	-	-	34	0.2	2	0.6	8,884	46.9	16	0.1
2003	-	-	65	0.4	-	-	30	0.2	2	0.6	9,312	48.4	-	-
2004	-	-	35	0.4	-	-	32	0.2	1	0.6	8,639	48.4	-	-
2005	-	-	24	0.4	-	-	25	0.1	1	0.6	9,448	48.4	-	-
2006	-	-	21	0.1	-	-	38	0.2	2	0.0	10,016	48.1	48	-
2007	-	-	37	0.2	-	-	16	0.1	0	-	9,817	47.9	21	0.1
2008	-	-	2	0.0	-	-	22	0.1	1	0.0	8,181	39.5	16	0.1
2009 *	-	-	129	0.1	-	-	26	0.1	0	-	10,306	49.8	48	0.2
2010 *	-	-	49	0.2	-	-	15	0.1	0	-	10,235	48.9	15	0.1
2011*	-	-	129	0.6	-	-	26	0.1	0	-	9,454	44.1	55	0.3
2012*	-	-	51	0.3	-	-	8	0.0	0	-	8,720	43.0	61	0.3

Rate = Rate per 100,000 population

Source : Epidemiology Unit

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

ND=No data

Table 5.1.15 : RDHS Distribution of Immunization Coverage - 2012

District	BCG	PVV1	PVV3	OPV1	OPV3	LJE	MMR-1	MMR-2	DT 5	OPV 5	#TT2+
Colombo (+MC Colombo)	97	98	98	99	99	100	100	91	99	99	96
Gampaha	96	99	100	99	100	103	97	100	103	103	97
Kalutara(+NIHS)	98	100	99	100	99	96	94	100	105	105	92
Kandy	96	100	99	100	99	99	93	96	97	97	98
Matale	100	100	98	100	98	97	91	100	94	94	91
Nuwara Eliya	100	99	99	99	99	94	87	92	91	92	87
Galle	99	100	99	100	99	102	94	98	105	105	88
Hambantota	96	96	95	96	95	94	92	92	89	88	87
Matara	89	99	97	99	97	93	95	96	101	101	90
Jaffna	101	92	95	92	95	101	100	90	97	97	87
Killinochchi	91	95	100	95	100	95	95	102	118	118	85
Mannar	88	98	100	98	100	106	89	95	97	97	86
Vavuniya	113	97	100	97	100	103	95	93	96	96	93
Mulativu	86	98	99	98	99	94	100	95	99	104	95
Batticaloa	122	98	100	97	99	102	98	102	101	101	90
Ampara	97	97	100	97	100	101	97	103	103	105	94
Trincomalee	92	91	100	91	100	100	95	101	104	103	80
Kurunegala	90	99	100	99	100	99	95	98	98	98	94
Puttalam	103	98	100	98	100	99	95	96	100	100	90
Anuradhapura	99	99	100	99	100	101	97	100	94	94	92
Polonnaruwa	116	99	98	99	100	102	98	102	97	97	91
Badulla	104	98	98	100	98	100	93	93	98	98	89
Moneragala	96	99	100	99	100	100	96	96	99	99	93
Ratnapura	95	99	98	99	98	99	94	91	99	99	88
Kegalle	99	100	100	100	100	100	98	97	103	101	91
Kalmunai	92	94	94	94	94	100	100	96	97	97	74
Sri Lanka	98	99	99	99	99	99	95	96	99	99	91

Note: *Source : Epidemiology Unit*

**For the Calculation of BCG coverage Actual Births in 2012 taken as the denominator

*** In Sri Lanka registration of births occur by place of occurrence and not by place of residence. Hence to estimate the probable births in each district the following method was adopted. Estimated births in each district = Highest number of infant imm

PVV-Pentavalant Vaccine

MMR - Measles,Mumps and Rubella vaccine

LJE - Live Japanese Enchephalitis Vaccine

OPV - Oral Polio Vaccine

DT -Diphtheria and tetanus

aTd - Adult tetanus and diphtheria

#TT2+ - Mothers protected for Tetanus Toxoid

Table 5.1.16 : Number of Selected Adverse Events by Vaccines in 2012

	BCG	OPV	PVV	DPT	MMR	LE	DT	TT	aTd	Total number of AEFI reported
Total number of AEFI reported	36	18	2735	1238	837	746	457	62	155	6,455
AEFI reporting rate/1,000,000 doses administered	10.3	1	259.5	361.9	122.2	126	130	19.1	55.8	-
High Fever (>39C^0)	1	5	1108	430	144	159	72	1	8	1,933
AEFI reporting rate/1,000,000 doses administered	0.3	0.3	105.1	125.7	21	26.8	20.4	0.3	2.9	-
Allergic reactions	2	4	422	227	359	361	145	30	38	1,720
AEFI reporting rate/1,000,000 doses administered	0.6	0.2	40	66.4	52.4	60.8	41.1	9.3	13.7	-
Sever local reactions	3		82	83	15	13	34	3	5	239
AEFI reporting rate/1,000,000 doses administered	0.9		7.8	24.3	2.2	2.2	9.6	0.9	1.8	-
Seizure (Febrile/Afebrile)		2	73	76	19	33	8			212
AEFI reporting rate/1,000,000 doses administered		0.1	6.9	22.2	2.8	5.6	2.3			-
Nodules	3		488	183	17	15	37	5	2	756
AEFI reporting rate/1,000,000 doses administered	0.9		46.3	53.5	2.5	2.5	10.5	1.5	0.7	-
Injection site abscess	19		101	38	5	14	25	2	2	207
AEFI reporting rate/1,000,000 doses administered	5.5		9.6	11.1	0.7	2.4	7.1	0.6	0.7	-
HHE			24		3	3	2		1	33
AEFI reporting rate/1,000,000 doses administered			2.3		0.4	0.5	0.6		0.4	-

Source : Epidemiology Unit

Table. 5.1.17 The Summary of Human Influenza Surveillance Data for 2012

Month	Human Surveillance							
	ILI Surveillance				SARI Surveillance			
	Total ILI Visits Reported	Proportion of ILI out of Total OPD Visits (%)	Total ILI Samples Tested (%)	Influenza yield from ILI Samples (%)	Total SARI Visits Reported (%)	Proportion of SARI out of Total Admissions (%)	Total SARI Samples Tested (%)	Influenza yield from SARI Samples (%)
Jan	11,265	2.7	341	16.1	181	2.9	69	20.3
Feb	8,348	2.0	238	9.6	83	1.4	36	16.7
Mar	6,792	1.5	143	2.1	200	3.1	32	18.8
Apr	5,364	1.7	171	1.7	193	3.2	49	2.0
May	4,138	1.3	204	11.3	165	2.1	53	5.7
Jun	7,937	1.6	199	24.6	173	1.9	44	15.9
July	7,602	1.8	304	21.0	267	3.4	71	50.7
Aug	6,229	1.4	212	17.0	314	3.6	66	34.8
Sept	5,268	1.4	286	12.0	259	3.7	70	24.3
Oct	5,113	1.4	208	18.0	301	3.6	63	28.6
Nov	6,223	1.7	216	20.0	367	4.2	63	47.6
Dec	6,381	2.6	151	28.0	77	3.1	32	50.0
Total	80,660	1.7	2,673	16.0	2,580	3.0	648	27.3

ILI - Influenza Like Illness

SARI - Sever accute respiratory infection

Source : Epidemiology Unit

5.1.4. National Dengue Control Unit

Dengue fever has emerged as the leading public health problem with expanding geographical boundaries and severity. The mosquito *Aedesaegypti* and *Aedesalbopictus*arethetwo vectors of dengue illness which breed mainly in water holding containers in domestic and peri-domestic localities.

5.1.4.1 Profile of National Dengue Control Unit

National Dengue Control Unit (NDCU) was established in 2005 as a fulfilment of a strategy in National Dengue Control Action Plan.

NDCU is the central agency responsible for the coordination of control and preventive activities of dengue at the national level between different stakeholders and it is one of the Technical Directorates under the purview of DDG/ PHS1 in the Ministry of Health.

5.1.4.2 The Vision

To minimize the health, economic and social impact of the disease by reversing the rising trend of dengue.

5.1.4.3. The Mission

To enhance the capacity at the national, provincial, district and divisional levels for better planning, prediction, early detection and prompt control and containment of outbreaks through partnerships and application of coordinated efforts in sustainable manner.

5.1.4.4 Goal

To reduce endemicity to such an extent that it is no longer a major public health problem in Sri Lanka.

5.1.4.5 General Objective

To reduce morbidity and mortality due to dengue fever (DF) and dengue haemorrhagicfever (DHF) by 50% of that in 2009, by 2015.

5.1.4.6 Specific Objectives:

- To increase the capacity of health sector to monitor trends and reduce dengue transmission
- To strengthen capacity to implement effective integrated vector management.
- To increase health workers' capacity to diagnose and treat patients and improve health-seeking behaviour of communities
- To promote collaboration among communities, national health agencies and stakeholders to implement dengue programmes for behavioural change
- To increase capacity to predict, detect early and respond to dengue outbreaks
- To address programmatic issues and gaps that requires new or improved tools for effective dengue prevention and control

5.1.4.7 Epidemiological Surveillance

Epidemiological (disease) surveillance is carried out through the Epidemiology Unit. In 2012 a total of 44,461 dengue cases were reported from the entire country. This was the highest figure ever which corresponds to a rate of 218 per 100,000 population. There were 15 districts reporting more than 100 cases per 100,000 population indicating increasing geographic distribution (Figure 5.1.11).

Although the number of cases were high in 2012, the number of deaths were 181 with a case fatality rate of 0.4 percent which was a marked reduction compared to previous years (Table 5.1.18).

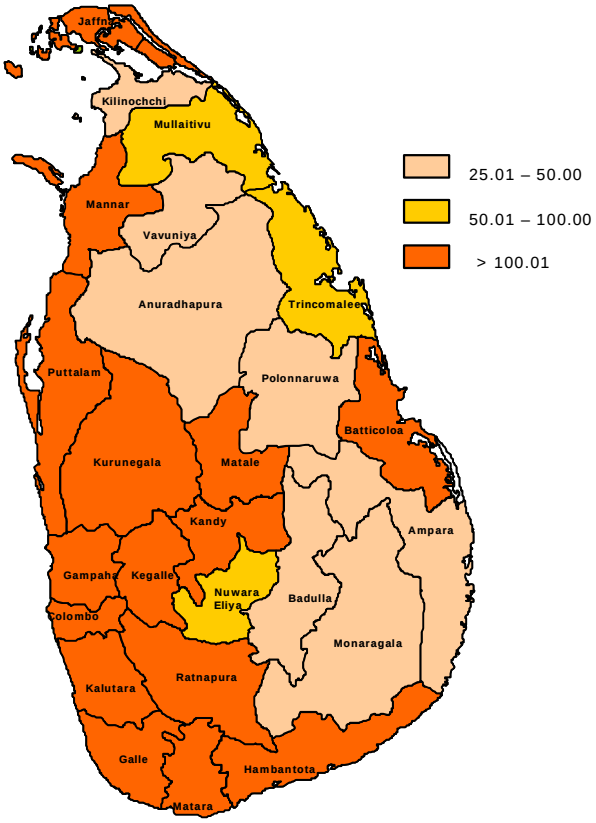
Two distinct peaks of case reporting in May – July and Oct – Jan are identified over the years associated with South-West and North-East monsoon rains respectively(Figure 5.1.12).

Therefore it is evident that preventive activities should be initiated before the increase of cases. As such, bi-annual mosquito control weeks are conducted in April/May and September/October.

Table 5.1.18 : Case Fatality Rate from 2009 to 2012

Year	Reported Dengue Cases	Dengue Deaths	Case Fatality Rate
2009	35,095	346	0.98
2010	34,105	246	0.72
2011	28,473	186	0.65
2012	44,461	181	0.41

Fig.5.1.11 : Reported Dengue Incidence by District - 2012
(Cases per 100,000 population)



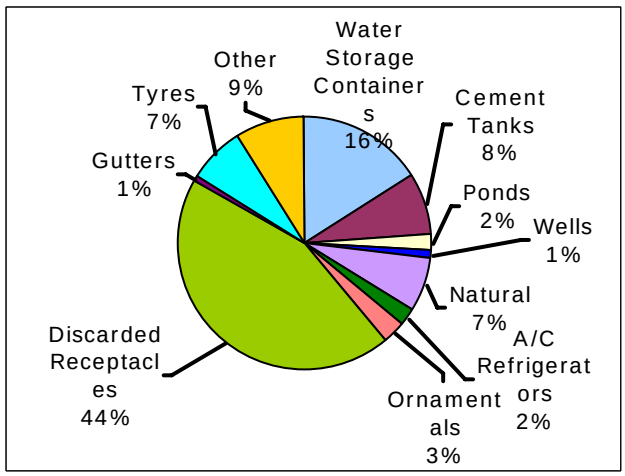
Source – Epidemiology Unit

5.1.4.8 Integrated Vector Management (IVM)

5.1.4.8.1 Entomological Surveillance

Entomological surveillance is carried out under the preview of National Dengue Control Unit, Anti Malaria Campaign, Anti Filariasis Campaign and Medical Research Institute through their counterparts at regional level. Vector surveillance is important to forecast impending outbreaks and initiate early measures to prevent the occurrence of outbreaks and to limit the spread.

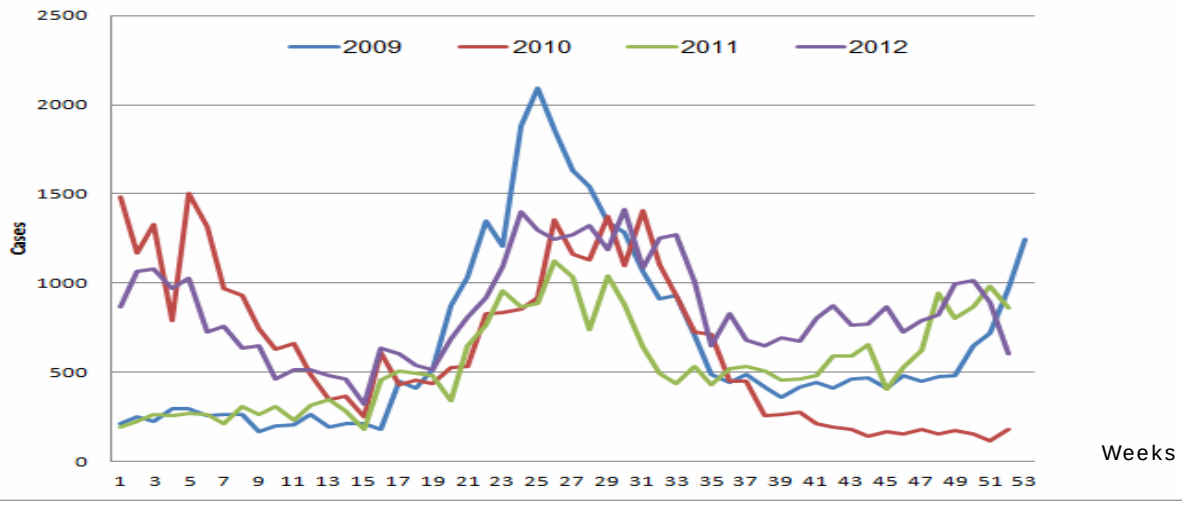
Fig.5.1.13 : Breakdown of Positive Containers (by type) Entomological Surveillance in 2012



Source – Epidemiology Unit

Vector indices are calculated (breteau index, premise index and container index) for assessment of risk and impact of control activities. In 2012 a total of 142,957 premises were inspected, where *Aedes* larvae were found positive in 10,512 containers. The types of containers are illustrated in Figure 5.1.13.

Fig. 5.1.12 : Seasonality 2009 - 2012



Source – Epidemiology Unit

5.1.4.8.2 Vector Control

Vector control interventions including source reduction (Elimination of breeding places), biological and chemical vector control activities are carried out by the health authorities with all relevant stakeholders and the community in accordance with the guidelines of the Ministry of Health. Vector control activities are carried out on a high-risk approach based on epidemiological and entomological parameters.

5.1.4.8.3 Case Management during 2012

During 2012, curative health care personal were trained on proper management of dengue patients based on National guidelines coordinated by the Epidemiology Unit and Education, Training & Research unit, Ministry of Health. Management of dengue cases was further enhanced by establishing 26 High Dependency Units (HDU) in selected hospitals

Table 5.1.19 : Health Institutions Provided with HDU Equipment in 2012

Type of Hospital	No. of HDUs Established	Hospital
Teaching Hospitals	6	NHSL
		CSTH Kalubowila
		TH. Ragama
		TH.SBSCH Peradeniya
		TH. Anuradhapura
		TH. Karapitiya
District General Hospitals	3	DGH. Ampara
		DGH. Negombo
		DGH. Polonnaruwa
'A' Grade Base Hospitals	9	BHA. Kantale
		BHA. Kalmunai
		BHA. Angoda
		BHA. Kuliyapitiya
		BHA. Puttalum
		BHA. Gampola
		BHA. Tangalle
		BHA. Panadura
		BHA. Wathupitiwala
'B' Grade Base Hospitals	8	BHB.Marawila
		BHB. Mutur
		BHB. Kathankudi
		BHB. Valachchenai
		BHB. Eravur
		BHB. Samathurai
		BHB. Akkareipattu
		BHB. Dambadeniya
Total	26	

5.1.4.9 Major Activities Carried out in 2012

- Three well co-ordinated National Mosquito Control Programmes were carried out during 2012 with the aim of minimising the spread of dengue by conducting coordinated programmes at national, provincial, district and divisional level with relevant stakeholders and community
  - 1st Mosquito Control Week from 16th to 22nd January
  - 2nd Mosquito Control Week from 14th to 20th May
  - National Mosquito Control Month from 25th June to 24th July
- Convened Presidential Task Force meeting chaired by the Minister of Health with the participation of Ministry of Environment, Ministry of Education, Ministry of Local Government & Provincial Councils, Ministry of Defence and Ministry of Public Administration to solicit their support in dengue control activities
- Promote elimination of mosquito breeding places within institutions and in and around all school premises.
- Advocate cleaning public places and drainage systems by the relevant local government bodies.
- Provincial coordination committee meetings with the respective Governors and participation of relevant ministry officials where advocacy was provided regarding District, Divisional and Village Committees.
- Appointed 50 new Entomology Assistants to high-risk districts to strengthen vector control activities.
- Establishment of "Mosquito Control Committees" in government institutions as per the circular (PCMD/1/2/2012) issued by the Secretary to H.E. the President. This activity is monitored through a regular reporting system by respective institutions.
- Advocacy meetings were conducted in parallel to above activity to make aware of all heads of Ministries, Departments, Authorities, Corporations, Statutory Boards and affiliated institutions to identify the mosquito breeding places within their own buildings/premises and to remove/destroy them as a joint activity of the staff at least once a week.
- Fogging machines were distributed to high-risk MOH divisions along with Personal Protective Equipments (PPE) to protect health personnel.

5.1.5.Nutrition Division

Nutrition Division is responsible for nutrition related activities across the country on behalf of Ministry of Health.This unit is responsible for Nutrition related policy formulation, coordination, monitoring and evaluation. Nutrition division formulates guidelines on nutrition related matters which are translated in to action at grass root level. In addition this unit carries out in-service training programmers, awareness sessions and other nutrition related capacity development activities for health workers as well as other categories of staff. Nutrition Division coordinates with provincial and other grass root level organizations and officers ensuring effective implantation of Nutrition programmes in the country. This unit functions with the following objectives

5.1.5.1 General Objective

To ensure optimum nutrition wellbeing in all population groups adopting a life cycle approach.

5.1.5.2 Specific Objectives

1. To improve knowledge on healthy food practices and healthy lifestyle among every citizen of Sri Lanka.
2. To encourage healthy food practices and habits in Sri Lankan population.
3. To control and combat incidence of nutrition related deficiency disorders as well as nutrition imbalances and over-nutrition.
4. To control and combat the incidence of nutrition related Non-communicable diseases in the country.
5. To effectively harness traditional knowledge and practices to improve nutrition status.

5.1.5.3 Vision

A Nation with optimum Nutritional wellbeing, together with anoptimum Health status for Sri Lankans of all age groups.

5.1.5.4 Mission

To be and active partner in improving Nutritional wellbeing to achieve desired economic and social development .

5.1.5.5 Activities Carried out 2012

Nutrition division for the year 2012 was able to carry out the following activities

1. **Dissemination of Food Based Dietary Guidelines**

   The premier document that was prepared to promote food based approaches to improve nutrition was introduced to grass root level health workers both in the curative sector and preventive sector. A total of 30 hospital and range of other institutions were covered.

2. **Dissemination of Guide for Healthy Food Choices for Healthy Living**

   This document was disseminated in many community groups including school children and community libraries. The unit is of the opinion that this exercise will enable people to extract information they are looking for.

3. **Formulation of Guidelines for a Healthy Canteen in work Places**

   With trend of increasing work forces in many establishments, consuming food from the workplace canteens has become a common practice. In this backdrop, it is vital that foods that are being served at canteens are made healthier, nutritious and safe as much as possible. This guideline will serve as a guide both to the administrators as well as to the canteen mangers to offer low-cost nutritious food

4. **Formulation of Disease based Dietary Guidelines**

   Currently there is no standard protocol or guidelines on the dietary management of any chronic disease and this has lead to confusion. The Ministry is hopeful that once this document is published, clinicians will have a supporting document for their patient management effort.

5. Expansion of Nutrition Promotion Clinics

Efforts were taken to expand the network of nutrition promotion clinics. Assistance was given in improving infrastructure and equipment such as weighing scales. Eight such clinics were established during 2012.

6. Formulation of Guidelines for Volunteers to Implement the Health and Nutrition

It has been noticed that many nongovernmental organizations and volunteers carryout health and nutrition services and the Nutrition Division formulated a guideline for the use of these workers so that uniform messages and services according to national guidelines will reach the public. These guidelines were formulated in both Sinhala and Tamil languages.

7. Nutrition Awareness for Security Personnel

Awareness Programmes for promotion of Healthy diet and lifestyle among the officers and other ranks of Sri Lanka Navy.

8. National Level Monitoring of Northern Province Nutrition Improvement Project

Northern Province health authorizes recognized the need for immediate relief to the nutritionally vulnerable individuals in the Northern Province and implemented a comprehensive nutrition improvement project. Nutrition Division is entrusted to provide administrative and programme support and monitor these activities on behalf of the line Ministry.

5.1.6 Nutrition Coordination Division (NCD)

Nutrition Coordination Division, which was under the Ministry of Plan & Implementation earlier, has been transferred to the Ministry of Health, Nutrition and welfare, under the Extra Ordinary Gazette of the Democratic Socialist Republic of Sri Lanka, number 1.215/14 and dated 20th December 2001.The Nutrition Coordination Division is located at 7th Floor of Anti Malaria Campaign building (Public Health Complex) at Narahenpita.

5.1.6.1 Vision

" Improve the nutritional status of the population with special reference to Children and Women."

5.1.6.2 Mission

"Contribute to improve the nutritional status of the population in the country through Coordination, monitoring, and facilitation of implementation of the nutrition interventions with Sectoral Coordination"

5.1.6.3 Responsibilities of Nutrition Coordination Division

It has already been identified that improvement of nutritional status of the population in Sri Lanka is a coordinated effort of all stakeholders. Therefore, Nutrition Coordination Division is mandated to formulate a National Nutrition Policy and guidelines and coordinate all nutrition and related activities with institutions of Ministry of Health – e.g. FHB, HEB, MRI, Non Communicable Disease Unit, Food Control Unit, Nutrition Division, Young Elderly & Disabled Unit, Provincial Authorities, other ministries and nongovernmental organizations.

5.1.6.4 Activities Implemented during 2012

5.1.6.4.1 Coordinating the National Supplementary Feeding Programme (Thriposha Programme)

This is an Island-wide nutrition supplementary feeding programme implemented by the Ministry of Health and fully funded by the Government.

The objective of the Thriposha programm

- is to provide energy and reference proteins with all required micro-nutrients as a supplement in order to improve the nutritional status of the children and pregnant & lactating mothers.

Beneficiaries are

- Pregnant & lactating mothers
- Children from 6 months to under 5 years of age who are below -2SD of the growth reference curve and growth faltering.

The Management of the island-wide nutrition supplementary feeding programme has now been transferred to Sri Lanka Thriposha Limited, a fully government owned company of Ministry of Health. Following the management change Thriposha production has been increased up to 57,000 master bags per month from previous 35,000 – 40,000 master bags per month. Percentage of Thriposha beneficiaries also reached 85 percent from 68 pecent during this time.

At present, Director /Nutrition Coordination Division is responsible for allocating Thriposha for suitable beneficiaries & monitoring the process of distribution.

5.1.6.4.2 National Nutrition Policy & District Nutrition Action Plan (DNAP)

Nutrition is one of the high priority areas in the Health Sector. Importance of proper nutrition throughout the lifecycle has been identified. Over last three decades, Ministry of Health conducted several intervention programmes to enhance Nutritional status of the population.

Absence of National Nutrition Policy was a problem throughout the years. Therefore Nutrition Coordination Division decided to take part in formulating National Nutrition Policy which was published in an extraordinary gazette No.1639/5 of Democratic Socialist Republic of Sri Lanka in 2nd February 2010 with the support of relevant stakeholders.

Printed copies in all three languages(Sinhala, Tamil and English) are distributed among all relevant stakeholders, Launched on 8th June 2010 at the National Nutrition Month inauguration ceremony by the Hon. Minister of Health.

Policy and the strategic plan formulated were handed over to Provincial and Districts authorities to prepare the District Nutrition Action Plan.

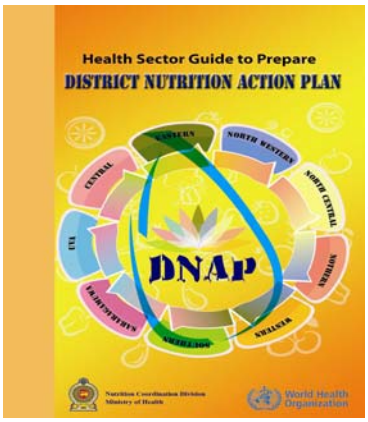
As the next step of development & implementation of National Nutrition Strategic Plan 2009-2013 was formulated based on the National Nutrition Policy developed in 2008. The goal of this plan is to achieve & maintain the nutrition & wellbeing of all Sri Lankan enabling them to contribute effectively towards national socio-economic growth & development.

To achieve the expected status of nutrition following policy objectives were defined.

- Ensuring optimal nutrition throughout the life cycle.
- Enhancing the capacity to deliver effective & appropriate interventions.
- Ensuring effective management of adequate nutrition to vulnerable populations.
- Ensuring food & nutrition security for all citizens.
- Strengthening advocacy, partnership & networking.
- Strengthening research, monitoring & evaluation.

To implement the National Nutrition Policy & National Nutrition Strategic Plan, District Nutrition Action Plan (DNAP) was developed by the Nutrition Coordination Division. This document will guide the Health sector personal in the district planning team to translate the NNSP & Health sector directions of the National Nutrition Council into specific actions in the nutrition plan relevant to the particular district.

With reference to the guidelines of DNAP, proposals of nutritional programmes and relevant activities for the district were submitted by Regional Directors of Health Services and were approved by the Ministry of Health.



Funds for each district were released to all Provincial Directors of Health Services for the implementation of DNAP.

5.1.6.4.2.1 National Nutrition Council

- National Nutrition Council was established on 14.01.2011 chaired by the His Excellency the President, with the broad aim of setting up institutional support for the implementation of the National Nutrition Policy. Nutrition Coordination Division is the focal point to liase with President Secretariat to coordinate NNC activities

- Desk Review and mapping of information on nutrition was done using the data available from studies conducted since 2006.
- Nutrition Action plans were started to develop in Uva & Central Provinces with the highest political commitment. Two pilot projects to improve nutrition status through Multi Sectoral Approach were implemented in Nuwara Eliya and Moneragala districts. Findings of it were given to Nutrition Secretariat to be used during the preparation of Nutrition Plan of National Nutrition Secretariat.

- Conducted a workshop to scale up Multi-Sectoral Approach to improve nutrition in plantation sector with the coordination of Plantation Human Development Trust (PHDT)

5.1.6.4.2.2 District Nutrition Action Plan (DNAP)

According to the National Nutrition Policy and Strategic Plan, the guideline of the DNAP has been finalized. Developed the DNAPs in all districts for the year 2013.

5.1.6.4.3 Nutrition Education Programme for Pre School Teachers with the Assistance of UNICEF.

The objective of this programme is to improve nutrition knowledge and skills of preschool teachers and officers of Early Childhood Care & Development in order to improve the nutrition and health status of preschools.

1. It is planned to conduct this programme in nutritionally most vulnerable areas - Badulla, Moneragala, Nuwara Eliya and Polonnaruwa districts with the assistance of Unicef
2. Conducted one Orientation programme to stakeholders in Polonnaruwa District.
3. Conducted three preschool teacher training programme in Nuwara Eliya district.
4. Planned to implement TOT programme and Preschool Teacher Training Programme in Polonnaruwa District.

5.1.6.4.4 World Food Programme Assistance for the Development Project -2012

WFP proposed a budget revision for a commodity change and made arrangements to procure Super Cereal Plus from the available funds. Ministry of Health has agreed for this Super Cereal Plus to treat MAM in the Development Districts.

The first stock of Super Cereal (300 MT) has arrived in Colombo and arrangements are made to distribute these stocks to Ampara and Batticaloa districts.

In 2012/2013, 963 MT of super-cereal plus has been distributed in 8 RDHS - Ampara, Batticaloa, Badulla, Hambantota, Kalmunai, Nuwara-Eliya, Polonnaruwa and Trincomalee. Under this programme 43,899 children suffering from MAM was benefited.

5.1.6.4.5 Establishment of National Nutrition Surveillance System

In 2006, Nutrition Coordination Division of the Ministry of Health, National Nutrition Surveillance System (NNSS) was initiated which gather timely nutrition related secondary data that further support battle against malnutrition and this system was launched in October 2008.

National Nutrition Surveillance System was successfully established in 30 D.S Divisions representing 19 Districts and presently in operation.

- Policy makers and programme managers as well as general users can access the NNSS data base through our website *nutrition.lk*.
- Nutrition Coordination Division successfully revamped the web based data base with a Consultancy Company
- Discussions were done to expand the National Nutrition Surveillance System in all D.S. Divisions in Nuwara Eliya District in 2013.

5.1.6.4.6 National Nutrition Month

'National Nutrition Month' is held annually with the intention of improving nutrition status of the community through awareness and changing attitudes. To advocate thrusting areas of nutrition to policy makers and to increase public awareness the national nutrition Month was conducted by coordinating with many stakeholders.

Nutrition Coordination Division is the focal point to conduct the National Nutrition Month Activities.

5.1.6.4.6.1 Theme for the year 2012 was based on Complementary Feeding.

During the nutrition month, series of nutrition programmes were conducted at national, provincial, district and MOH level.

5.1.6.4.6.2 Activities Implemented during Nutrition Month

Awareness programmes, exhibitions, distribution of stickers, leaflets, posters and banners on nutrition related messages, preparation of short messages on nutrition, organized the electronic media discussions etc with in Health Staff as well as with other ministries.

5.1.6.4.7 Coordination & Collaboration with Other Agencies

- Participated in awareness exhibitions & out reached health camps like " Dayata Kirula", "Suwa Udana" Programmes & conducted Nutrition Programmes.
- Nutrition Coordination Division is the Secretariat to the Nutrition Steering Committee, which is chaired by the Secretary of Ministry of Health.
- Provided Technical support to other Ministers like –Ministry of Agriculture, Ministry of Economic Development, Ministry of Education, Ministry of Child Development & Women's Empowerment, Ministry of Industry and Commerce, Ministry of Youth, Ministry of Sports on nutrition related issues.
- Involved in conducting lectures at PGIM, NIE, University of Colombo & Wayamba, Post Basic Nursing School.
- Working with UN agencies such as UNICEF, WHO, WFP and World Vision, Sarvodaya etc.

5.1.7 Quarantine Unit

This unit is mainly concerned with implementation of Quarantine and prevention of diseases ordinance of 1897, and International Health Regulations (IHR- 2005). IHR- 2005 aims at more secure world that is on the alert and ready to respond collectively to the threats to public health security, which may occur through international trade and travel. According to IHR 2005 Quarantine unit of Ministry of Health and Epidemiology Unit had been designated as national IHR focal point to be accessible at all times with WHO IHR focal points.

The following units carry out the quarantine services in Sri Lanka

- Port Health Office, Colombo Harbor.
- Office of the Assistant Port Health Officer, at MRI(vaccinations only)
- Airport Health Office, Katunayake.
- Port Health Office at Galle

New unit was established in

- Port Health Offices at Rajapaksha International Port-Hambantota since 2011

With the commissioning of the new international port by His Excellency the President in 2011 a new quarantine unit was established and medical officers and other relevant officers were appointed to this new unit.

5.1.7.1 Responsibilities

Quarantine services are responsible for inspection, examination, isolation, prevention, treatment, inoculation, vaccination, sanitary regulation, disinfection and disinsectisation of persons, animals, vessels, goods and things and any other measure having as their object the prevention of the spread of certain diseases into Sri Lanka from other countries.

At present the following tools are being used prevent control and spread of disease into Sri Lanka. Quarantine and prevention of diseases ordinance No.3 of 1897 and its subsequent amendment No.13 of 1936, No.11 of 1939, No.7 of 1917, No.14 of 1919, No.14 of 1920 No.5 of 1941, No.13 of 1943, Act No.12 of 1952. SARS Regulations of 2003 (chapter 222) Quarantine Regulations of 1960 (chapter 173) list of notifiable diseases, list of notifiable diseases WHO.

5.1.7.2 Comprehensive Assessment and Public Health Audit at Points of Entry (POE)

- An assessment was carried out by a public health specialist with support of the WHO to find out public health infrastructure facilities and core capacities at points of entry in Sri Lanka to implement IHR 2005. WHO protocol was used to asses ports of entry under three areas. Namely core capacity requirements at all times and when responding to events that may constitute a Public Health Emergencies of International Concern (PHEIC) and activities which should be strengthen at points of entry for public health response to natural occurrence accidental release for deliberate use of biological chemical agents for radio nuclear materials.

An action plan was prepared to achieve the following objectives :

1) To formulate a mechanism for coordination and collaboration among relevant stakeholders in planning and implementation of IHR 2005
2) To strengthen national diseases prevention, surveillance, control and response system to efficiently detect report and respond to events that may constitute a PHEIC
3) To strengthen capacity at points of entry to ensure public health security in national level
4) To provide a legal environment conducive to implement IHR 2005
5) To establish s process of monitoring progress of IHR implementation

5.1.7.3 Achievements

- Initiated establishment of isolation facilities at main international airport and seaport
- Expanded the facilities at Infectious Disease Hospital which acts as an isolation center to travelers with suspected disease with Public Health Emergencies of International Concern (PHEIC)
- Airport and sea port health staffs have been trained on IHR requirements and PHEIC

5.1.7.4 Quarantine Services: Activities

5.1.7.4.1 Yellow Fever Surveillance

A valid international certificate of vaccination against Yellow Fever is mandatory according to the IHR 2005 from all travelers over 01 year of age arriving to Sri Lanka from Yellow Fever endemic countries. Administering Yellow fever vaccine and yellow fever vaccination certificate made available at Assistant Port Health office, Medical Research Institute, Borella, Colombo 08.

5.1.7.4.2 Surveillance for Public Health Emergency of International Concern (PHEIC)

Routine surveillance data regarding international travel and trade are monitored at POE for containment of diseases to prevent PHEIC.

5.1.7.4.3 Disinfection, Disinfestations and Deratting Procedures

Disinfection, disinfestations of air craft's, ship sanitation procedures are being carried out by professionals and monitored and supervised by the trained public health staff.

5.1.7.4.4 Ship Sanitation Certificate (Deratting certificate) and Deratting

Ship Sanitation Certificate and Ship Sanitation Exemption Certificate have been replaced by ship sanitation control exemption certificate and ship sanitation control certificate.

5.1.7.4.5 Vector Control

With regard to vector control unit has established surveillance for the presence of vectors and reservoirs at the designated port of entries.

5.1.7.4.6 Food and Water Sanitation at Points of Entry

Inspection of food stuff, catering establishments inside the premises of airport and port under the food act, sampling of imported food items, forwarding lab analysis as an when required by the custom authorities.

5.1.7.4.7 Arrangement for the Quarantine of Suspects in IDH Hospital

Infectious Disease Hospital, Colombo (IDH) is designated as the focal point of management of cases at the national level.

Activities carried out by the each unit during previous years are listed below.

Table.5.1.20 Summary of the Activities Carried out by the Port Health Officer-Colombo Harbor

Indicator	2009	2010	2011	2012
No. of Ship arrival/ Pratique granted	4,202	3,457	4,205	4,235
No. of Yellow fever vaccines given	70	94	104	87
No. of Ship Sanitation Exemptions Certificate issued	84	199	201	188
No. of human remains released	2	446	2	4
No. of under graduate medical officers trained	200	200	282	220
No. of post graduate medical officers trained				40

Table.5.1.21 Summary of the Activities Carried out by the Asst. Port Health Officer-MRI -Colombo

Year	Total no. of Yellow Fever vaccination	Total no. of Meningococcal Meningitis	Total no. of Oral Polio vaccination (Booster)
2009	2,009	332	171
2010	3,328	354	163
2011	4,381	499	174
2012	3,372	505	178

5.1.7.5 Activities Carried out by the Airport Health Officer-BIA Katunayake

At Airport Health Office BIA Katunayake, there are three Airport Health Officers and 8 PHII involved in the quarantine activities. There were 22,620 air crafts arrived in the year 2012, out of which 16,629 air craft's disinfection activities were carried out. Arrivals of passengers during 2012 were 3,209,370. Number of valid international certificate for yellow fever vaccination produced were 221. According to the IHR 2005, Aircraft General Health Declarations were submitted by the air craft crew . In the year 2012, 453 human remains were released out of which 22 were released for Judicial Medical Officer for postmortems.

In the year 2012, the quarantine unit of the air port Health office had carried out 110 sanitary inspections and sent 12 food samples,18 water samples for bacteriological analysis. The health education activities carried out during 2012 was 68.

5.1.7.6 The Way Forward

Revitalization of Current practicing legal frameworks, preparation of Standard Operational Procedures (SOP) will be the first priority for 2013. Mapping literature and Global best practices in border health activities relevant to Sri Lankan context will also be done.

5.2 Specialised Public Health Programmes

5.2.1 Anti Malaria Control Programme

The dramatic reduction of malaria cases sustained over the past decade 41,411 cases in 2002 to 124 cases in 2011) has continued further as only 23 cases were reported in 2012. This is a 99.9 percent reduction when compared with 2002 figures. With this success achieved Sri Lanka is currently in the elimination phase of malaria.

The vision of the programme is 'Sri Lanka with no indigenous malaria'

5.2.1.1 Objectives of the Malaria Control Programme

1. To eliminate indigenous P.f malaria by 2012
2. To eliminate indigenous P.v malaria by 2014.
3. To maintain a zero mortality of malaria cases.
4. To prevent the reintroduction of malaria into the country.

5.2.1.2 Present Status of Malaria

A total of 93 microscopically confirmed malaria cases were reported in the country during the year 2012. Of them 70 were imported cases while only 23 were indigenous.

5.2.1.3 Indigenous Malaria

Out of the indigenous cases reported, 15 (65.2%) were males while 8 (34.8%) were females. *P.vivax* infections constituted 82.6 percent of the total while *P.falciparum,* 17.3 percent. No deaths due to malaria were reported during the year. The last death due to malaria in Sri Lanka was reported in 2007.

The district-wise morbidity pattern in Sri Lanka has undergone dramatic changes during the last decade due to the conflict situation prevailed in several districts of the North-East Province. More than half of the total morbidity in the country during the year 2012 has been reported from Northern Province (78%).

Table 5.2.1 : Distribution of Indigenous Malaria Cases by RDHS Division- 2012

RDHS Division	Blood smears examined	Microscopically confirmed cases	*P.v.*	*P.f.*
Colombo	73,085	-	-	-
Gampaha	35,587	-	-	-
Kalutara	12,947	-	-	-
Kandy	45,083	-	-	-
Matale	23,176	-	-	-
N' Eliya	2,780	-	-	-
Galle	15,313	-	-	-
Matara	23,943	-	-	-
Hambantota	26,186	2	1	1
Jaffna	62,790	4	3	1
Kilinochchi	45,852	2	2	-
Vavuniya	37,514	3	3	-
Mannar	27,992	1	-	1
Mullativu	34,742	8	8	-
Batticaloa	72,498	-	-	-
Ampara	27,160	-	-	-
Kalmune	45,280	-	-	-
Trincomalie	45,775	1	-	1
Kurunegala	74,827	-	-	-
Puttalam	18,995	-	-	-
Anuradhapura	72,091	-	-	-
Polonnaruwa	40,316	-	-	-
Badulla	21,723	-	-	-
Moneragala	26,697	2	2	-
Ratnapura	26,535	-	-	-
Kegalle	9,363	-	-	-
Total	948,250	23	19	4

Table 5.2.2 : Distribution of Malaria Cases by Age

Age Group	No.	%
Under 1 yr	0	0
1 – 5 yrs	2	8.7
6 – 9 yrs	1	4.35
10 – 14 yrs	1	4.35
Over 15 yrs	19	82.6
Total	23	100

Majority of patients were over 15 years of age.

5.2.1.4 Imported Malaria

In addition to the indigenous cases, 70 malaria cases (26 *P. vivax* infections, 37 *P. falciparum,* 02 *P.ovale* and 5 mixed infections) were imported from other countries.

There had been a rise in imported malaria cases in 2012 as compared to 51 in 2011. Majority of cases were imported from India (40%) and Benin (28%).

An.culicifacies continued to be the principal vector of malaria and *An. subpictus*, a secondary vector of malaria in Sri Lanka was ncountered in the year 2012 to well.

5.2.1.5 The Main Malaria Elimination Activities

Since 2008, the Malaria Control Programme in the country has been modified, keeping in line with the National Strategic Plan (2008-2012) approved by the Ministry of Health.

Accordingly, malaria elimination strategies of the Anti Malaria Campaign are:-

- To provide early diagnosis and prompt treatment of malaria patients and asymptomatic parasite carriers.
- To plan and implement selective and sustainable vector control measures based on the principles of Integrated Vector Manegement (IVM).
- Forecasting, early detection & prevention of outbreaks, and the rapid & effective containment of outbreaks.
- To reassess the country's malaria situation regularly, in particular the ecological, social and economic determinants of the disease and evaluation of malaria control activities.
- Prevention of malaria in travellers to malaria endemic countries
- Enhance community participation and partnership building for effective and sustainable malaria control.
- Promotion of human resource development and capacity building.
- Promotion of operational research.

5.2.1.6 Foreign Funded Malaria Control Activities

During the year 2012 the Global Fund to Fight Aids Tuberculosis and Malaria (GFATM) and World Health Organization (WHO) assisted malaria control activities in Sri Lanka.

WHO technical assistance to the Malaria Control Programme in 2012 was under the 2012/2013 biennium programme of the country budget.

National Malaria Control Programme continued to receive support from GFATM in the form of one grant for malaria elimination under the Round 8. This project is jointly implemented through a partnership between the Ministry of Health, Tropical and Environmental Diseases and Health Associates (TEDHA) and Lanka Jathika Sarvodaya Shramadana Sangamaya of Sri Lanka.

Round 8 GFATM project covers all the districts in the country.

This project aims at scaling up efforts of the National Malaria Control Programme and focus on elimination of *P.falciparum* by end of 2012 and elimination of *P.vivax* malaria by end of 2014.

5.2.2. National Programme for Tuberculosis Control and Chest Dseases (NPTCCD)

National Programme for Tuberculosis Control and Chest Diseases is a decentralized unit in the Ministry of Health which is headed by the Director NPTCCD. The programme functions under the Deputy Director General (Public Health Services) I of the Ministry of Health. The central unit of the NPTCCD, National Tuberculosis Reference Laboratory at Walisara, Central Drug Stores of the NPTCCD, District Chest Clinics of Colombo and Gampaha, and chest ward, DH Kopay are under the direct administrative purview of the Director NPTCCD.

NPTCCD provides preventive, diagnostic and curative services to the population of Sri Lanka. Inward facilities for TB patients are provided by the chest wards situated in 13 District Hospitals and National Hospital for Respiratory Diseases (NHRD) situated in Walisara.

Diagnostic services are provided through National TB Reference Laboratory, Two provincial culture laboratories in Kandy and Ratnapura, District Chest Clinic Laboratories and over 160 microscopy centers.Central Drug Stores of the NPTCCD is responsible for estimation, procurement supply and distribution of anti TB Drugs to District Chest Clinics.

TB and respiratory disease control activities at the district level are carried out by the 26 District Chest Clinics situated in 25 Districts . All the District Chest clinics except Colombo and Gampaha are administratively under respective district health authorities.

NPTCCD is responsible for infrastructure development and financial management of the institutions under its direct administrative preview . It also provides technical guidance and financial assistance from funds obtained from donor agencies for implementation of the TB control activities at the District Level.

In addition to that, NPTCCD is responsible for the formulation of policies and guidelines for control of TB and other respiratory diseases in the country and for planning, implementation, monitoring and evaluation of the TB control activities carried out in the entire country. TB surveillance is also one of the main activities carried out by the NPTCCD. It also provides information and data on TB to Ministry of Health and relevant government institutions such as central bank, to UN agencies such as WHO and SEARO and to SAARC. It also acts as a coordinating body between the central ministry and provincial health sector and other governmental and nongovernmental organizations.

NPTCCD also carries out training of medical and paramedical staff engaged in TB care Public awareness through various channels of communication are done by this unit.

Carrying out operational and health system research is one of the key priorities of the NPTCCD. The main areas of research interest are co morbidity of TB with NCDs and communicable diseases, Pharmocovigilance, Anti TB drug resistance, Morbidity and mortality patterns among high risk groups and morbidity pattern of other respiratory diseases such as Asthma and Occupational Lung Diseases .

The Government of Sri Lanka is the main source of funding for the NPTCCD. In addition to that TB control activities are supported by the Global Fund to Fight AIDS Tuberculosis and Malaria (GFATM) and the World Bank. WHO provides technical assistance to the programme and Global Drug Facility (GDF) provides Fixed Dose Combination (FGD) anti TB Drugs.

5.2.2.1 Vision

Sri Lanka free of Tuberculosis and other respiratory diseases.

5.2.2.2 Mission

To contribute to the socio-economic development of the nation by committing ourselves to create a TB free Sri Lanka and to reduce the morbidity and mortality due to the respiratory diseases by formulation of policies, planning, coordinating and monitoring of all TB and other respiratory disease control activities in the country.

5.2.2.2 Objectives

- To ensure that every patient with TB and respiratory diseases have access to effective diagnosis, treatment and cure.
- To interrupt transmission of TB.
- To prevent the emergence of multidrug-resistant tuberculosis.
- To reduce the social & economic burden caused by TB and other respiratory diseases.

5.2.2.3 Targets

- To reach and thereafter to sustain the 2005 global targets achieving at least 70 percent case detection and at least 85 percent treatment success among TB cases under DOTs; in order.
- To reach the interim targets of halving TB deaths and prevalence.
- To halt and reverse the incidence of TB as stated in the Millennium Development Goals set for 2015 (MDG-6 Target 6c).

Table 5.2.3 : MDG Targets set for the year 2010 and 2015

Indicator	1990 estimates	2010 targets	2015 targets
Case detection rate under DOTs	N/A	86%	90%
Treatment success rate	N/A	>85%	>85%
Incidence	60/ 100K	42/100K	30/100K
Mortality	10/100K	2.2/100K	2.2/100k

Data on case detection, sputum conversion and treatment outcome from District Chest Clinics are collected quarterly and compiled for preparation of annual figures

5.2.2.5 Direct Observation Theraphy (DOTS) Coverage

The population coverage of DOTs is 100% including districts in the North and East.

5.2.2.6 Indicators

The most important performance indicators are ;

5.2.2.6.1 Case Detection Rate

This is defined as proportion of all forms of TB cases (new and relapse) detected during the specified year out of the estimated incidence of all forms of TB cases for the same year

5.2.2.6.2 Treatment Success Rate

Calculated by amalgamating both cure and treatment completion rates.

- **Cure Rate –** Cure rate is defined as the proportion of new smear positive pulmonary TB cases registered in a specified time period that were cured out of the total number of new smear positive pulmonary TB cases registered in the same period.
- **Treatment Completion Rate -** This is defined as the proportion of new smear positive pulmonary TB cases registered in a specified time period that completed treatment and did not meet the criteria for cure or failure out of total number of new smear positive pulmonary TB cases registered in the same period.

5.2.2.6.3 Sputum Conversion Rate

Sputum conversion rate is defined as **"**proportion of new smear positive pulmonary TB cases registered in a specified period that are smear negative at the end of intensive phase of treatment out of number of new smear positive pulmonary TB patients registered during the same period.

5.2.2.6.4 Defaulter Rate

Defaulter rate is defined as proportion of new smear positive pulmonary TB cases registered in a specified time period that interrupted treatment more than two consecutive months out of total of new smear positive TB cases registered during the same period.

5.2.2.6.5 Death Rate

This is defined as the proportion of deaths occurred among new smear positive pulmonary TB cases out of total number of new smear positive cases registered in the same period

5.2.2.7 Case Notification.

Each new case of TB is notified to the central unit of the NPTCCD by form H 816. A. total of 8522 new cases were notified to the centre in 2012. There is a slight decrease of the notification rate (42.1 per 100,000 population) when compared with the previous year's (45.2 in per 100,000. population) rate. NPTCCD received notifications from several private hospitals and were also included in the total year 2012.

5.2.2.8 Case Detection

The total number of 9343 cases of all forms of TB were reported from DCCs in the quarterly reports of 2011. It consists of 8507 new cases, of which 4269 (50.2%) were Smear-positive pulmonary tuberculosis (smear +ve PTB),1889 (22.2%) were smear negative (smear –ve PTB) and 2349 (27.6%) were Extra Pulmonary Tuberculosis (EPTB) cases.

Furthermore, 433 Retreatment (relapse, treatment after failure and treatment after default) cases and 403 Other (patients whose treatment history was unknown, treated outside NTP etc) cases were reported in 2012.

The case detection rate for 2012 was 69.9 per 100,000 population and it has been decreased, when compared with the 2011 rate which was 77.8 per 100,000 population.

Similarly, the highest numbers of TB cases (2190, 23.4%) as well as new smear positive cases were reported from Colombo district while the lowest was from Mullathive District(31)

Fig 5.2.1 : Case Detection of TB 1998 - 2012

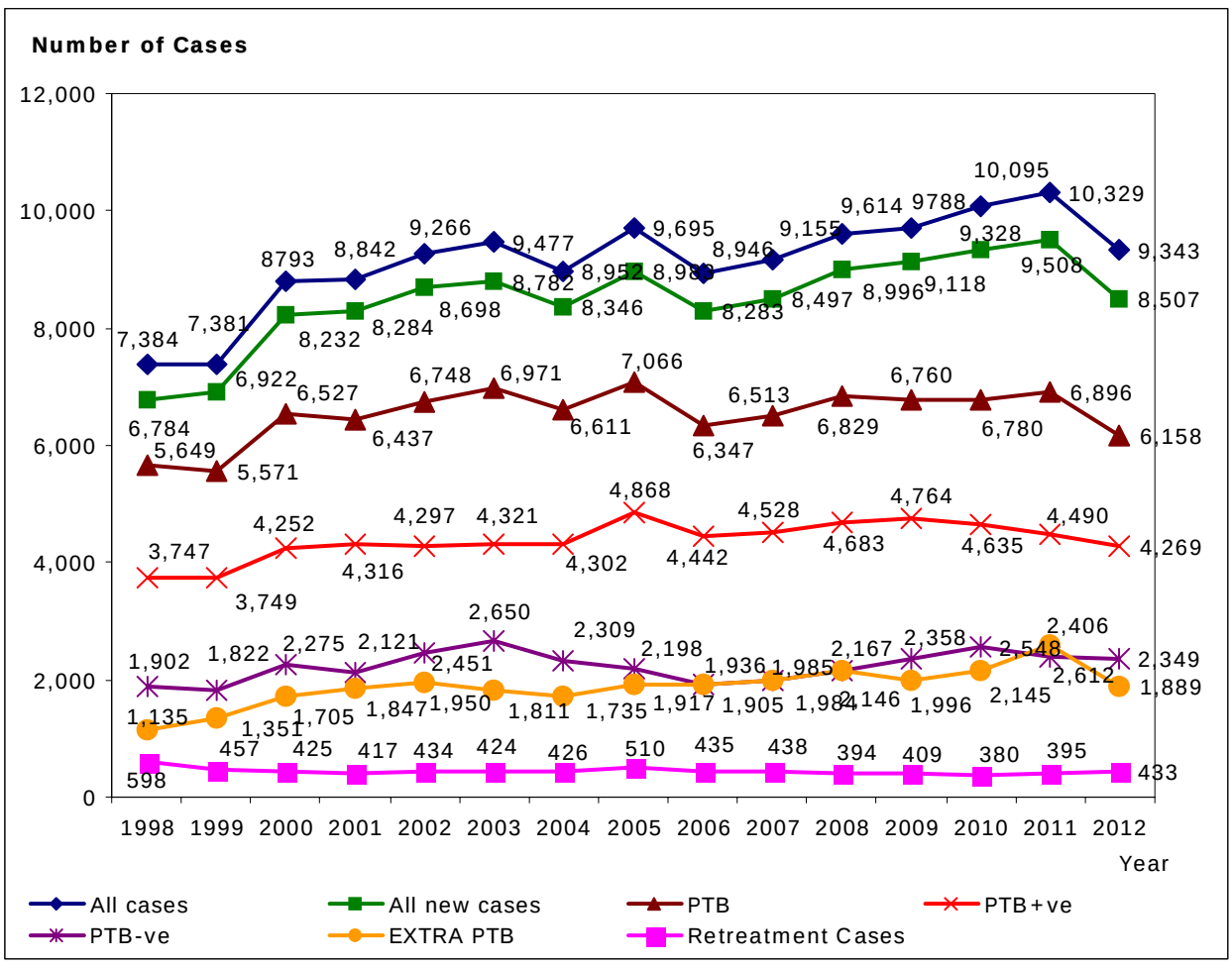


Table 5.2.4 : Case Detection of TB by the District of Registration - 2012

District	New Cases				Others					Treatment After Failiure	Treatment After Default	Total
	PTB sp+ve	PTB sp-ve	EPTB	Total	Relapse	sp+ve	sp-ve	EPTB	Total			
Colombo	1,075	326	525	1,926	84	32	30	38	100	21	59	2,190
Gampaha	470	182	234	886	29	-	3	13	16	6	20	957
Kalutara	341	99	180	620	11	1	4	10	15	1	5	652
Kandy	209	197	165	571	6	6	27	17	50	9	3	639
Matale	57	35	45	137	1	-	2	2	4	1	-	143
Nuwara Eliya	96	43	49	188	3	-	7	6	13	-	-	404
Galle	228	121	109	458	19	2	3	5	10	3	2	492
Marara	124	18	55	197	2	3	8	11	22	2	-	223
Hambantota	47	18	36	101	3	1	2	3	6	-	-	110
Jaffna	107	74	115	296	10	-	6	3	9	2	2	319
Vavuniya	47	13	19	79	1	-	1	2	3	-	1	84
Batticaloa	85	18	61	164	11	1	3	4	8	-	3	186
Ampara	29	22	11	62	1	-	-	1	1	-	-	64
Kalmunai	80	60	31	171	4	2	11	-	13	-	2	190
Trincomalee	66	134	41	241	7	-	1	-	1	1	1	251
Kurunegala	205	122	109	436	12	5	62	30	97	8	4	557
Puttalam	101	22	75	198	1	-	-	-	-	2	3	204
Anuradhapura	151	59	77	287	6	-	4	5	9	4	-	306
Polonnaruwa	53	53	36	142	2	-	1	1	2	1	1	148
Badulla	108	42	53	203	5	1	3	5	9	4	1	222
Monaragala	55	20	26	101	1	-	-	-	1	1	1	105
Ratnapura	287	71	153	511	16	-	1	-	1	5	3	536
Kegalle	189	81	114	384	6	-	4	5	9	2	3	404
Mannar	37	17	13	67	1	-	-	-	-	-	-	68
Mullaitivu	9	8	10	27	2	-	1	-	1	1	-	31
Kilinochchi	13	34	7	54	1	-	2	1	3	-	-	58
Total	4,269	1,889	2,349	8,507	245	55	186	162	403	74	114	9,343

source: Quarterly Reports of Case Finding from district

5.2.2.9 Age and Sex Distribution of New Cases

The highest number of new cases of TB was in 45-54 age group (1,799 cases). The lowest numbers were seen in 0-14 age group (309 cases) out of 8,507 all new cases.

61.8 percent of new cases were in the economically active age group of 15-54. More males (65%) were detected than the females (35%). The highest number of new TB cases among males was found in the age group of 45-54 years (23%) while that in the females was also in the same age group of 45-54 years(18%).

Fig 5.2.2 : Treatment Outcome of New Smear Positive PTB Cases 2000-2011

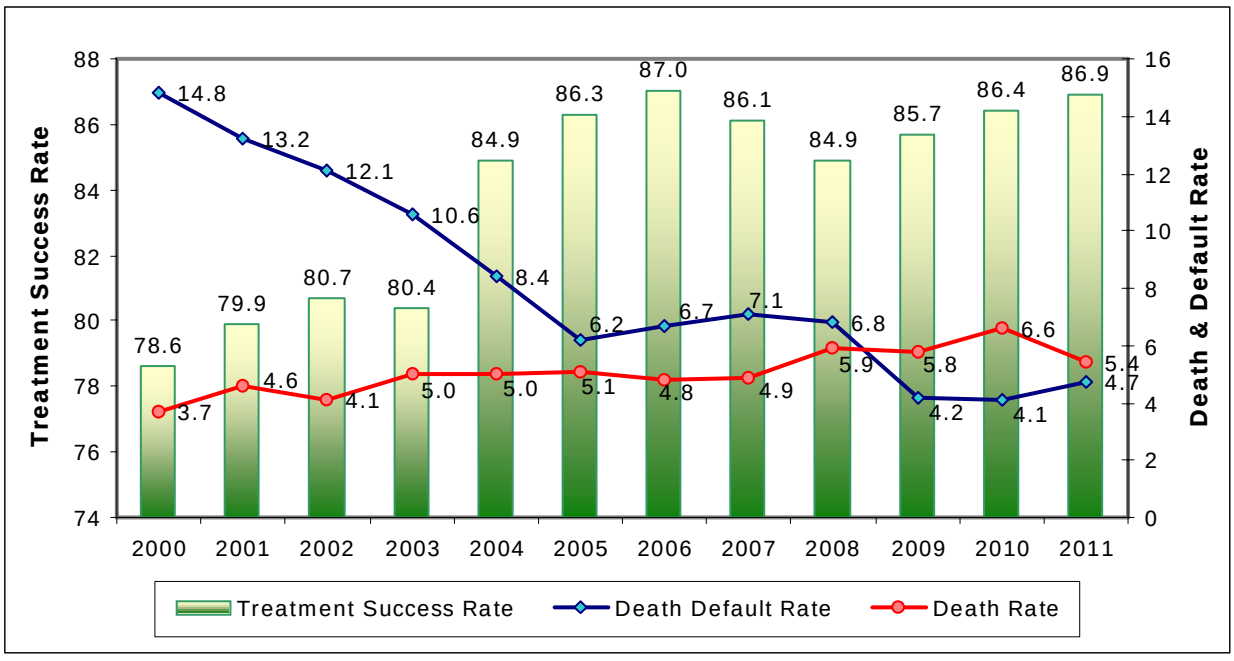
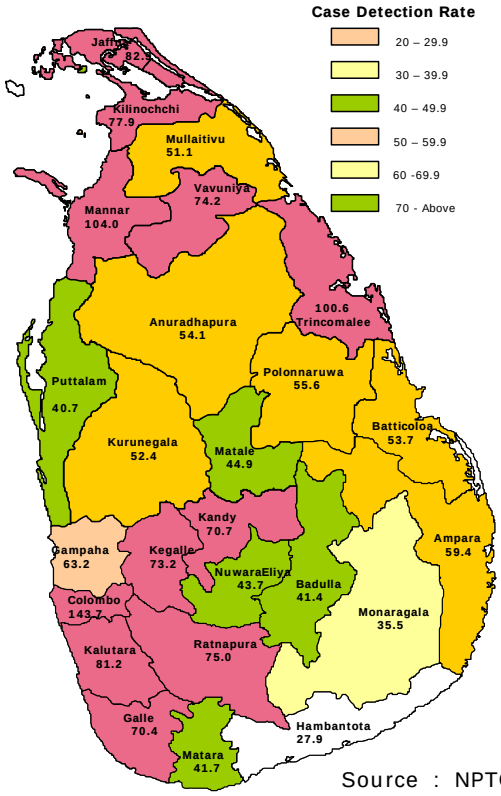
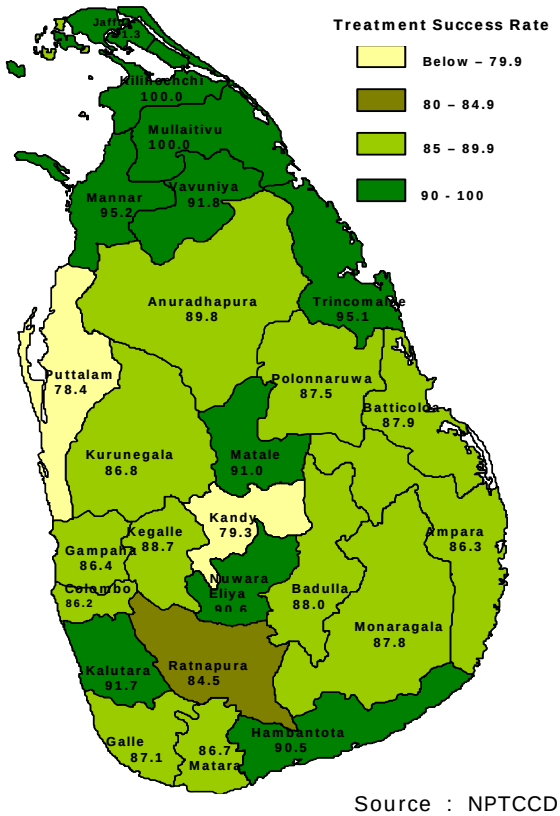


Fig 5.2.3 : Case Detection Rate -2012



Source : NPTCCD

Fig 5.2.4 : Treatment Success Rate - 2011



Source : NPTCCD

Table 5.2.5 : Treatment Outcome PTB New Cases (Sputum Positive) - 2011

RDHS Division	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died		Failure		Defaulted		Transferred out		Not Evaluated		Total
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	
Colombo	976	772	79.1	69	7.1	841	86.2	35	3.6	7	7.0	74	7.6	3	0.3	16	1.6	976
Gampaha	609	510	83.7	16	2.6	526	86.4	35	5.7	8	1.3	35	5.7	-	0.0	5	3.2	609
Kalutara	350	321	91.7	-	0.0	321	91.7	21	6.0	2	0.6	5	1.4	-	0.0	1	1.3	350
Kandy	276	220	79.7	-	0.0	220	79.7	14	5.1	8	2.9	23	8.3	-	0.0	11	15.1	276
Matale	67	57	85.1	4	6.0	61	91.0	2	3.0	-	0.0	1	1.5	1	5.9	2	10.8	67
Nuwara Eliya	85	76	89.4	1	1.2	77	90.6	6	7.1	-	0.0	1	1.2	-	0.0	1	4.5	85
Galle	233	157	67.4	46	19.7	203	87.1	7	3.0	-	0.0	11	4.7	12	21.7	-	0.0	233
Matara	128	110	85.9	1	0.8	111	86.7	15	11.7	1	0.8	1	0.8	-	0.0	-	0.0	128
Hambantota	63	56	88.9	1	1.6	57	90.5	2	3.2	-	0.0	3	4.8	-	0.0	1	6.3	63
Jaffna	104	95	91.3	-	0.0	95	91.3	7	6.7	-	0.0	1	1.0	-	0.0	1	3.2	104
Vavuniya	49	45	91.8	-	0.0	45	91.8	1	2.0	1	2.0	2	4.1	-	0.0	-	0.0	49
Batticaloa	107	93	86.9	1	0.9	94	87.9	10	9.3	-	0.0	2	1.9	-	0.0	1	3.4	107
Ampara	30	27	90.0	-	0.0	27	90.0	1	3.3	1	3.3	1	3.3	-	0.0	-	0.0	30
Kalmunai	75	60	80.0	2	2.7	62	82.7	6	8.0	-	0.0	7	9.3	-	0.0	-	0.0	75
Trincomalee	61	58	95.1	-	0.0	58	95.1	3	4.9	-	0.0	-	0.0	-	0.0	-	0.0	61
Kurunegala	219	186	84.9	4	1.8	190	86.8	10	4.6	9	4.1	10	4.6	-	0.0	-	0.0	219
Puttalam	116	80	69.0	11	9.5	91	78.4	6	5.2	2	1.7	15	12.9	-	0.0	2	6.1	116
Anuradhapura	147	132	89.8	-	0.0	132	89.8	11	7.5	2	1.4	-	0.0	-	0.0	2	4.7	147
Polonnaruwa	80	70	87.5	-	0.0	70	87.5	4	5.0	2	2.5	-	0.0	4	19.5	-	0.0	80
Badulla	142	125	88.0	-	0.0	125	88.0	10	7.0	6	4.2	1	0.7	-	0.0	-	0.0	142
Monaragala	49	43	87.8	-	0.0	43	87.8	3	6.1	1	2.0	2	4.1	-	0.0	-	0.0	49
Ratnapura	303	256	84.5	-	0.0	256	84.5	22	7.3	4	1.3	12	4.0	4	5.0	5	6.9	303
Kegalle	177	156	88.1	1	0.6	157	88.7	11	6.2	1	0.6	5	2.8	2	4.3	1	2.4	177
Mannar	21	20	95.2	-	0.0	20	95.2	1	4.8	-	0.0	-	0.0	-	0.0	-	0.0	21
Mullaitivu	2	2	100.0	-	0.0	2	100.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	2
Kilinochchi	21	21	100.0	-	0.0	21	100.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	21
Total	4,490	3,748	83.5	157	3.5	3,905	87.0	243	5.4	55	1.2	212	4.7	26	0.6	49	1.1	4,490

Source : Quarterly report of district chest clinics

In 2011, 4480 new smear positive pulmonary TB cases were registered under Directly Observed Therapy Short Course (DOTS) for treatment. The cure rate among registered cases was 83.5 percent and a further 3.5 percent completed treatment (no laboratory confirmation of cure), giving an overall treatment success rate of 87 percent. This is a slight increase in comparison to 2010 where the treatment success rate was 86.4 percent.

The failure rate remained low at 1.2 percent with 11 districts not having any single case of treatment failure. The defaulter rate is 4.7 percent with only 5 districts having defaulter rates above 5 percent (WHO target < 5 percent). Yet a slight increase of defaulter rate has been observed when compared with the 2010 rate (4.1 percent).

Death rate has been fallen to 5.4% in 2011 from 2010 death rate of 6.6%.

5.2.2.10 Multi Drug Resistant Tuberculosis (MDR TB)

MDR TB is not a big threat to Sri Lanka . Only 37 cases of MDR TB were reported since 2008 and 5 cases were reported in year 2012.

Table 5.2.6 : Incidence of MD RTB 2008-2012

Year	2008	2009	2010	2011	2012
MDR TB cases detected	8	4	8	12	5

5.2.2.10.1 TB/HIV co-infection

All TB patients are offered HIV testing with special emphasis given to those TB patients who belong to identified high risk groups for HIV.

In 2012,, 3379 TB patients were screened for HIV., Of these patients 23 (0.7%) were recorded HIV positive. Five HIV positive patients started or continued on co-trimoxazole preventive therapy and 11 HIV positive patients started or continued on antiretroviral therapy (ART) in year 2012.

5.2.2.10.2 B.C.G. Vaccination

B.C.G Vaccination is included in the Expanded Programme of Immunization (EPI).All newborn babies(except immunocompromised) are vaccinated within first 24 hours of Birth.

5.2.2.10.3 Drugs & Supplies

Quality assured fixed dose combinations of anti TB drugs were directly provided to the NPTCCD by the Global Drug Facility as a grant. Individual 1st line and 2nd line anti TB Drugs and laboratory reagents for sputum microscopy, culture and DST were provided through the Medical Supplies Division of Ministry of Health in 2012.

5.2.2.10.4 Activities

The following key activities were arried out in 2012 with a in view of improving the case detection and treatment outcome.

5.2.2.10.5 Revision of Manuals and Guidelines

- The laboratory manual was revised and 500 copies were printed.
- Revision of “Programmatic Management of Drug Resistant TB” was finalized.

5.2.2.10.6 Strengthening of TB Control Activities among High Risk Populations

- Newer approaches were taken to strengthen the TB control activities in Prisons. Mass screening programmes were carried out in all major prisons in Sri Lanka.

5.2.2.10.7 Operational Research

- A Survey was carried out in 2012 among 5510 convicted prisoners in 15 larger prisons in Sri Lanka and prevalence of TB among them was identified as 1688 per 100,000 population. This was 15 times more than the National estimates of prevalence (101 per 100,000 population).
- A study carried out using secondary data to determine characteristics and outcomes of tuberculosis patients who failed to smear convert at two months of intensive phase in 2012, revealed significant associations between heavy bacterial load at baseline and missing doses at the initial phase with late sputum conversion.

- A multi centre study was carried out to identify prevalence of TB/ Diabetes co-morbidity in 2012.

The following two international days were commemorated in 2012 in view of creating awareness among general public and to get the fullest cooperation and maximum support from political leadership, health professionals and other stakeholders.

5.2.2.10.8 Commemoration of the World TB Day-2012

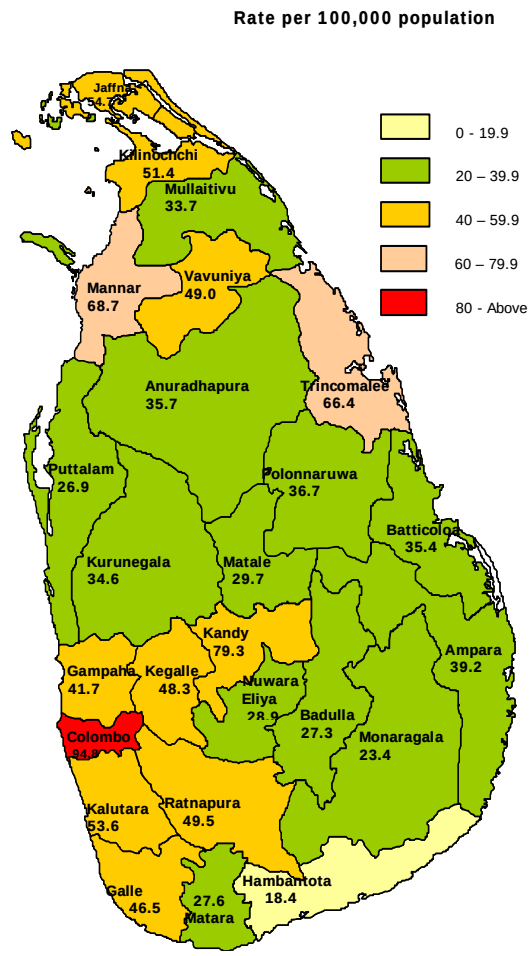
The main function of the World TB day, 2012 was held at the Bandaranayke Maha Vidyalaya, Gampaha under the theme of "***Stop TB in my life time*** ".

In par with the national event, a verity of activities were conducted by the District Chest Clinic staff in view of commemorating the World TB Day.

5.2.2.10.9 Commemoration of the World Asthma Day

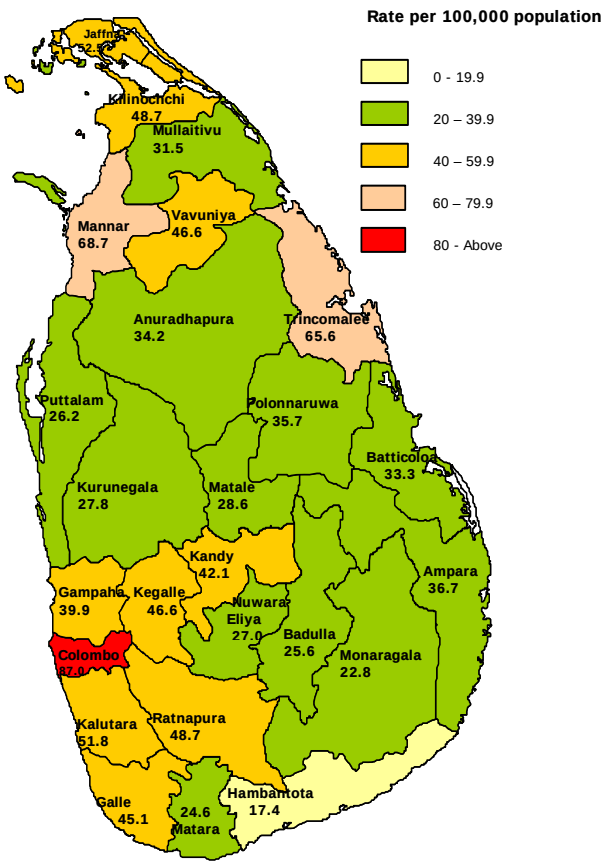
Commemoration of the World Asthma day was held at the BMICH with the participation of over 500 health professionals. This event was jointly organized with the association of Pulmonologists of Sri Lanka.

Fig 5.2.5 : Case Detection of TB Patients, Rates per 100,000 Population



Source : Quarterly reports of District Chest Clinics

Fig 5.2.6 : Incidence Rate (New and Replace) - 2012



Source : Quarterly reports of District Chest Clinics

5.2.3 Anti Filariasis Campaign

Lymphatic Filariasis (LF), one of the most disfiguring diseases in the world which causes permanent disability leading to social stigma, economic loss with a heavy burden on health systems. LF is the fourth leading cause of permanent and long-term disability. LF is a neglected tropical disease (NTD), which is endemic in 83 countries and more than a billion people are at risk of LF infection. Though LF like diseases have been mentioned in ancient chronicles in Sri Lanka, the first authentic description was found in 1936- 1939: an island-wide survey reported a microfilaria (mf) rate of 20-24 Percent (mf rate-percentage of persons positive for mf in night blood samples). The vertical organisation, **Anti Filariasis Campaign (AFC)** of Ministry of Health, was established in the department of Health in Sri Lanka in 1947 to reduce the burden of the disease.

Two types of filarial parasites were reported from Sri Lanka i.e. *Wuchereria bancrofti* and *Brugia malayi.* At present, *Wuchereria bancrofti* is the main LF infection being transmitted and few cases of Brugian filariasis have been reported.

The insect vector responsible for the spread of Bancroftian filariasis in Sri Lanka is the female mosquitoes of *Culex quinquefasciatus*. This mosquito breeds in highly polluted collections of water, such as blocked drains, damaged septic tanks, and latrine pits etc, which abound in urban habitats.

In Sri Lanka LF is endemic in eight districts (Colombo, Kalutara, Gampaha, Galle, Matara, Hambantota, Kurunegala & Puttalam) in three provinces (Western, Southern & North Western Provinces). There are Regional Anti Filariasis Units (RAFUs) in seven endemic districts. Staffs of the AFC and RAFUs routinely conduct several activities i.e.: parasitological surveys (through night blood filming among humans) and treat mf positive persons; entomological surveys and vector control activities; manage lymphoedema patients. In 1997, as a result of advances in diagnostics and treatment of LF, the disease was classed as one of the six infectious diseases considered to be 'potentially eradicable'. The 50th World Health Assembly (WHA) adopted a resolution (WHA 50.29) calling all member states to work towardselimination of LF as a public health problem by 2020.

Table 5.2.7 : Morbidity Data of Anti Filariasis Clinics - 2012

Name of the clinic	No of clinic sessions	No of first visits				No of subsequent visits			Total No of lymphoedema cases
		Lymphoedema with acute attacks	Lymphoedema without acute attacks	Total No of new lymphoedema cases	Hydrocele TPE*	Lymphoedema with acute attacks	Lymphoedema without acute attacks	Total No of old lymphoedema cases	
AFC**Narahenpita	98	1	65	66	-	81	1,260	1,341	1,407
AFU***Boralasgamuwa	49	89	76	165	-	55	577	632	797
Dehiwala	99	45	32	77	-	57	813	870	947
Kolonnawa	23	49	56	105	-	12	214	226	331
Colombo District	269	184	229	413	-	205	2,864	3,069	3,482
AFU-Kurunegala	50	27	15	43	1	37	532	569	612
Kurunegala District	50	27	15	43	1	37	532	569	612
AFU-Chilaw	48	2	19	21	-	3	248	251	272
Puttlam District	48	2	19	21	-	3	248	251	272
AFU-Kiribathgoda	44	5	89	94	-	-	653	653	747
Peliyagoda	49	-	9	9	-	-	148	148	157
Attanagalla									
Gampaha District	93	5	98	103	-	-	801	801	904
AFU-Kalutara	50	46	-	46	-	2	304	306	352
Panadura	50	24	-	24	-	10	301	311	335
Kalutara District	100	70	-	70	-	12	605	617	687
AFU-Galle	48	18	2	20	-	413	89	502	522
Ambalangoda	12	7	-	7	-	99	41	140	147
Ahangama	12	8	-	8	-	299	92	391	399
Galle District	72	33	2	35	-	811	222	1,033	1,068
AFU-Matara	50	4	5	9	-	-	436	436	445
Polhena	10	1	-	1	-	-	161	161	162
Kamburugamuwa	11	-	-	-	-	-	152	152	152
Matara District	71	5	5	10	-	-	749	749	759
Sri Lanka	703	326	368	695	1	1,068	6,021	7,089	7,784

Source : Anti Filariasis Campaign

Elimination status was defined as a microfilaria rate of < 1 Percent.One of the main strategies adopted for elimination was the interruption of transmission through Mass Drug Administration (MDA) to the entire endemic population at least for five years.

With the support from the international partners and the WHO, Sri Lanka successfully completed five rounds of MDA in 2006 which covered more than 80 percent of the population residing in endemic eight districts in the three provinces (Western, Southern and North Western). Two drugs regime (DEC and Albendazole) was given during the MDA.

5.2.3.1 Major Activities Implemented in 2012

- Conducted routine and special night blood filming programmes in endemic areas
- Treated mf positive and clinically suspected cases
- Managed lymphoedema patients and educated the lymphoedema patients and caregivers, on morbidity management measures (exercise, elevation, washing, bandaging, wearing of comfortable foot wear etc.).
- Conducted vector surveillance and control activities in endemic areas
- Conducted awareness programmes for health staff and general public
- Conducted training programmes for Medical, paramedical and post graduate students
- Conducted monthly review meetings with the Regional Medical Officers (Filariasis) Patients and district review meetings with the staff attached to RAFUs.
- Conducted research activities

5.2.3.2 Survey in Dehiwala MOH area

Parasitological and vector surveys were conducted in Dehiwala Medical Officer of Health (MOH) area in 2012. *Wuchereria bancrofti* antigen testing using ICT card (Immunochromatographic test) was done among grade 1 and 2 school children and Female gravid and semi gravid mosquitoes of *Culex quinquefasciatus* were collected and subjected to PCR testing to detect *Wuchereria bancrofti* DNA. Children of grade 1 and 2 were selected as they were not given MDA.

The antigen rate (0.14%) in school children suggested that LF activity in this MOH area met the WHO elimination criteria. The *Wuchereria bancrofti* DNA positivity rate (0.19%) in *Culex* mosquitoe pools in this survey indicated low level persistence of filariasis in this MOH area.

5.2.3.3 Enhanced Surveillance Studies

With the collaboration of foreign partners and AFC, a study on "Use of enhanced surveillance techniques to assess the elimination and interruption of transmission of lymphatic Filariasis in Sri Lanka" was conducted. This study covered two high risk Public Health Inspector (PHI) areas each in eight endemic districts and 2 high risk areas from Colombo Municipality Council (CMC) area which doesn't come under Colombo RAFU. In each PHI area of the district and in high risk area in CMC we have planned to conduct *Wuchereria bancrofti* Antigen testing among 350 school children (grade 1 and 2 students) and 500 community samples and PCR testing for *Wuchereria bancrofti* among 200 female mosquitoe (*Culex quinquefacsiatus)* pools. Out of the 5 districts (Colombo-RDHS area, Gampaha, Kalutara, Galle, Matara) completed up to 2012, highest antigen positivity (above the cut off of 2%) among Community samples was detected in Unawatuna PHI area in Galle district. Schools samples didn't exceed the cut off. Highest vector mosquito pools positivity rate (28%) was in Unawatuna PHI area.

5.2.3.4 Microfilaria Rate

During the year under review (2012), 373,145 night blood films were examined for microfilaria by the thick blood smear technique. Persons in endemic areas were screened at the night bloodblood filming centres, though house to house visits and during special surveys. Microfilaria rate for 2012 was 0.02 percent. (mf rate-number of microfilaria positive persons per 100 persons tested).

5.2.3.5 Clinic Visits of Lymphoedema Patients

In 2012, the number of first visit lymphoedema patients attended the clinics of AFC and RAFUs were 695, and the number of clinic visits of past lymphoedema patients were 7,233.

5.2.3.6 Infected and Infective Rates

Infected rate (number of *Culex quinquefaciatus* mosquitoes with all larval stages per 100 *Culex quinquefasciatus* mosquitoes) and infective rate (number of *Culex quinquefaciatus* mosquitoes with infective parasite stages per 100 *Culex quinquefaciatus* mosquitoes dissected) were 0.49 percent and 0.01 percent respectively for the year 2012.

Table 5.2.8 : Entomological Indices by District, Annual 2012

District	Premises			*Culex quinquefacsiatus*			Infected %	Infective %
	No of premises examined	No of premises positive for *Cx quin.**	Positive %	Dissected	Infected	Infective		
Colombo	1,894	1,109	58.55	2,761	15	1	0.54	0.04
Gampaha	1,756	1,400	79.73	6,456(18)	48	0	0.74	0
Gampaha Special Survey				406(523)	0 (4)	0 (2)	0 (0.76)	0 (0.38)
Kalutara	2,035	1,042	51.2	3,587	10	0	0.28	0
West.Prov.	5,685	3,551	62.4	13,210(541)	73(4)	1(2)	.55(.73)	.008(.4)
Galle	2,062	1,034	50.15	3,202	14	0	0.44	0
Matara	1,478	466	31.53	1,708	3	0	0.18	0
Hambanthota	-	-	-	-	-	-	-	-
Southern Prov	3,540	1,500	42.3	4,910	17	0	0.34	0
Kurunegala	1,699	388	22.84	830	2	0	0.24	0
Puttlam	835	293	35.09	55	0	0	0	0
Nor.West.Prov	2,534	681	26.87	885	2	0	0.23	0
Sri Lanka	11,759	5,732	48.77	19005(541)	92	1(2)	0.48	.005(.4)

* Cx quin-Culex quinquefacsiatus

Source : Special Survey-2012,NIH project

Table 5.2.9 : Parasitalogical Indices by District, Annual 2012

District	No of Blood films Examined	No of Blood films Positive	Microfilaria (MF) Rate	No of Microfilaria (MF)	Microfilaria (MF) Density
Colombo	40,495	5	0.01	6	60.00
Gampaha	48,284	12	0.02	76	316.67
Kalutara	90,537	10	0.01	87	435.00
Western Prov.	179,316	27	0.02	169	312.96
Galle	36,283	37	0.10	478	645.95
Matara	94,362	6	0.01	52	433.33
Hambathota	7,777	-	-	-	-
Southern Prov.	138,422	43	0.03	534	620.93
Kurunegala	43,752	10	0.02	159	795.00
Puttlam	11,655	2	0.02	4	100.00
North West.Prov.	55,407	12	0.02	163	679.17
Sri Lanka	373,145	82	0.02	866	528.02

Note : All the school children of ICT positive are Mf negative

Source : Special Surveys-2012, NIH Project

Table 5.2.10 : Conduction of PCR Testing on Mosquito Pools (for Wucheraria Bancrofti DNA)

District	No.of Mosquito Done	No.of Mosquito Pools Positive
AFC	6	Nill
Kalutara	34	Nill
Puttlam	35	3
Kurunegala	46	2
Gampaha	15	1
Total	136	6

Table 5.2.11 Immunochromotographic Test Result by PHI Areas

District	PHI Area	School		Community		Night blood film Result of ICT Positive Patients
		No. of ICT Done	No. of ICT Positive	No. of ICT Done	No. of ICT Positive	
Matara	Devinuwara	379		513	2	Negative
	Weligama	354	2	509	5	03(Mf-23,27,5)
Puttlam	Chilaw Town			508	Nil	
Total		733	2	1530	7	3

Note : All the school children of ICT positive are Mf negative

Source : Special Surveys-2012, NIH Project

5.2.4 Leprosy

5.2.4.1 History of Leprosy in Sri Lanka

The history of leprosy in Sri Lanka dates back to 1708 when Dutch rulers set up a leprosy asylum in order to segregate the patients as a mode of controlling the disease. British rulers made the admission compulsory with the introduction of lepers' ordinance No. 4 in 1901 and also established the second leprosy asylum in the Mantivu Island, Batticaola.

The first effective chemotherapy, Dapsone was introduced in late 1940s; however, this monotherapy became ineffective by 1960s due to emergences of drug resistant strains due to prolonged use of dapsone. In 1954, the vertical structure, Anti Leprosy Campaign (ALC) was started as the national programme for Leprosy control activities including diagnosis, management, rehabilitation, control activities etc.

The island–wide introduction of short term effective chemotherapy- Multi drug Therapy (MDT) – for all diagnosed patients in 1983 and the launching of Social Marketing Campaign in 1989 to create awareness of early signs of leprosy among general public and to dispel the myths and misconception surrounding the disease paved the way for achieving the elimination target in 1995. Leprosy control activities hitherto implemented through the vertical organization ALC, was integrated into General Health Service in 2001.

5.2.4.2 Enhanced Global Strategy

The 'Enhanced Global Strategy for Further Reducing the Disease Burden due to Leprosy: 2011-2015' was formulated as a natural extension of WHO's earlier strategies of 2006 - 2010. It offers opportunities to redefine joint actions and enhance global efforts to address the remaining challenges to reduce the disease burden due to leprosy and its harmful impact on persons affected by leprosy and their families.

Government of Sri Lanka has decided to adopt the 'Enhanced Global Strategy for Further Reducing the Disease Burden due to Leprosy: 2011-2015' as the guide for leprosy control programme for Sri Lanka till 2015.

5.2.4.3 Vision of the Programme

Leprosy free Sri Lanka where the needs of existing persons affected by leprosy are fulfilled

5.2.4.4 General Objective

To prevent grade 2 deformities by provision of quality leprosy services through early detection, treatment and rehabilitation services for those who need assistance.

5.2.4.5 Special Objectives

1. To reduce the rate of new cases with grade 2 deformities down to 4 percent at the end of 2015, compared to the baseline value of 8 percent at the end of 2010

2. To increase early detection rate (less than 6 months of the onset of symptoms) to 75 percent from the current rate of 44 percent

3. To improve treatment completion rates up to 90 percent at the end of 2015.

4. To reduce development of new deformities while on treatment and after completing treatment.

5. To provide comprehensive disability prevention and management through education and improved rehabilitation services

6. To fight all forms of stigma associated with leprosy

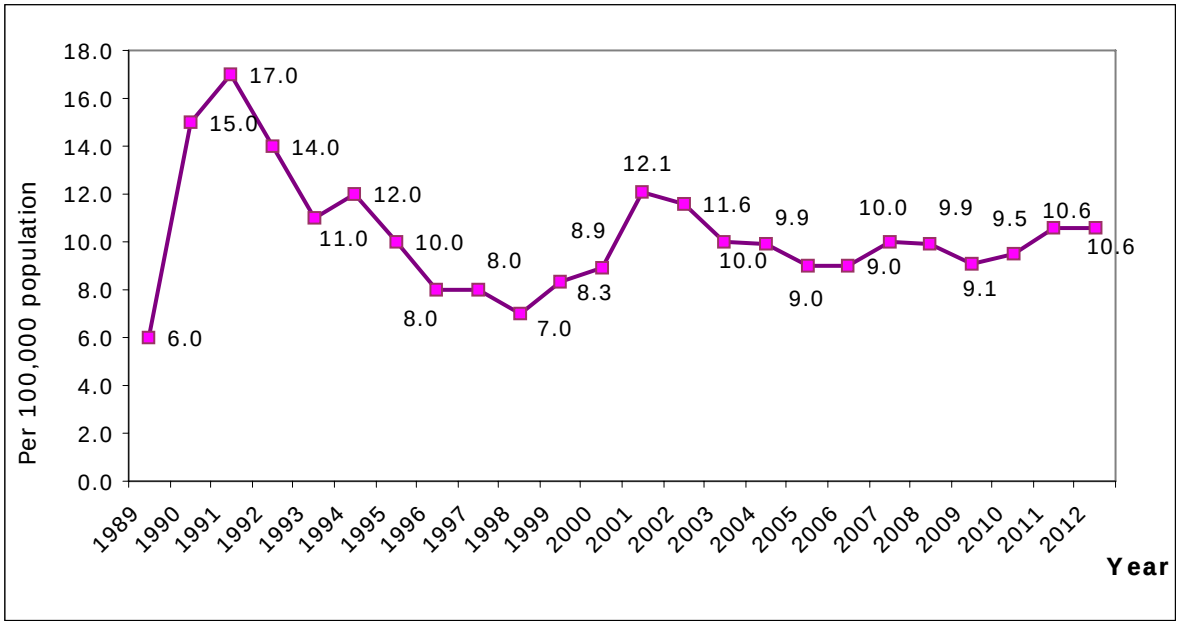
7. Ensuring the rights of persons affected with leprosy

5.2.4.6 Current Status

From 2003 - 2012 it was observed that the new case detection rates were fluctuating around 10 per 100,000 population. There is increase in trend in new case detection rates from 9.14 in 2009 up to 10.6 in 2012.

The number of new leprosy cases detected in 2012 was 2211 (10.6 per 100,000). The reported prevalence at the beginning of 2012 was 0.7 per 10,000.

Fig 5.2.7 : New Case Detection Rates of Leprosy per 100,000 Population 1989 – 2012

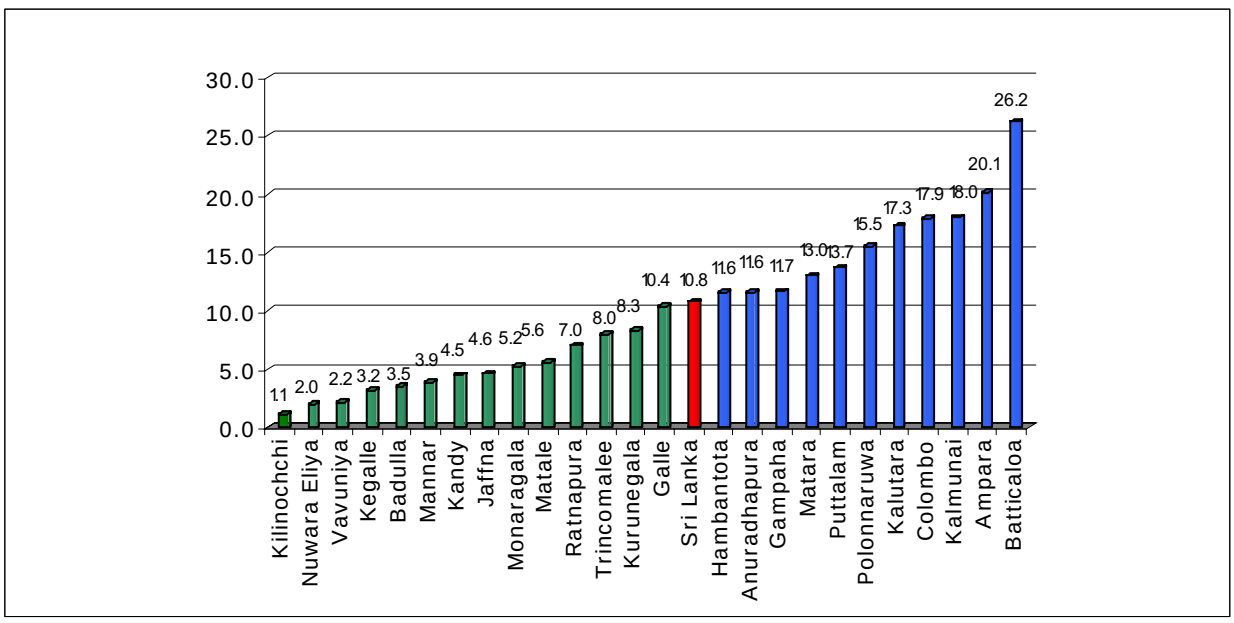


Source: Special Surveys-2012, NIH Project

Highest number of new cases has been reported in Colombo district followed by Gampaha and Kalutara districts. Lowest numbers have been reported from Districts in Northern Province. This trend has prevailed for the last 10 years.

Percentage of patients with Grade 2 deformity has showed a downwards trend from 2001 has increased to 7.37 percent in 2012. Highest rates of grade 2 deformity have been reported from Nuwaraeliya, Kandy and Monaragala districts in 2012.

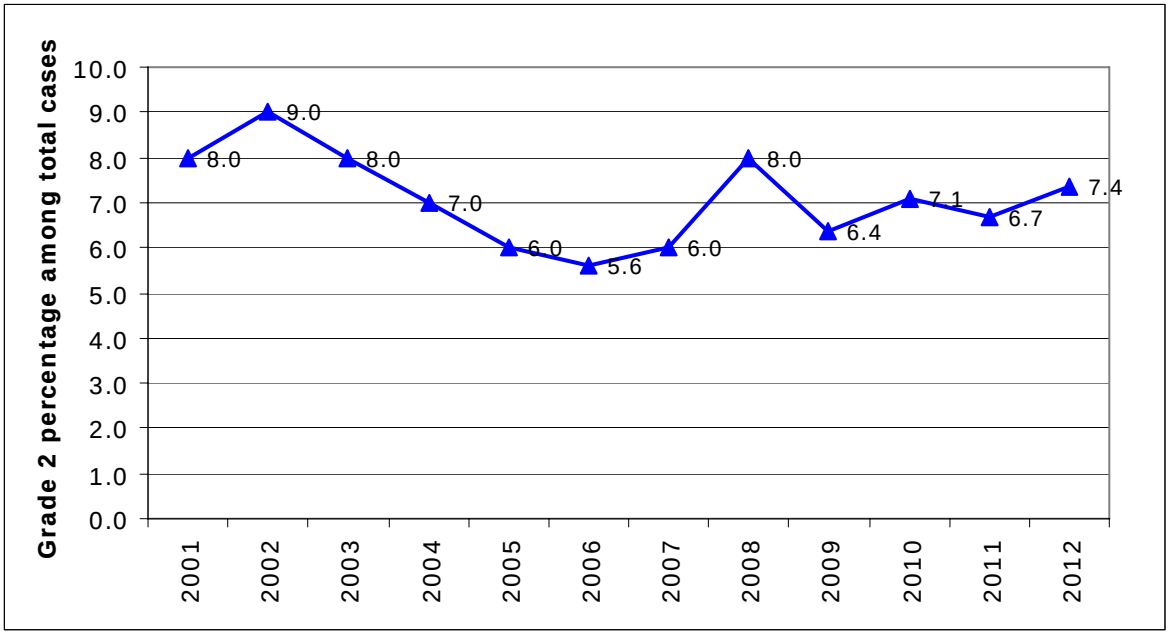
Fig 5.2.8 : New Case Detection Rates District wise in 2012



Source : Special Surveys-2012, NIH Project

Even though large number of patients are reported from Colombo district in 2012, the highest new case detection rate of 26.2 was reported for Batticoloa district and the lowest new case detection of 1.1 was reported from Kilinochchi district.

Fig 5.2.9 : Grade 2 Deformity Rates among Newly Diagnosed Leprosy Patients in Sri Lanka 2001-2012

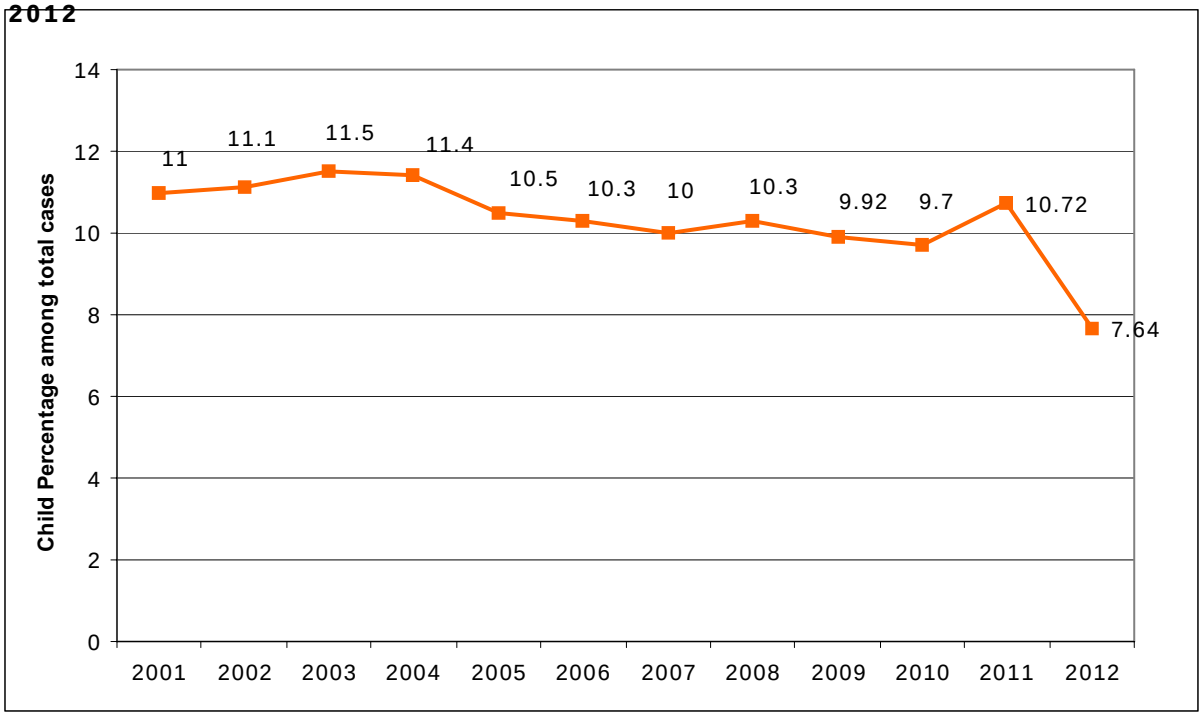


Source: Special Surveys-2012, NIH Project

Child rates among leprosy cases have been fluctuating around 10 percent from 2001 to 2011. However there is a reduction of child rates reported in 2012 to 7.64. Child case rates have remained high indicating active transmission in district such as Puttlam, Batticaloa, Trincomalee, Colombo, Kalutara, Gampaha.

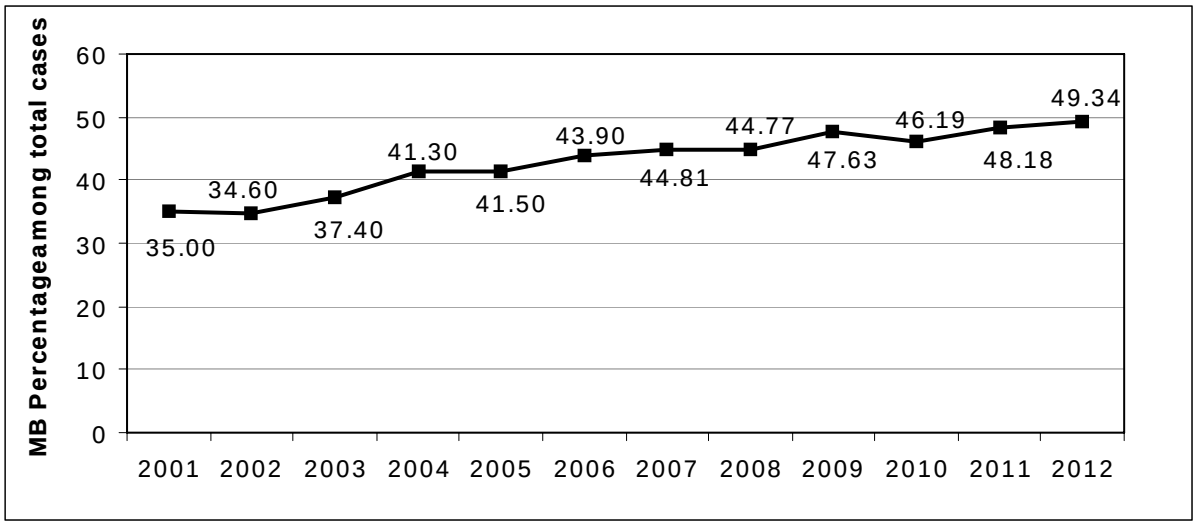
Percentage of MB patients is increasing gradually over the past 10 years and has a rate of in 49.34 percent in 2012. Female rates have remained more or less the same around 40 -45 percent for last 10 years.

Fig 5.2.10 : Child Rates among Newly Diagnosed Leprosy Patients in Sri Lanka 2001-2012



Source: Special Surveys-2012, NIH Project

Fig 5.2.11 : MB Rates among Newly Diagnosed Leprosy Patients in Sri Lanka 2001-2012



Source: Special Surveys-2012, NIH Project

5.2.4.7 Major Achievements in 2012

Strategic plan for Enhanced Strategy for Further Reducing the Disease Burden Due to Leprosy in Sri Lanka 2011 – 2015 was published. Circular No 02-90/2012 for Implementation of the Enhanced Strategy for Further Reducing the Disease Burden Due to Leprosy at in Sri Lanka was issued. Monitoring system was strengthened by introducing Clinic Leprosy Register and District Leprosy Register and conducting PHI training workshop and training leprosy control PHII.

In line with the strategic plan activities for increasing public awareness through mass media were conducted along with World Leprosy Day activities and a Media Seminar.

IEC material to increase public awareness on leprosy printed including patient education leaflets to improve patient compliance and posters to increase public awareness

Disability prevention strengthened by programmes for People Affected with Leprosy and providing splints and ulcer care kits and conducting training workshop for physiotherapists with participation of foreign experts on disabilities associated with leprosy and training physiotherapists. Laboratory facilities improved by conducting training Medical Laboratory Technologists and Public Health Laboratory Technicians on slit skin smear testing and trained.

Table 5.2.12 : Basic Indicators in Leprosy

year	New case detection rate For 100,000 population	Multibacillary rate	Child rate	Deformity rate
1991	17.0	15.0	18.0	6.8
1992	14.0	15.0	16.0	8.8
1993	11.0	16.1	13.5	11.3
1994	12.0	17.1	14.0	8.2
1995	10.0	22.4	11.8	8.3
1996	8.0	21.2	11.9	10.8
1997	8.0	24.0	9.2	9.8
1998	7.0	29.0	11.5	11.3
1999	8.3	35.6	10.9	11.4
2000	8.9	36.5	11.3	9.6
2001	12.1	35.0	11.0	8.0
2002	11.6	34.6	11.1	9.7
2003	10.0	37.4	11.5	8.2
2004	9.9	41.3	11.4	6.7
2005	9.0	41.5	10.5	5.7
2006	9.0	43.9	10.3	5.6
2007	10.0	44.8	10.0	6.0
2008	9.9	44.8	10.3	8.0
2009	9.1	47.6	9.9	6.4
2010	9.5	46.2	9.7	7.1
2011	10.6	48.2	10.7	6.7
2012	10.6	49.3	7.6	7.4

Table 5.2.13 : Epidemiological Profile of Leprosy by Provinces, 2012

Province	Total		MB		Child		Grade 2		Female	
	No	NCDR	No	Rate	No	Rate	No	Rate	No	Rate
Central	104	4.63	53	50.96	11	10.58	14	13.46	40	38.46
East	318	14.23	179	56.29	14	4.4	27	8.49	139	43.71
North	38	2.94	17	44.74	4	10.53	4	10.53	21	55.26
North Central	164	12.7	91	55.49	2	1.22	15	9.15	59	35.98
North Western	253	10.04	112	44.27	20	7.91	23	9.09	102	40.32
Sabaragamuwa	100	5.2	62	62	5	5	7	7	42	42
Southern	283	11.54	163	57.6	22	7.77	21	7.42	110	38.87
Uva	58	4.2	30	51.72	4	6.9	2	3.45	24	41.38
Western	894	17.25	384	42.95	87	9.73	50	5.59	409	45.75
Total	2211	10.6	1091	49.34	169	7.64	163	7.37	946	42.77

Source: Special Surveys-2012, NIH Project

5.2.5 Public Health Veterinary Services (Rabies Control Programme)

Public Health Veterinary Services of Ministry of health has been entrusted with the national responsibilities in preventing the human and animal rabies and controlling other zoonotic diseases in Sri Lanka.

Rabies control programme is the main zoonotic control programme in Sri Lanka and it had been decentralized since 1990. Provincial health services are responsible for implementation of the programme.

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

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

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

5.2.5.1 Vision

Assure maximum protection to public from deadly rabies and other zoonotic diseases causing disability.

5.2.5.2 Mission

Monitor, promote and facilitate implementation of Rabies control strategies stipulated by the Ministry of Health to reach high coverage involving provincial health services whilst ensuring high community effort and promotion of rabies post exposure treatment involving government hospitals, ensuring cost effectiveness

5.2.5.3 Policy Goal

Elimination of Rabies from Sri Lanka by 2020

5.2.5.4 National Program Objectives:

1. To ensure protection for those exposed to suspected rabies infection
2. To ensure protection for those who are at a higher risk of contacting rabies
3. To establish herd immunity in animal reservoirs with special emphasis on dogs
4. To control the population of animal reservoirs with special emphasis on dogs through appropriate methods
5. To remove all rabies suspected dogs humanely

5.2.5.5 Strategies

1. Proper screening of animal bite victims for decision making on post exposure management.
2. Provide appropriate post exposure treatment equitably to the population of Sri Lanka.
3. Encourage pre exposure prophylaxis for those engaged in occupations at higher risk of exposure rabies infections
4. Immunize all dogs (domestic, community and stray) through mass vaccination campaigns to achieve 75% coverage.
5. Encourage the participation of both private and public sector veterinary services in providing vaccinations to dogs.
6. Sterilize dogs through appropriate chemical and surgical methods.
7. Control of environmental conditions in public places conducive to propagation of dogs.
8. Removal of nuisance dogs by proper authorities in a humane manner
9. Develop a mechanism to identify and dispose of all suspected or rabid animals.
10. Strengthen the Rabies surveillance system
11. Enact appropriate legislation to implement the national rabies policy.
12. Strengthen the governance and stewardship for Rabies elimination
13. Control of Japanese Encephalitis among pigs

5.2.5.6 Activities

Activities are implemented by the Line Ministry & Provincial Health Authorities.

Activities pertaining to policy development, strategy development, training (curative and preventive staff), mass awareness campaigns, supply of drugs, vaccines and other major inputs, research and supervision are carried out by the PHVS office of the Ministry of Health.

Provincial Health Services are responsible for implementation of awareness programmes, vaccination (Anti Rabies) of dogs and Animal birth control programmes with regard to rabies elimination. Provision of Post exposure treatment is done by both line ministry and provincial hospitals

5.2.5.7 Surveys on Dog Population Size and Structure

Dog population surveys were conducted in Katana and Seeduwa MOH areas in 2012 and it was revealed ratio of human to total dog population was 8:1.

5.2.5.8 Status of Human Rabies

Rabies control measures launched in Sri Lanka since 1975 have had a tremendous effect on the incidence of human rabies. The number of human rabies deaths declined from 377 in 1973 to 38 rabies deaths in the country in 2012. (Fig 5.2.12)

5.2.5.9 Status of Animal Rabies

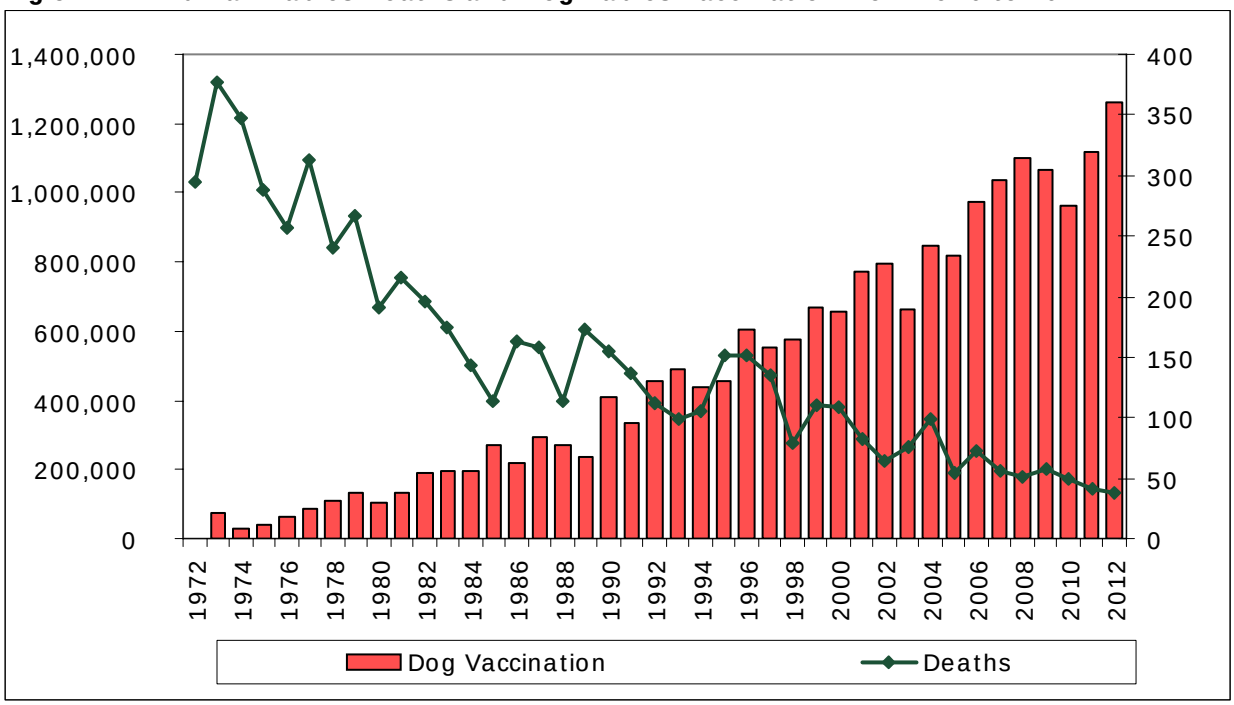
The dog is the main reservoir as well as the transmitter of rabies in Sri Lanka. Total number of animal rabies reported during the year 2012 was 715. Majority 85% (608) of animal rabies was reported among dogs, 10.9%(78) cats , 2.5% (18)cows ,0.2%(2)pigs, 0.2% (2) goats, 0.2% (2) rock squirrels and 0.1% (1) each among mongoose, squirrel, pole cat, monkey and rock mongoose.

Mainly the dogs have transmitted the disease to humans. Dog was responsible for 94 percent of human rabies deaths reported in 2012 while cat was responsible for 5 percent. Only 1 percent of human rabies deaths were due to wild animals.

5.2.5.10 Achievements in 2012

- It was possible to maintain the human rabies free status in Kandy, Kegalle, Galle, Hambanthota, Nuwaraeliya, Mannar, Mulathive and Trincomalee districts in year 2012 (Table 5.2.17)
- Human rabies deaths in 2012 were contained to 38 (41 in 2011).
- In year 2012 it was possible to sterilized 116,154 dogs surgically and 49,989 dogs chemically.
- 1,260,310 stray dogs and domestic dogs Vaccinated in year 2012. (Table 5.2.17)
- Event planning meeting for fifty district level stake holders and media seminar for 150 media personnel was conducted to mark the world rabies day.
- In 2012, 268,527 human rabies vaccines vials were provided for human rabies prevention.
- In year 2012, 103,364 serum vials were provided for human rabies prevention.
- Ten training programmes were conducted for preventive and curative health staff on effective domestic and stray dog vaccination, economical rabies Post exposure treatment and dog population control.310 staff members participated in this event.
- In year 2012, 60,000 pigs were vaccinated against Japanese Encephalitis Infection in high endemic districts.
- Five exhibitions were conducted in 2012 for rabies awareness and 537,500 people were educated through those exhibitions.
- Mass awareness programmes were conducted throughout the country. Posters, banners were distributed and media seminar, exhibition stalls and school awareness programmes were conducted.
- Four quarterly project development meetings were held with district rabies control officers.

Fig 5.2.12 : Human Rabies Deaths and Dog Rabies Vaccination from 1970 to 2012



Source: Special Surveys-2012, NIH Project

Table 5.2.14 : Human Rabies Deaths by Districts

District	2006	2007	2008	2009	2010	2011	2012
Ampara	3	0	0	1	1	0	2
Anuradhapura	4	4	3	6	4	1	2
Badulla	3	0	1	1	0	0	1
Batticaloa	2	6	7	6	5	8	4
Colombo	4	1	0	7	2	2	6
Galle	6	5	5	6	5	4	0
Gampaha	7	8	7	8	6	7	2
Hambantota	1	2	1	0	0	2	0
Jaffna	8	1	0	5	2	1	1
Kalutara	1	5	2	3	3	1	2
Kalmune						1	1
Kandy	1	2	2	1	1	0	0
Kegalle	2	0	1	1	0	0	0
Kilinochchi	3	2	0	0	2	2	1
Kurunegala	4	8	11	4	3	4	4
Matale	1	2	0	1	1	0	2
Matara	6	2	1	1	0	1	4
Mannar	3	1	1	0	1	0	0
Monaragala	0	2	2	2	4	2	2
Mulathiv	2	0	1	0	1	0	0
N'Eliya	1	1	1	0	0	1	0
Polonnaruwa	2	0	0	0	0	0	1
Puttalam	3	0	5	1	1	2	2
Ratnapura	3	3	0	2	3	1	3
Trincomalee	3	1	0	1	2	1	0
Vavuniya	0	0	0	0	2	0	1
Grand Total	73	56	51	58	49	41	38

Source: Special Surveys-2012, NIH Project

Table 5.2.15 : Trends in Rabies Control Activities and Human Deaths from Rabies 1975-2012.

Year	Dog Vaccination	Elimination of Dogs	Dog Heads Examined at MRI Number	Positive % (Out of the total Dog heads Examined)	Human Rabies Deaths Number Rate Per 100,000	
					No.	Rate
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	0.6
1999	667,270	106,699	672	70.3	110	0.6
2000	657,597	117,790	559	88.5	109	0.6
2001	770,375	119,761	737	69	83	0.4
2002	797,565	117,790	670	71	64	0.3
2003	664,493	83,350	897	60	76	0.4
2004	843,906	89,530	1105*	58	98	0.5
2005	818,162	62,675	472 **	42.6	55	0.3
2006	971,442	12,791	788 ***	55.3	73	0.4
2007	1,037,617	0	659	63	56	0.3
2008	1,103,258	0	681	61.9	51	0.25
2009	1,068,036	0	709	65.8	58	0.29
2010	961,626	0	658	46.4	49	0.24
2011	1,115,399	0	922	59.4	41	0.2
2012	1,260,310	0	909	66.9	38	0.19

* The new Laboratory at Galle started functioning.
** Galle laboratory was washed away by the tsunami.
*** Re commence of Galle laboratory

Source: Special Surveys-2012, NIH Project

5.2.5.11 Control of Japanese Encephalitis (JE)

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 2012, 60000 pigs were vaccinated against JE. Funds were provided by Provincial Health Services while Department of Animal Production and Health provided the human resources.

Table 5.2.16 : History of Human Rabies and Control Activities, 1972 -2012

Year	Deaths	Dog Vaccination	Dog Elimination	Chemical sterilization	Surgical sterilization
1972	295	0	0	0	0
1973	377	75,386	3,128	0	0
1974	347	31,617	312	0	0
1975	288	42,252	1,608	0	0
1976	257	60,932	2,223	0	0
1977	312	85,798	278	0	0
1978	241	111,289	7,986	0	0
1979	266	130,070	22,431	0	0
1980	191	105,287	35,156	0	0
1981	216	135,266	37,633	0	0
1982	196	189,600	48,353	0	0
1983	174	194,146	42,237	0	0
1984	143	195,696	62,962	0	0
1985	113	268,561	58,238	0	0
1986	163	216,243	73,750	0	0
1987	158	293,603	88,919	0	0
1988	113	268,717	55,803	0	0
1989	173	236,728	47,175	0	0
1990	154	408,086	63,233	0	0
1991	136	336,052	100,340	0	0
1992	112	453,891	96,861	0	0
1993	98	491,871	112,098	0	0
1994	105	435,204	105,133	0	0
1995	151	452,828	106,862	0	0
1996	152	603,108	114,337	0	0
1997	135	553,468	91,215	0	0
1998	79	578,825	129,773	0	0
1999	110	667,270	106,699	0	0
2000	109	657,597	117,790	0	0
2001	83	770,375	119,761	0	0
2002	64	797,565	96,202	0	0
2003	76	664,993	84,350	0	0
2004	98	844,123	89,530	0	0
2005	55	818,162	62,675	5,651	244
2006	73	971,442	12,791	46,968	1,419
2007	56	1,037,617	0	102,031	4,088
2008	51	1,103,258	0	85,339	119,816
2009	58	1,068,036	0	53,931	220,280
2010	49	961,626	0	39,999	93,656
2011	41	1,115,399	0	54,345	106,002
2012	38	1,260,310	0	49,989	116,154

Source: Special Surveys-2012, NIH Project

5.2.6 Directorate of Youth,Elderly, Disabled and Displaced persons

To improve quality of Youth, Elderly and Disabled persons through improvement of health facilities, disease prevention and health promotion according to the Health Master Plan and of Mahinda Chinthana Sri Lanka.

5.2.6.1 Youth

5.2.6.1.1 Vision:

Healthy & Productive adolescent and Youth population

5.2.6.1.2 General Objectives

- To improve knowledge attitude and life skills among youth to reduce youth problems & improve their well being.

5.2.6.1.3 Specific Objective

- To improve the capacity of the health staff on youth friendliness, promoting life skills among school and out of school adolescent and Youth.
- To implement programme on adolescent health and life skills education through school curriculum, teacher training and through advocacy awareness programme for young people, parents and community leaders through the provincial health authorities and the heads of the health institutions
- To strengthen the youth friendly health services in the country with the support of the central and provincial health authorities.
- Monitoring and evaluation of youth friendly health services in the country

5.2.6.1.4 Activities in 2012

- Conducted community research on sexual reproductive health among youth.
- Conducted regional training of trainers (in different sectors) for youth friendly health services on sexual reproductive health among youth to design, implement and monitor programmes based on research findings.
- Training peer communicators on RH and LS

5.2.6.2 Elderly

5.2.6.2.1 Vision

Healthy, active & productive elderly population

5.2.6.2.2 General Objectives

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

5.2.6.2.3 Specific Objective

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

5.2.6.2.4 Activities

1. Conducting programmes with the Ministry of Social Services, for training carers for elders.
2. Conduct training of Trainers (ToT) programme for carers for Elders.
3. Conducting programmes with the Ministry of Social Services, for training carers for the elders. Strengthening partnerships with other stakeholders.
4. Promote awareness on ‘Active Aging ‘for different target groups.
5. Promoting the physical, mental and social well being of the elderly by establishment of day centers.
6. Opening elderly counters.
7. Under the vision 2020 programme,free distribution of spectacles and facilities to have free cataract surgeries and lenses

8. Inspection of elderly home activities including PHI manual. Developed format for inspection of elder's homes. Pilot test in Kaluthara.
9. Developing Elderly friendly Units in 11 identified hospitals in Sri Lanka.

5.2.6.3 Disabled

5.2.6.3.1 Vision:

Improve the quality of life of disabled persons

5.2.6.3.2 General Objectives

- To improve the health services for disabled persons.

5.2.6.3.3 Specific Objective

- To improve quality health care on disability and rehabilitation.
- To improve among all age groups regarding "Active Ageing" and prevention of disability through promotion of healthy life style.
- To improve awareness among members of community regarding elders and their family members on disability health problems.
- To improve early detection of common health problems of disability and referral for treatment and through timely management of common impairment to minimize & postpone disability.
- To promote the physical, mental & social well being of elderly with disability by establishment of day centers.

5.2.6.3.4 Activities

1. Development & printing of materials and guidelines.
2. Conducting training for Occupational Therapist (OTs) on Community Based Rehabilitation (CBR).
3. Training relevant nursing officers to improve their skills for services provision on spinal cord injury management in collaboration with the Orthopedic surgeons, Neurosurgeons and Neurologists (Western Province).
4. Implementing a project for Children with special needs in collaboration with FHB.
5. Initiated establishment of prosthetics & Orthotics workshops at District General Hospitals Vavuniya and Trincomalee.
6. Initiated work to establishment of Rehabilitation units in Regional hospital
7. Supported to establish stroke units in Teaching Hospitals and General hospitals.
8. Partnership with Sri Lanka Institute of Architectures to improve awareness on accessibility to built environment among professional in that field.
9. Conducted periodical review meetings with NGOs who provide Rehabilitation care services in Sri Lanka.
10. Designing and printing of accessibility guideline booklets
11. Purchasing of logistics & materials for prosthetics & orthotics workshops

5.2.7 National STD/AIDS Control Programme - 2012.

The National STD/AIDS Control Programme (NSACP) is responsible for the implementation and co-ordination of activities at the national and district level related to Sexually Transmitted Diseases (STD) including Human Immunodeficiency Virus (HIV).

The overall goal of the NSACP is to reduce the impact of STIs including HIV/AIDS on the society and development of the country.

The main objectives are

- To maintain the low HIV prevalence among most-at-risk groups and the general population
- To increase the quality of life of those already infected.

These objectives are achieved through 2 core strategies.

- Increased coverage and quality of prevention interventions
- Increased coverage and quality of care, support and treatment interventions

To support the above, four additional strategies are identified :

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

Implementation of the above strategies depends on the efforts of many government departments, non-government organizations, people living with HIV, the private sector and development partners.

The NSACP provides both preventive and curative services with a network of 29 full time STD clinics and 23 branch clinics scattered across the country. The following programme areas were continued to function in 2012.

- Prevention, control and provision of care STI,
- HIV care, support, and treatment,
- Counseling services,
- IEC activities targeting the general population and risk groups,
- STD/HIV surveillance system,
- Condom promotion in prevention of transmission of STD/HIV infections,
- Laboratory facilities,
- Screening blood and blood products,
- Instituting infection control and providing post exposure prophylaxis for occupational exposures for health care workers in medical institutions.

5.2.7.1 Sexually Transmitted Infections (STI) in Sri Lanka – 2012.

There were 17642 new persons registered in the government STD clinics in 2012 and of them 53 percent of clinic attendees were diagnosed having at least one STI.

Genital herpes (2,689 cases) was the commonest STI and Candidiasis (2,286 cases) was the commonest reproductive tract infection diagnosed in 2012.

Table 5.2.21 shows the trends of some of the bacterial STI and the viral STI.

All new female STD clinic attendees at the central STD clinic, Colombo underwent cervical cytology screening (Pap smear screening). Table 5.2.20 depicts the results of Pap smears taken in year 2012.

Table 5.2.17 : Result of Abnormal Pap Smears in 2010 - 2012.

Year	Total Pap smears	NSI/SI*	LSIL#	HSIL##	Carcinoma	HPV** effect
2010	1204	178	30	9	1	9
2011	1381	323	22	3	4	9
2012	1299	162	23	5	0	6

*NSI /SI – Non Specific Infection/ Specific Infection
#LSIL – Low grade squamous intraepitheliallesion,
#HSIL- High grade squamous intraepitheliallesion,
**HPV- Human papilloma virus

Table 5.2.18 : Rates of Selected Sexually Transmitted Infections per 100,000 Populations 2000-2012.

STI	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Infectious Syphilis	1.43	0.98	1.09	0.72	0.7	0.8	0.91	0.62	0.63	1.03	1	1.2	1.5
Gonorrhoea	3.49	2.8	3.95	6.3	8.7	6.6	5.77	3.07	2.58	2.4	1.8	1.3	2
Non Gonococcal Infections	4.88	6.13	7.3	6.8	8.28	8.77	7.14	7.16	7.73	8.79	8.39	8.6	9.4
Genital Herpes	6.92	7.3	7.6	7.39	7.6	7.8	9.33	9.25	9.37	10.6	12.2	13.1	13.3
Genital Warts	2.61	3.17	3.2	3.28	4	4.8	4.86	5.47	5.61	5.9	7.5	7.7	8.8
Trichomoniasis	1.04	1.01	1.01	0.63	0.8	0.8	0.75	0.82	0.68	0.7	0.5	0.5	0.4

5.2.7.2 Antibiotic Sensitivity Monitoring of Neisseria Gonorrhoeae

Antibiotic sensitivity monitoring of *Neisseria gonorrhoeae* is routinely carried out by the National reference laboratory of the NSACP. This information is useful for all clinicians treating patients with gonococcal infections. The antibiotic sensitivity pattern for the period of year 2000 to 2012 is given in Table 5.2.22.

Table 5.2.19 : Percentage of Gonorrhoea Strains Resistant to Antibiotics 2001 - 2012.

Year	Penicillin	Tetracycline	Ciprofloxacin	Cefuroxime	Ceftraxone	Spectimomycin	Percentage of PPNG*
2001	79.2	1.7	6.1	0	0	0	9
2002	86.3	35.8	38.9	0	0	0	38
2003	94.2	56.3	82.1	0	0	0	62
2004	95.1	59.6	92.7	0	0	0	93.4
2005	89.2	43.6	88.7	0	0	0	85
2006	89.2	22.7	83	0	0	0	88
2007	69.3	24.2	81.9	0	0	0	61
2008	57.7	11.6	82.7	0	0	0	64.5
2009	80	8	92	1.3	0	0	62.7
2010	74.8	9.72	90.2	0	0	0	70.3
2011	78.1	50	84.2	0	0	0	65.7
2012	81.3	12.5	95.8	12.5	0	0	50

* Penicillinase producing Nisseria gonorrhoea

5.2.7.3 : Overview of HIV/AIDS Situation in Sri Lanka as at end 2012.

Sri Lanka is classified as a country with low level epidemic of HIV in the South- East Asia region. The estimated HIV prevalence among adults (15-49 years) is less than 0.1 percent. The HIV prevalence among individuals considered at higher risk of infection on the basis of occupation, behaviors, and practices is below 1 percent.

Since the detection of first HIV infection in 1987, a cumulative total of 1649 HIV infections were reported as at end 2012. Four hundred and thirty two (432) have been reported as AIDS. Heterosexual transmission was the commonest way of acquisition of HIV in Sri Lanka. Cumulative HIV Cases by Age and Sex as of end 2012 is shown in the Table 5.2.23.

Table 5.2.20 : Cumulative HIV Cases by Age and Sex as of end December2012.

Age	Male	Female	Total
0 - 9	32	20	52
10 - 14	5	2	7
15 - 19	2	3	5
20 - 24	62	44	106
25 - 29	138	87	225
30 - 34	171	128	299
35 - 39	177	138	315
40 - 44	166	93	259
45 - 49	96	72	168
50+	103	55	158
Unknown	29	26	55
Total	981	668	1,649

First line and second line regimens of Highly Active Anti Retro Viral Treatment (HAART) is available in five centers and a total of 387 HIV positive people were on HAART as of end 2012.

5.2.7.4 HIV Estimates and Projections for 2012.

Once every 2 years the NSACP in conjunction with national and international stakeholders undertakes an exercise to update HIV estimations and projections using the recent data and modeling software. According to these estimations, in 2012, approximately 4,100 adult (>15 years) and 100 children (<15 years) are living with HIV. The adult (>15 years) HIV prevalence is estimated to be <0.1 percent.

5.2.8 National Cancer Control Programme (NCCP) 2012

National Cancer Control Programme (NCCP) was established in 1980 on the recommendations made by a WHO team to the Ministry of Health after a detailed study on mortality and morbidity of cancers in Sri Lanka.

NCCP is the national focal point for prevention and control of cancers in the country. It is also responsible for policy, advocacy, monitoring and evaluation of prevention and control of cancers and conducting surveillance of cancers and facilitating research related to cancer.

NCCP coordinates with all cancer treatment centres, national level institutes (Eg. Family Health Bureau) and provincial health ministries to implement cancer control activities in Sri Lanka.

Currently NCCP is situated at two locations at Narahenpita, Colombo 5. Administrative units, technical units and IT unit are located at the ground floor of the Public Health Complex. A Central cancer screening clinic is located at a separate private building, which is rented by the Rotary Club of Colombo at Narahenpita.

NCCP activities are supported by the World Health Organization (WHO) Country Office Biennium. The NCCP is further supported by the joint programme of WHO, International Atomic Energy Authority (IAEA) and Programme of Action for Cancer Therapy (PACT) for improving facilities for cancer care and capacity building.

5.2.8.1 Vision

'A country with a low incidence of preventable cancers and high survival rates with good quality of life and minimal disabilities & suffering from effects of cancers'

5.2.8.2 Mission

'To reduce the incidence of cancers by controlling and combating determinants of cancers, ensuring early detection and providing a holistic and accessible continuum of cancer care which address curative treatment options to end of life care through an evidence-based approach'

5.2.8.3 Objectives

1. Ensure primary prevention of cancers by addressing risk factors and determinants by improved public awareness and empowerment

2. Advocate for early detection of cancers by improved public awareness and relevant service providers, particularly primary care providers, through opportunistic screening of asymptomatic populations and, if clinically suspicious, ensure prompt referral of individuals with symptoms and signs suggestive of cancer in symptomatic populations leading to early clinical diagnosis.

3. Ensure sustained and equitable access to diagnosis and treatment facilities for cancers.

4. Ensure rehabilitation, survivorship and palliative care facilities for cancer patients and support to their care givers at all levels.

5. Strengthen cancer information systems and surveillance to monitor the progress and to evaluate the outcomes of cancer control actions.

6. Promote professional education of doctors, nurses, technicians and health workers to augment trained human resources.

7. Promote research and utilization of its findings for prevention and control of cancers.

5.2.8.4 National Policy & Strategic Framework on Prevention & Control Cancers Sri Lanka

Draft policy on Prevention & Control of Cancers was prepared through the process of multi stakeholder consultatation. The draft policy is available for public comments. The draft policy is the main guiding document in further strengthening prevention & control of cancers in Sri Lanka.

5.2.8.5 National Advisory Committee on Prevention & Control of Cancers

National Advisory Committee on Prevention & Control of Cancers chaired by the Secretary of Health, accountable to the Minister of Health will function as the main statutory body on implementation of the National Policy on Prevention and Control of Cancers in Sri Lanka. National Cancer Control Programme acts as the secretariat for this advisory committee.

5.2.8.6 Cancer Prevention & Control Activities at Provincial Level

The provincial ministries of health will function as the provincial focal point to implement cancer control activities in each province.

In each district, with the leadership of RDHS, district cancer control committees are being established in parallel with the participation of MO/NCD, MO/MCH, RE, RDS, MOOH, Consultants in curative & preventive sector. District level cancer control activities will be planned, implemented and evaluated by this committee.

5.2.8.7 Major Achievements for year 2012:

Main activities of National Cancer Control Programme

5.2.8.7.1 Primary Prevention

- Public awareness activities related to prevention & control of cancers.
- Thirteen mobile exhibitions on cancer prevention & health education programmes
- A social marketing campaign to promote healthy life styles in the prevention of oral cancer
- Printing & distribution of health education materials on prevention & control of cancers
- Printing & distribution of 500 000 leaflets on cancer prevention, early detection, breast cancer early detection, oral cancer prevention and early detection and cervical cancer prevention and early detection.
- Printing & distribution of 10 000 hand books on breast cancer early detection for primary health care worker in Sinhala and Tamil
- Printing and distribution of 75 000 booklets on breast cancer early detection for primary health care physicians in English
- Printed and distributed 100,000 leaflets, 50,000 stickers and 20,000 posters for primary prevention and early detection of oral cancer in both Sinhala and Tamil languages.
- Two radio spots and two TV spots were developed for social marketing campaign on oral cancer prevention and early detection
- Two radio spots and TV spots were broadcasted and telecasted for two months

5.2.8.7.2 Strengthening Early Detection of Cancers

- Conducted 327 cancer screening clinics with an attendance of 1983 at the National Cancer Early Detection Centre, Narahenpita, (with mammography screening)
- Screened 5390 apparently healthy people for cancer at mobile screening clinics conducted by cancer control programme
- A coloposcopic centre at cancer early detection centre was commenced
- A colposcopic centre at the Teaching Hospital Jaffna was also commenced
- Participation of Dr. Sankarananayakara , from International Agency for Research on cancer for commencing colposcopic clinics at Cancer early detection centre and Teaching Hospital Jaffna
- Commemoration of the 'World Breast Cancer Awareness Month' through advocacy meetings, health care worker training and community activities were done.
- A social marketing campaign was conducted to promote early detection of oral cancer.
- 15 TOT were conducted for strengthening capacity of early detection of common cancers in district level.

5.2.8.7.3 Diagnosis & Treatment of Cancers

- Coloposcopy clinics were commenced at Cancer Early Detection Centre, Narahenpita & Teaching Hospital Jaffna with the guidance & support of International Agency for Research on Cancer (IARC).

- Consultant Oncologists & Consultant Oncosurgeons were actively involved in conducting district level training of trainer programmes which were conducted nationally & regionally.

5.2.8.7.4 Rehabilitation, Survivorship & Palliative Care

- Conducted an advocacy programme to commemorate the 'International Palliative Care Day' on 12th of October 2012 in collaboration with Sri Lanka Medical Association.
- Pilot projects were initiated in 'Community Based Palliative Care' in Gampaha, Vavuniya, Rathnapura & Anuradhapura districts.
- The palliative care programme in Sri Lanka was evaluated by Dr.Suresh Kumar, Director, WHO Collaboration Centre for Community Participation in Palliative Care & Long term Care, India

5.2.8.7.5 Cancer Surveillance

- Cancer incidence data of year 2006 was published and data collection of cancer incidence data up to 2009 were completed in all cancer treatment centres

- Cancer Treatment Centres were provided a desk top computer to strengthen and expedite cancer surveillance activities at institutional level.

5.2.8.7.6 Cancer Research

Study on socio -economic impact on cancer patients was completed.Research priorities in cancer were identified.

Table 5.2.21 : Incidence of Cancers in Sri Lanka

Year	No. of cases	Crude incidence rate per 100,000 population
1985	5,012	31.6
1990	6,063	35.7
1995	7,325	40.4
2000	10,925	56.4
2005	13,372	67.9
2006	14,080	70.9
2007	13,635	68.0

Table 5.2.22 : No. of Newly Registered Patients at Government Cancer Units

Cancer Treatment Centre	2008	2009	2010	2011	2012
NCI, Maharagama	11,163	11,756	11,513	12,403	12,550
TH, Kandy	3,648	3,634	4,046	5,042	3,717
TH, Karapitiya	1,764	1,866	1,793	2,193	2,158
TH, Jaffna	412	479	659	1,055	1,048
TH, Anuradhapura	712	551	641	698	803
PGH, Badulla	753	794	858	1,430	2,152
TH, Baticaloa		169	565	727	1,094
TH, Kurunegala	538	804	806	1,174	1,973
PGH, Ratnapura	319	485	636	735	808
Total*	19,309	20,538	21,517	25,457	26,303

* May include duplicate entries in the same year or previous years

Table 5.2.23 : Leading Cancer Sites, Males

Site	Year					
	2005		2006		2007	
	No.	(ASR)	No.	(ASR)	No.	(ASR)
Lip, oral cavity and pharynx	1,240	(14.1)	1,427	(16.0)	1,415	(15.7)
Trachea, bronchus and lungs	666	(7.7)	691	(7.9)	723	(8.3)
Oesophagus	498	(5.8)	486	(5.7)	530	(5.9)
Colon and rectum	388	(4.4)	371	(4.2)	409	(4.5)
Lymphoma	360	(3.9)	369	(3.9)	363	(3.8)
Larynx	324	(3.7)	341	(3.9)	343	(3.9)
Leukaemia	313	(3.3)	329	(3.8)	332	(3.6)
Prostate gland	303	(3.5)	321	(3.8)	305	(3.6)
Unknown primary site	257	(2.9)	303	(3.3)	326	(3.8)
Brain	171	(1.8)	196	(2.3)		
Hematopoietic and reticulo-endothelial system other than leukaemia						
Stomach					224	(2.5)

Table 5.2.24 : Leading Cancer Sites, Females

Site	Year					
	2005		2006		2007	
	No.	(ASR)	No.	(ASR)	No.	(ASR)
Breast	1,859	(18.3)	2,102	(20.6)	1,914	(18.8)
Cervix	881	(8.9)	934	(9.6)	732	(7.4)
Thyroid	592	(5.6)	683	(6.4)	656	(6.1)
Ovary	596	(5.9)	672	(6.7)	529	(5.3)
Oesophagus	524	(5.5)	610	(6.4)	534	(5.6)
Lip, oral cavity and pharynx	377	(3.8)	390	(4.0)	398	(4.0)
Colon and rectum	353	(3.6)	372	(3.8)	405	(4.1)
Uterus	237	(2.4)	268	(2.8)	263	(2.7)
Leukaemia	257	(2.8)	257	(2.8)	275	(2.9)
Lymphoma	243	(2.5)	251	(2.5)	257	(2.6)

5.2.9 National Non Communicable Disease (NCD) Prevention and Control Programme

NCD prevention and control activities in Sri Lanka are implemented through the NCD Unit which is the focal point for NCD Prevention and Control in the Ministry of Health headed by Director (NCD).The programme functions under the DDG (MSI). The Unit coordinates and implements its activities through the Provincial and Regional health authorities. The programme is evaluated and assisted by the National NCD Steering Committee and the National Advisory Body for Non Communicable Diseases.

The NCD prevention and control activities in the country are delivered through the district level Medical Officers NCD (MOO/NCD) under the administrative purview of Regional Directors of Health Services in par with the National Policy for NCD prevention and control. There are 26 MOO (NCD) in the country and in some curative care institutions a Medical officeris designated as Medical officer NCD, to carry out NCD prevention and control activities in the relevant institution. The programme is funded mainly by government of Sri Lanka for implementation of control strategies. In 2012, 45 million LKR was allocated for the National Non Communicable Disease (NCD) Prevention and Control Programme.

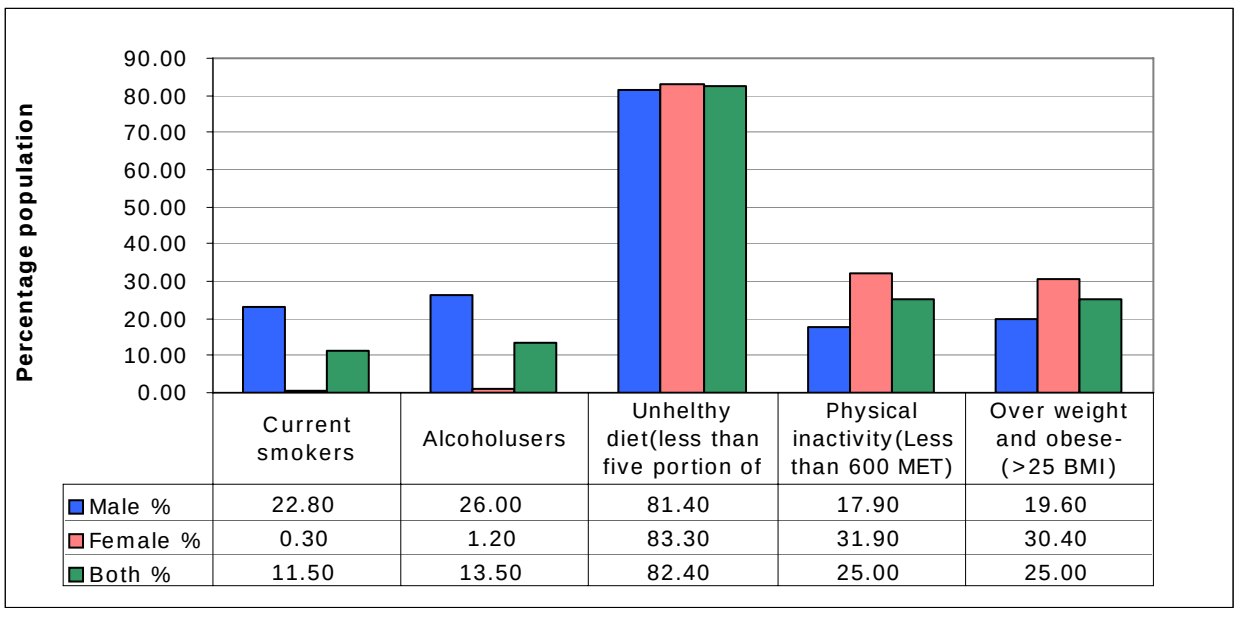
In addition, the Primary Health Care development fund was utilized for NCD screening by establishment of Healthy Lifestyle Centres (HLCs) and development of emergency facilities in hospitals around the Southern Expressway. Japan International Corporation Agency (JICA) and World Health Organization (WHO) provided support for NCD control programme in the country by conducting pilot projects in Polonnaruwa, Kurunagale districts and the Uva province respectively.

5.2.9.1 Burden of Non Communicable Diseases

Non-Communicable Diseases (NCDs) have been on the rise in the past two decades in Sri Lanka and at present the leading cause of mortality, morbidity, and disability. Government hospital statistics indicates that 71 percent of all annual deaths in Sri Lanka are due to chronic NCDs.

Cardiovascular Diseases, Diabetes, Cancers and Chronic Respiratory Diseases are now the major NCDs accounting for 29.6, 9.4, 3.9 and 8.5 percent respectively.The prevalence of common shared risk factors for these diseases, smoking, use of alcohol, unhealthy diet and lack of physical activity is shown in Fig 5.2.13.

Fig 5.2.13 : Percentage Distribution of the Prevalence of Risk Factors for Chronic NCDs



	Current smokers	Alcoholusers	Unhelthy diet(less than five portion of	Physical inactivity(Less than 600 MET)	Over weight and obese-(>25 BMI)
Male %	22.80	26.00	81.40	17.90	19.60
Female %	0.30	1.20	83.30	31.90	30.40
Both %	11.50	13.50	82.40	25.00	25.00

Source: Risk factor surveillance –Ministry of Health.2007

The five major categories of un intentional injuries: Falls, Road Traffic Injuries, Burns, Poisoning, and Drowning are Acute NCDs, addressed in par with primary, secondary and tertiary injury prevention strategies in liaison with the National Poison and Drug Information Centre and the Trauma Secretariat.

The policy and strategic framework for prevention and control of chronic Non–Communicable Diseases published by Ministry of Health in 2010.

5.2.9.2 Vision

Country which is not burdened with chronic NCDs, deaths and disabilities.

5.2.9.3 Goal

The overall goal is to reduce the burden due to Chronic NCDs by promoting healthy lifestyles, reducing the prevalence of common risk factors, and providing integrated evidence-based treatment options for diagnosed NCD patients.

5.2.9.4 Objective

To reduce premature mortality (less than 65 years) due to chronic NCDs by 2 percent annually over the next 10 years through expansion of evidence-based curative services, and individual and community-wide health promotion measures for reduction of risk factors.

5.2.9.5 Strategic Objectives

- Support prevention of chronic NCDs by strengthening policy, regulatory and service delivery measures for reducing level of risk factors of NCDs in the population
- Implement a cost-effective NCD screening program at community level with special emphasis on cardiovascular diseases
- Facilitate provision of optimal NCD care by strengthening the health system to provide integrated and appropriate curative, preventive, rehabilitative and palliative services at each service level
- Empower the community for promotion of healthy lifestyle for NCD prevention and control
- Enhance human resource development to facilitate NCD prevention and care
- Strengthen national health information system including disease and risk factor surveillance
- Promote research and utilization of its findings for prevention and control of NCDs
- Ensure sustainable financing mechanisms that support cost-effective health interventions at both preventive and curative sectors
- Raise priority and integrate prevention and control of NCDs into policies across all government ministries, and private sector organizations

5.2.9.6 Landmark Events of NCD Prevention and Control Programme

- Sri Lanka is the fifth country in the region to sign the Framework Convention for Tobacco Control (FCTC) in September 2003 and first country in the region to ratify in November 2003. The parliament of Sri Lanka certified the National Authority on Tobacco and Alcohol Act (NATA) No. 27 in 2006.

- A multi-stake holder meeting was held in June 2012 at Sri Lanka Foundation and identified roles and responsibilities of different sectors and development of plans in order to address NCDs before the World Health Assembly (WHA) high level meeting in New York for NCD prevention.

- Development of NCD Management Protocol according to WHO/ISH risk prediction chart in collaboration with Ceylon College of Physicians.

- Establishment of HLCs in Primary Health Care Institutions in 2011 for screening people between 40-65 years for prevention of premature cardio vascular mortality and NCDs.

- Ministry of Health and Ministry of Youth Affairs and skills development and National Youth Council signed a Memorandum of Understanding (MOU) for mobilizing youth for NCD prevention in February 2012.

- The NCD unit in collaboration with Japan International Corporation Agency NCD Prevention Project (JICA-NPP)installed digital blood pressure apparatus in five selected places in Colombo and 20 selected places in Polonnaruwa and Kurunegala districts.

- Three vehicles were donated by JICA to the NCD unit to facilitate the activities of the National NCD programme: one vehicle for the directorate and two to the NPP pilot project areas Polonnaruwa and Kurunegala.

- Three quarterly reviews for the year 2012 and the annual review for 2102 were conducted.

5.2.9.7 National NCD Screening Programme

NCD Unit, MOH arrived at a consensus with all the stakeholders (JICA, WHO, and NIROGI Lanka – SLMA) to establish Healthy Lifestyle Centres (HLCs) in Primary Health Care Institutions(PHCs) August 2011 for screening people between 40-65 years for NCD risk factors (Hypertension, hyperglycaemia, risk behaviours and hypercholesterolemia if facilities available) and providing health guidance.

Guideline was issued from the Ministry of Health on recruitment, screening, follow up and information management considering the consensus of all stakeholders. Cardiovascular risk is being assessed according to multiple risk factor approach using WHO/ISH risk prediction chart and managed according to NCD management protocol at HLCs.

Clients are provided with a Personal Medical Record (PMR) developed by MOH for follow up and future references. A circular was issued by MOH to ensure the availability of 16 essential drugs identified by relevant experts for management of NCD.

5.2.9.7.1 Monitoring of Screening Programme

Management Information System consisting of records, registers and returns was developed to monitor the performance of screening programme monthly and quarterly.

- Participant register-H1236
- Follow up register-H1237
- Monthly return-H1239
- Monthly consolidated return-H1240
- Quarterly consolidated return-H1241
- Personal Medical Record

5.2.9.7.2 Indicators for NCD Screening Programme

The need to implement a cost effective strategy for prevention and control of NCD through, National NCD screening program at community level and to empower the communities for adoption of healthy lifestyle is indicated in the NCD policy.Indicators identified for evaluation of screening programme are shown in Table 5.2.25.

Table 5.2.25 Indicators for NCD Screening Programme

No.	Indicator	Baseline	Cumulative target values (%)				
		2012/2013	2013	2014	2015	2016	2017
1	Percentage of persons 40 -65 years age group screened for selected non-communicable diseases in Healthy Lifestyle Centers	3	4	6	8	10	12
2	Percentage of the Medical Officer of Health areas conduct at least two Healthy Lifestyle Centers	10	10	25	50	70	90

Two hundred and ninety seven (297) and 581 Healthy Lifestyle Centres (HLCs) established in 2011 and 2012 respectively. In 2011, 117,768 and in 2012, 195,487 people were screened in the districts.

Distribution of HLCs in the districts is shown in Fig. 5.2.14. Risk factor distribution among screened people in the districts is shown in Table 5.2.26.

Fig 5.2.14 : Healthy Lifestyle Centres in the Districts 2011- 2012

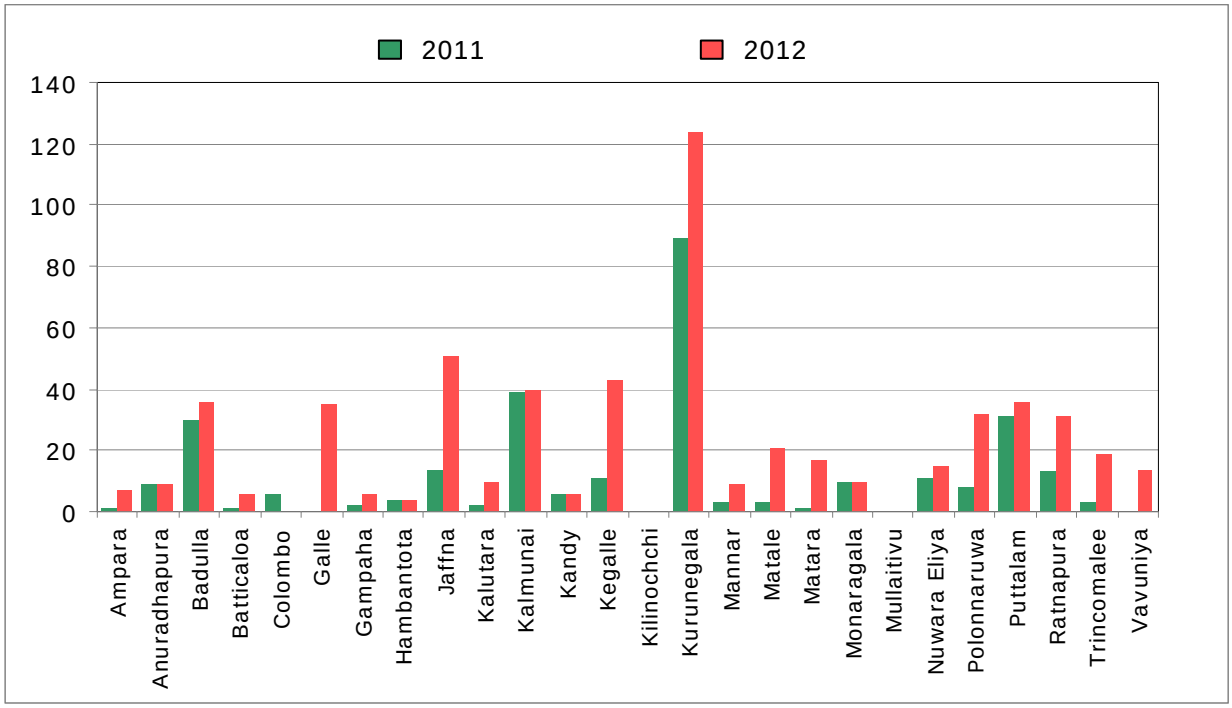


Table 5.2.26 : Distribution of Risk Factors among Screened Population 2012 (n=195,487)

RDHS Area	Total Screened	No.of Smokers Detected	No. of Tobacco Chewers Deteced	No.of Alcoholics	No.of BMI 25 - 29.9	No.of BMI > 30	No.of BP > 140/90 mm Hg	No.of FBS > 126mg/dl
Anuradhapura	1,638	64	109	63	570	141	423	188
Badulla	17,859	1,071	2,256	920	3,261	683	2,642	1,607
Batticaloa	2,927	351	556	351	1,112	527	820	498
Galle	10,113	404	1,256	526	2,933	1,012	1,921	2,326
Gampaha	3,291	67	250	42	1,100	362	891	443
Hambantota	4,201	18	12		100	3	55	99
Jaffna	10,057	604	912	471	1,826	294	967	778
Kalutara	3,793	105	181	101	822	196	470	367
Kalmunai	16,424	1,051	2,536	855	6,249	2,287	2,854	5,672
Kandy	13,333	1,199	1,265	507	3,500	567	1,493	933
Kegalle	7,920	280	837	297	2,023	485	1,347	987
Kilinochchi	307	2	8	28	35	7	9	12
Kurunegala	30,997	818	2,021	816	15,841	1,793	3,200	2,302
Mannar	1,390	149	100	209	332	51	284	303
Matale	4,047	177	325	11	695	227	217	444
Matara	11,351	120	551	351	1,696	12	610	686
Moneragala	2,788	93	477	89	1,633	305	340	424
NuwaraEliya	16,984	1,078	2,086	2,912	886	37	2,409	3,990
Polonnaruwa	5,270	228	414	490	2,348	1,268	131	130
Puttalam	10,141	772	1,130	976	3,002	1,297	1,914	1,377
Rathnapura	12,005	766	2,411	1,092	3,842	1,371	1,829	1,908
Trincomalee	6,845	197	238	92	685	33	452	1,906
Vavunia	1,806	112	467	185	374	136	207	226
Total	195,487	9,726	20,398	11,384	54,865	13,094	25,485	27,606
Percentage		4.98	10.43	5.82	28.07	6.7	13.04	14.12

5.2.9.8 Risk factor reduction in the community

NCD unit funded and participated in district level awareness programmes including district level political advocacy programme for political leaders, school children and youth named “Mihimeth Suwasara”.

Awareness programme for public on risk factors and NCDs named “Suwa Sarani” through Sri Lanka Board casting Cooperation for half an hour weekly for six months was conducted.

5.2.9.9 Material Production

Five types of posters and leaflets, dockets depicting health messages and banners on special days were developed and printed.

Four TV spots on chronic NCD risk factors were telecast. The NCD unit designed four video clips on injury prevention and a cartoon documentary on road safety.

Health guidance tools, Bill boards, flipcharts, BMI charts, DVDs on screening, health promotion and exercises were developed with the support of JICA in all three languages.

PMR, registers and returns were developed printed and distributed to all the districts to facilitate the flow of information

5.2.9.10 Human Resource Development

- A Consultant Community Physician (CCP)was trained on NCD management and Health promotion in Lussane (Switzerland)and Japan respectively. Another CCP was trained on STEP surveillance in Indonesia and India. Two district MOO (NCD) were trained in Japan on lifestyle modification. A CCP and a district MO (NCD) were trained on Injury epidemiology,prevention and care in KhonKaen Thailand.

- MOO (NCD), MOO (Mental Health) MOO, RMOO in the districts on NCD related nutrition, tobacco and alcohol prevention as master trainers.

- MOO (NCD) on accident prevention.

- Visiting Physicians in the districts,MOO & RMOO on management protocol for NCD in collaboration with Ceylon College of Physicians.

- District youth training programmes on NCD risk factor reduction.

- Training of two nurses at cardiology unit, National Hospital of Sri Lanka for cardiac rehabilitation in Australia was facilitated.

- Training of hospital MOO on National Trauma Management Course (NTMC).

Televisions with DVD players were distributed to the HLCs through Regional Directors of Health services.

Logistics, hospitals professional colleges

Financial support was provided to district hospitals for the secondary and tertiary management of NCDs. Equipment were provided to HLCs to implement screening activities effectively and efficiently.

5.3 Medical Supplies and Logistics

5.3.1 Medical Supplies Division - 2012

5.3.1.1 Objectives

The Medical Supplies Division (MSD) of the Ministry of Health (MOH) is the central organization mainly responsible for the distribution of medical requirements to all state sector health institutions and narcotic drugs to both state and private sector health institutions. The number of items supplied is more than 22,000, and these are supplied quarterly, annually or on need and request basis.

Additionally donations of medical items and hospital supplies are cleared from Sea Port / Air port, and distributed by MSD in keeping with the pre-planned programmes.

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

1. Medical Supplies Items

Medical Supplies Items could be broadly categorized as:

2. Pharmaceuticals
   - Drugs
   - Surgical Dressings
   - Narcotics

3. Dental Items
   - Dental Consumables
   - Dental Non-Consumables (instruments)

4. Surgical Items
   - Surgical Consumables
   - Surgical Non-Consumables (instruments)

5. Laboratory Items
   - Lab Consumables
   - Lab Non-Consumables (instruments)
   - Lab chemicals

X-ray Items

5.3.1.2 Main Functions of MSD

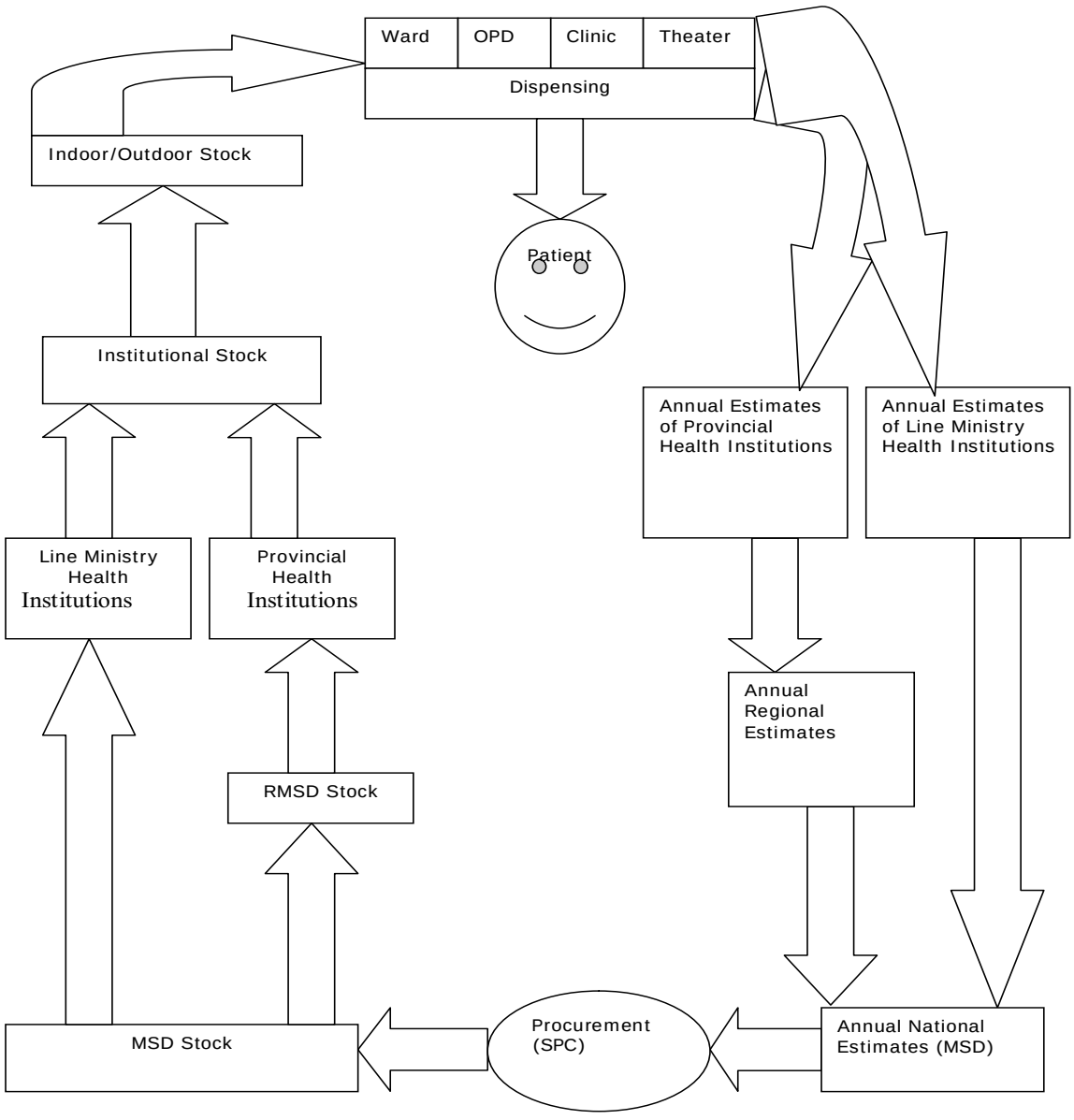
5.3.1.2.1 The Main Functions

- Estimates the annual national demand for each medical item based on institutional estimates, trends and drugs consumption patterns.
- Places orders with SPC, monitors the progress and makes the necessary arrangements based on past statistics of estimates, issues and forecasts of the national demand for the following year while considering the stock availability and balance due on order for supplies.
- Procurement of almost all Medical Items is done through State Pharmaceutical Corporation (SPC) which calls for worldwide tenders. The procurement is usually done once a year and it takes more than 12 months lead time for the SPC to supply MSD orders. Procurement is not done by the MSD except very urgent instances where the SPC has failed to supply the items on time.
- Procurement of absorbent gauze from local manufacturers and selected 28 Pharmaceutical items (according to the cabinet approval) from State Pharmaceutical Manufacturing Corporation.
- Receipt of Medical supplies from SPC and storage and distribution of same.
- Programme and distribute medical supplies mainly based on the estimates received and comply the institutional requirements.
- Identify deficits in supply and demand for the year concerned with respect to national demand and place additional orders to be supplied or amend existing orders accordingly.
- Review supplies/issues in mid-year and take appropriate action to ensure continuous availability of items to the hospitals.

5.3.1.2.2 Other Functions

- Regular meetings with SPC representatives and representatives of the Ministry of Health to review and decide on the action in times of short supply.
- Prepare annual price list for all medical supplies.
- Coordinate with Ministry of Health, SPC and Treasury regarding cash flow for procurement of Medical Supplies.
- Financial control of purchases and issues of medical items and preparation of reports.
- Support for the Quality assurance of medical items.
- Coordinate and furnish statistical data to the International Narcotic Control Board (INCB) in Vienna.
- Medical donations from various donors (local/ foreign; persons/organizations) are received, stored and re- distributed by MSD to all Govt. Health Institutions under guidance of the Minister, Secretary or Director General of Health Services.

Fig 5.3.1 : Distribution of Medical Supplies



Medical Supplies are distributed by MSD to

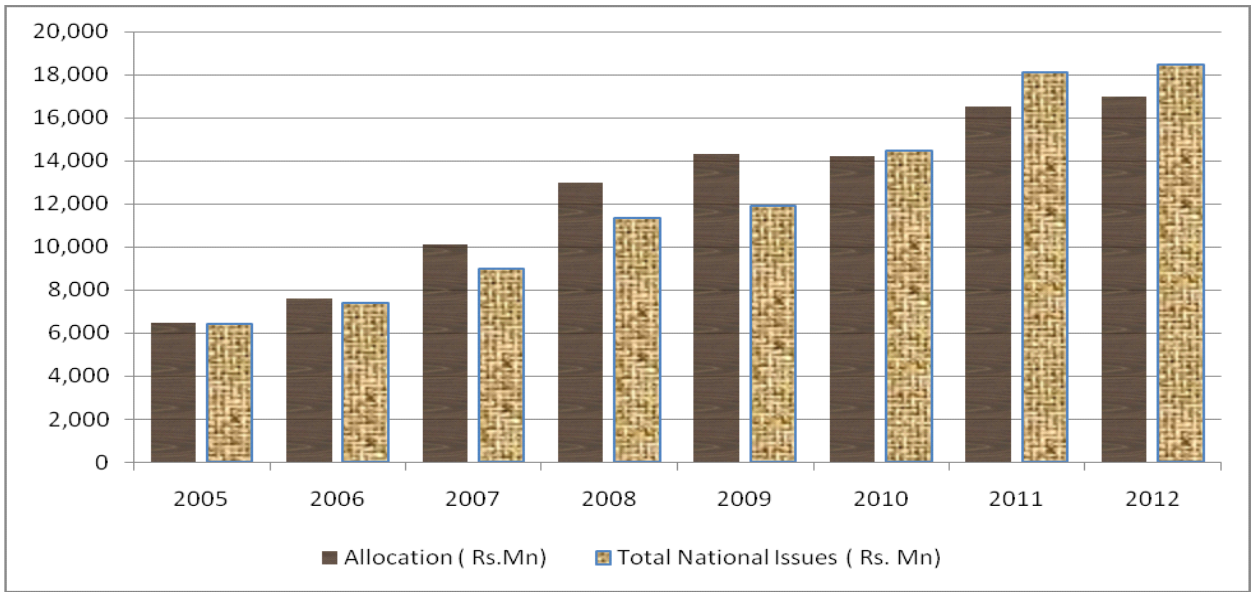
- Line Ministry Institutions,
- Regional Medical Supplies Division (RMSD),

Armed Forces, Police and Prison Health institutions.

4. Angoda sub store – Surgical Items, X-ray films, Contrast media, and Drugs.

5. Welisara sub store is used to store unserviceable office equipment.

Fig. 5.3.2 : Total Allocation and Expenditure of Medical Suppliers in 2005 – 2012



The objective is to ensure that all vital and essential medical supplies are made available in all govt. hospitals within the financial allocation of the year. Stock control and distribution of medical supplies are computerized.

5.3.1.3 Stores of MSD

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

1. Main stores complex of MSD is at 357, Rev. Baddegama Wimalawansa Thero MW, Colombo – 10. ; Drugs, Surgical instruments & consumables, and Dental items.

2. Wellawatta sub store- Laboratory items (Glassware and Lab. Chemicals) Surgical non-consumables, miscellaneous items, Printed forms and donations.

3. Digana sub store-selected bulky medical supplies.

5.3.1.4 Financial Situations

The total budget of MSD is approximately 29 percent of the budget of the Ministry of Health. The MSD handled approximately SL Rs. 22 Billion worth of medical items in 2012. The total allocation and Expenditure on Medical Supplies, during 2005-2012 are shown in Fig. 5.3.2.

5.3.1.5 New Developments

- Medical Supplies Management Information System (MSMIS) is in the implementation stage and it will be fully functional during the year 2014.

- Formulary revision for full range of pharmaceutical covering 1400 items has been completed. In this revision number of items has been reduced to 953 the revision of surgical and laboratory items have been planned for the year 2013.

- Conducted awareness programmes for nine provinces to improve medical supplies management in the year 2012.

- Supply position review meetings have been regularized with adopting weekly meetings with the participation of the members of State Pharmaceutical Cooperation and Ministry of Health to minimize out of stock situation.

- Initiated work on the new administration block on the roof top of MSD main building and the planning of the same has been completed in the year 2012 and it will be completed in the year 2014.

- The store capacity of Angoda store is increased by 20 percent with the construction of the new building

5.3.1.6 Problems

The main problems encountered in the Medical Supplies management are;

- Supplies are not received as scheduled,

- Unrealistic and high variation in estimates,

- Lack of storage facilities in MSD, Hospitals and some RMSDD.

- Non availability of facilities to store medical supplies under ambient temperature & humidity conditions with required capacity.

- Inadequate staff (Eg. Assistant Directors) with respect to the approved cadre and new working units to be established.

5.3.1.7 Future plans

- MSMIS project to be fully functional during the year 2014

- To establish Drugs and Therapeutic Committees in institutional level and regional level for strengthening the Medical supplies Management

- New units to be established for collecting information , analyzing and monitoring medical Supplies at the peripheral institutions and MSD level.

- Modification and Development of the cold store facilities with digital temperature control and monitoring system has been completed ,It will ensure continuous automated 24 hour monitoring of cold chain maintenance in a more reliable and safe manner.

- Plan of Action will be implemented to dispose quality failed stocks at district level with MSD undertaking the main role in the planning , implementation and coordinating activities.

5.3.2 Logistic Division

The Logistic Division is responsible for the Provision of allocation for maintenance and services of the following activities and also for construction of new buildings as required by Hospital and institutions under the control of the Ministry of Health.

- Construction and repairs of buildings.
- Supply and maintenance of electricity and plant machinery equipment
- Supply and maintenance of Air Conditioning Machines.
- Supply and maintenance of Medical Gas System.
- Supply of Power plant, Mortuary Refrigerator and laundry Equipment.
- Water Supply and Sewerage system.
- Supply of telephone network facilities.

A sum of Rs. 4,224 Million has been allocated for above activities for 2012.

Table 5.3.1 : Construction Work have been completed during the year, 2012

	Project	Project Cost Rs. Million
1	Construction of Provincial Blood Bank (Balance Work) TH Jaffna	21.81
2	Extension to Kitchen (Balance Work) TH Jaffna	18.45
3	Construction of Building to Install CT Scan GH Hambantota	12.96
4	Construction of Clinic Centers in Polonnaruwa & Anuradhapura Districts	53.65
5	Renovation of Operation Theatres in General Hospital Polonnaruwa	16.78
6	Renovation of Wards and Office complex in OPD building BH Kanthale	25.88

Table 5.3.2 : Construction Work are planned to completed during the year, 2013

	Project	Project Cost Rs. Million
1	Construction of Clinical Building Complex at GH Kalutara	89.18
2	Construction of Nurses Quarters at Maharagama Cancer Hospital	140.02
3	Construction of Drugs Stores Mullariyawa (MSD)	336.80
4	Sirimavo Bandaranayake Children Hospital Stage 11.	629.14
5	Construction of Accident Services at GH Rathnapura	502.86
6	Construction of DPDHS Office Galle, Matara	122.65
7	Construction of OPD & Ward Complex atGH Monaragala	364.40
8	Construction of Nurses Quarters GH Polonnaruwa	22.52
9	Construction of OPD Building Base Hospital Kalmunai	37.36

Table 5.3.3 : Projects and Provisions, 2012

Project	Provision for year 2012 Rs. Million
Ministry Administration & Establishment services	31.00
Human Resource Development National Institute of Health Sciences, Nurses Training School, Medical Research Center	109.50
Patients Care Service Hospital Development Project	4,074.50
Health Promotion & Disease Prevention Other Campaigns	9.00
Total	**4,224.00**

Table 5.3.4 : Ongoing Projects, 2012

	Project	Project Cost Rs. Million
1	Construction of Theater Complex at GH Kegalle	325.00
2	Construction of Clinical Building Complex at GH Kalutara	89.18
3	Construction of millennium Ward complex at TH Kalubowila	457.00
4	Construction of Medical Ward Complex at TH Kandy	493.45
5	Construction of Nurses Quarters at Maharagama Cancer Hospital	140.02
6	Construction of Drugs Stores Mullariyawa (MSD)	336.80
7	Construction of Accident Service & Wards Complex at Teaching Hospital Ragama	308.00
8	Sirimavo Bandaranayake Children Hospital Stage 11.	629.14
9	Construction of Accident Services at GH Rathnapura	502.86
10	Construction of DPDHS Office Galle, Matara	122.65
11	Construction of OPD & Ward Complex atGH Monaragala	364.40
12	Construction of Korea Sri Lanka Friendship Hospital at Godagama Matara	300.00
13	Development of Polonnaruwa General Hospital	502.00
14	Construction of Nurses Quarters GH Polonnaruwa	22.52
15	Maternity Ward complex Stage II Teaching Hospital Kurunegala	191.65
16	Construction of New Building for Dental Institute of Sri Lanka	733.79
17	Construction of OPD Building Base Hospital Kalmunai	37.36
18	Construction of Tele - Cobalt Unit Teaching Hospital Hambantota	127.44
19	Construction of Proposed over head Water tank at Provincial Hospital at Badulla	33.19
20	Extension to Operation Theatre - D GH Kalutara	21.68

Table 5.3.5 : Special Development Activities Planed for year,2012

	Project	Project Cost Rs. Million
1	Completion of Construction Work at Cardio Thoracic Unit - LRH	222.00
2	Construction of Partly Constructed Neurology Neprology and Orthopedic Ward at LRH	53.25
3	Reorganization of OPD Building at LRH and Construction a Critical Care Unit	44.00
4	Construction of a new building for Clinics and OPD phase 1 - Castle Street Hospital for Women - Colombo 08	
5	Construction of the State of the Art Cancer Ward Complex at National Institute of Cancer Maharagama	
6	Explanation of OPD & Clinic at National Eye Hospital in Colombo	165.00
7	New Surgical Complex DGH Chilaw	848.00
8	New Medical Ward Complex DGH Chilaw	311.00
9	Construction of Eye Theatre and Wards GH Kaluthara	65.00

5.3.3 Directorate of Medical Technology & Supplies (Cosmetics, Devices & Drugs Regulatory Authority)

The office of the Medical Technology & Supplies contributes to the achievement of a healthier nation by ensuring the provision of safe, quality and efficacious medicinal products and safe and quality cosmetic products.

The authority to regulate and control of manufacture, importation, sale, storage, distribution transportation, advertisements of pharmaceuticals and adverse reaction monitoring of Cosmetics, Devices and Drugs are vested with the institution through the provision of Cosmetics, Devices and Drugs Act 1980 (three amendments has been made in 1984,1987 and 1993 respectively). The other objective is to ensure rational use of medicines.

5.3.3.1 Vision

To achieve a healthier nation by ensuring the provisions of safe, quality and efficacious medicinal products and cosmetics.

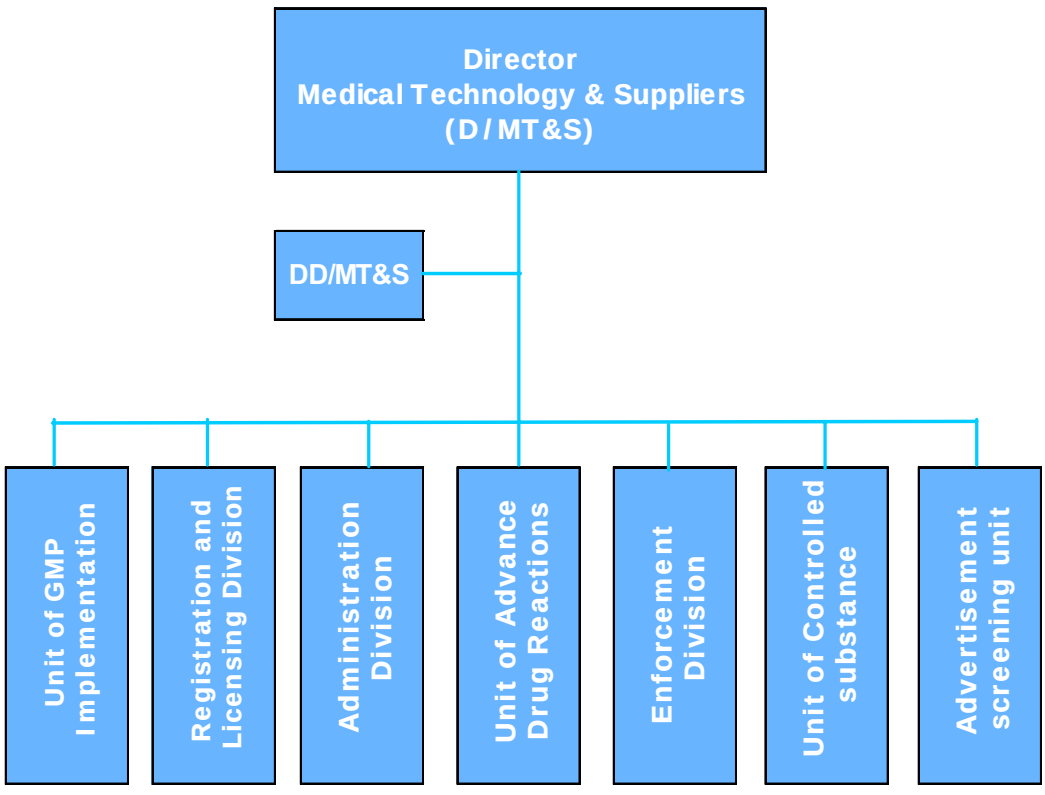
5.3.3.2 Mision

To regulate and control the manufacture, Importation, sale, storage and distribution of cosmetics, medicinal devices and drugs (including nutraceuticals and borderline devices) efficiently and effectively while ensuring rational usage.

5.3.3.3 Objectives

- To ensure that all the medicinal devices and drugs available in Sri Lanka are of safe, efficacious/effective of acceptable quality.
- To ensure that all the cosmetics available in Sri Lanka are of safe and acceptable quality.
- To ensure uninterrupted availability of cosmetics, devices and drugs
- To ensure rational usage.

Fig. 5.3.3 : Directorate of Medical Technology & Supplies



5.3.3.4 Strategies

- Harmonization of regulatory processes in line with stringent authorities
- Ensuring organisational efficiency and effectiveness
- Strengthen enforcement activities
- Ensure continuous mutual understanding and cooperation between regulatory bodies of other countries
- Upgrade expertise and competency of human resources and expertise
- Attaining of dedicated and fully committed work force
- Create in building trust among stakeholders

5.3.3.5 The Main Functions of the Organization

1. Registration of cosmetics, medical devices and drugs.
2. Issuing licences for importation, manufacture, sale and transport.
3. Inspection of manufacturing plants for Good Manufacturing Practices
4. Controlling advertisements on drugs, devices & Cosmetics
5. Monitoring adverse effects of drugs
6. Preparation of new regulations on drugs, medical devices & cosmetics
7. Recalling quality failure drugs from the market
8. Carryout legal procedures against offences
9. Regulating clinical trials
10. Controlling narcotics and other habit forming drugs in collaboration with Dangerous Drugs Control Board and Sri Lanka Custom.
11. Training of health staff on regulations
12. Providing drug information to the Healthcare professionals and to the public
13. Development of guidelines and manuals on drugs and related practices
14. Conducting workshops on intellectual property rights, strengthening the registration process of Cosmetics, Devices & Drugs etc.

Eight Sub Committees have been set up by the technical Advisory committee (TAC), namely

a) Drugs Evaluation Sub-Committee (DESC) to review and make recommendations to D/ MT&S on drugs submitted for registration;

b) Cosmetics Evaluation Sub-Committee to review and make recommendations to D/ MT&S on cosmetics submitted for registration;

c) Devices Evaluation Sub-Committee to review and make recommendations to D/ MT&S on medical devices submitted for registration;

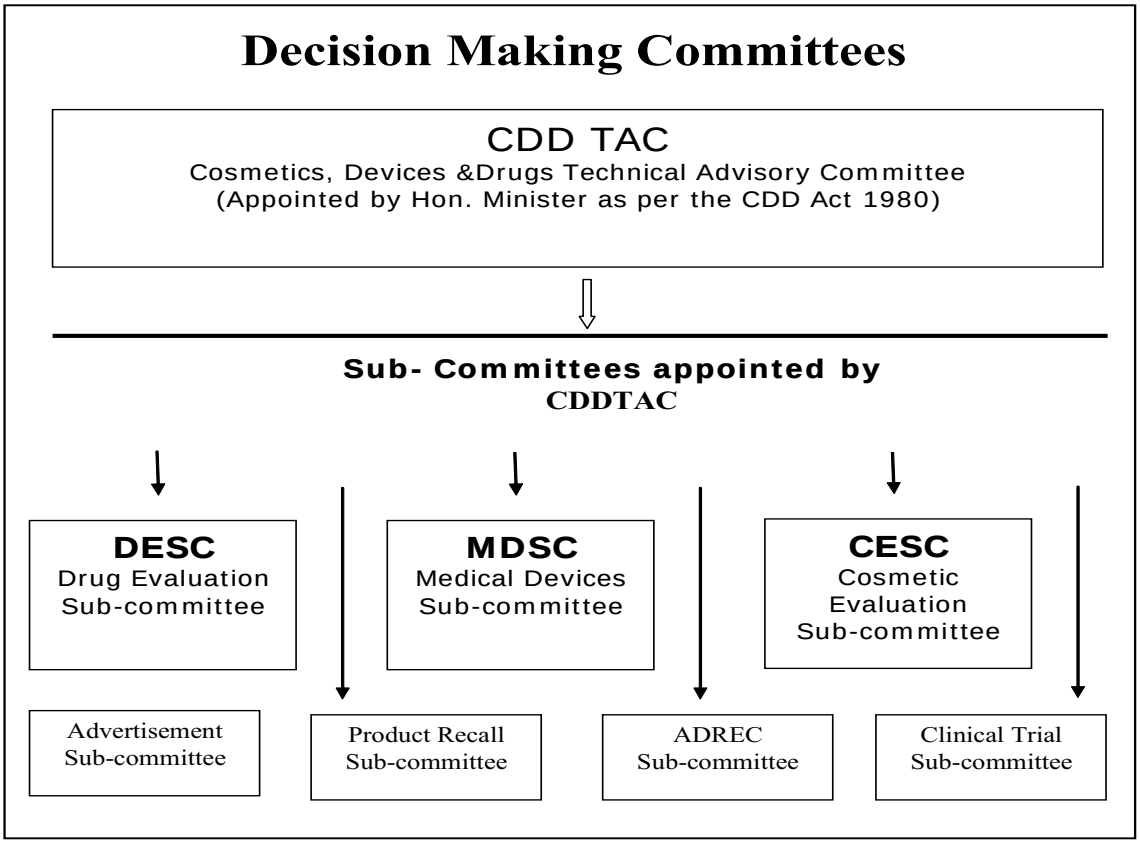
d) Advertisements Sub-Committee to screen advertisements of drugs and to make recommendations on the information given in the advertisements.

e) Product Recall Subcommittee - Sub-Committee to make decisions regarding the products with safety, quality or efficacy issues.

f) Sub-Committee on Clinical Trial (SCOCT) to review and grant approval for Clinical Trials (Phase II & Phase III) which are to be carried out in Sri Lanka (for NCEs and for new indications).

g) Safety of drugs and risk evaluation Sub-Committee (SAFRESC) to investigate and make recommendations on adverse drug reactions reported.

Fig 5.3.4 : Decision Making Committees



h) Sub-Committee on Nutraceutical products to review and make recommendations on nutraceuticals, dietary supplements and functional foods before registering as nutraceuticals, foods or drugs.

5.3.3.6 Major Achievements during 2012

- Launch of official Web site (www.http//:cdda.gov.lk)
- Data base is being updated with the objective of computerizing all relevant procedures including registration and licensing. (financial support by WHO)
- One week training for dossier evaluation & GMP by the experts at Malaysian drug authority.
- SOPs have been developed for all registration and licensing activities.
- Prior approval for advertisements on cosmetics was gazzeted (01/09/2012)
- Development of guidelines on advertisements of cosmetics.
- 4th amendment to the Cosmetics, Devices and drugs Act is completed.
- Implementation of tri language policy for cosmetics, OTC drugs and Schedule IIa drugs since 31st March 2013. Patient information should be given in all three (3) languages (Sinhala, Tamil & English).
- Prequalification of suppliers (Pharmaceuticals & Medical devices)

5.3.3.7 Special Activities planned for 2013 - 2014

- Computerization of Drug registration is in progress & will be launched in this year.
- Further strengthening of registration processes
- Formulation of draft Act and regulation on clinical trials
- Further training of pharmacists & F&D inspectors on GMP
- Formation of a multi-stakeholder committee and developing a mechanism and guidelines for the regulation and monitoring of medicine prices
- Consultative workshops to develop standard operating procedures
- Strengthening the drug advertisement regulating unit of the DRA
- Procurement of reliable drug information material
- Foreign training for DRA staff
- Recruitment of new staff to CDDA eg. graduate pharmacists

5.3.3.8 Harmonization of Regulatory Process in line with Stringent Authorities and Steps taken to Strenthen the Regulation Procedures.

- GMP audits of foreign manufacturing facilities.
- Regulation of Active Pharmaceutical ingredient (API) manufacturers.
- Registration of Similar Bio therapeutic products according to the format recommended by the WHO from 16th August 2013
- Making bioequivalence studies mandatory for registration (oral preparations of Antibiotics, Slow Release preparations, combination products & some selected Narrow therapeutic index drugs) from 2014 January.
- Making lot release certificates mandatory for private sector vaccines. (in progress)
- Making Vaccine Vial Monitors (VVM) mandatory for private sector vaccines. (in progress)
- Standardization of Market Authorization Holder (in progress)
- Implementation of novel recall procedure (in progress)
- Prequalification of suppliers (in progress)
- Development of guidelines on advertisements of cosmetics. (in progress)

5.3.3.9 The Operational Policies adopted by the Government to ensure Adequate Supply of Essential Medicines to All Patients seeking Care at Government Institutions are:

- Procurement of drugs which are registered with the CDDA based on their generic names, wherever generic names are available;
- To encourage local manufacturers to produce essential Medicines within the country in a phased manner subject to their techno-economic feasibility and granting a duty free concession for all raw material used in their pharmaceutical formulations and 20 percent rebate for locally manufactured products;
- Development and periodical revision of List of Essential medicines for Sri Lanka with separate lists for different levels of health care institutions depending on the services provided and facilities available.

5.4 Laboratory and Biomedical Services

5.4.1 Laboratory Services

5.4.1.1 Directorate of Laboratary Services, 2012

Directorate of Laboratory Services under the Ministry of Health has its responsibilities in two major directions namely in the capacity of technical advisory and policy guidance role and resource allocation for appropriate technology acquisitions and sustaining the system. Although the directorate is the main resource provider for the sector to the line ministry institutions, its technical directions are focused on both provincial and line ministry sectors giving a national exposure and presence. In the year 2012, department has promoted and accelerated the pace of development of the laboratory sector by engaging in multi dimensional activities that lead to significant achievements and growth in the sector. Another unique feature of the directorate has been the deep involvement of the scientific community in particular the professional colleges of laboratory medicine through technical task forces, advisory committees and individual experts in identification, formulation, implementation and monitoring of various programmes and activities.

In the year 2012, laboratory sector has improved its capacity in human resources specifically appointing MLTT (85) around the country and appointing Hematologists (06), Histopathologists (01), Microbiologists (01) and Chemical Pathologists (01) for many new stations where demand for services have increased. Laboratory automation process is underway and Rs 300 million was spent for major technology acquisitions in 2012 and Rs 290 million was spent for reagents and consumables, In addition a dedicated Rs 10 million was allocated for maintenance.

Furthermore, by strengthening the satellite programme, further expansion of services to smaller institutions was ensured in PGH – Badulla, PGH – Rathnapura, DGH – Monaragala, DGH -Nuwara Eliya, BH-Kalawana and TH-Kurunegala.

Initiatives have been taken to strengthen laboratory policy and install a proper regulatory structure in to the system backed by accreditation process and quality assurance schemes. ICT was a key concern and steps have been taken to introduce laboratory networking system to improve availability and accessibility particularly focusing the rural sector services.

5.4.2. Biomedical Engineering Services (BES)

The Division of Biomedical services of the Ministry of Health is entrusted with procuring, installing, commissioning and maintaining medical equipment in Line Ministry Hospitals. This division also provides to the Provincial Health authorities based on their requirements.

The head quarters of the Biomedical Engineering Services Division, located in Colombo,has workshop facilities, warehouse facilities for equipment and spare parts storage and administrative functions.

Regional Biomedical Units established in Central and Uva Province, Southern Province, North Central and North Western Province are supervised by Biomedical Engineers appointed to Kandy, Galle and Anuradhapura respectively. It has 22 Hospital – based maintenance units.

Major activities in 2012 & up to June 2013

- Provision of two MRI scanners to TH Karapitiya; Value Rs.400Mn.
- Provision of equipment for new operating theater complex TH Kandy; Value Rs.40Mn.
- Provision of equipment for new ICU and operating theaters at GH Hambantota; Value Rs.75Mn.
- Provision of equipment for strengthening SBSCH; Value Rs.70Mn.
- Provision of equipment for GH Chilaw taken Over by the Line Ministry; Value Rs.60Mn.

- Provision of equipment to strengthen operating theaters in line ministry hospitals;Value Rs.235Mn.
- Provision of equipment to strengthen ICU in line ministry hospitals; Value Rs.265Mn.
- Provision of equipment to strengthen Radiology (X-ray) Department in line ministry hospitals; Value Rs.45Mn.
- Provision of equipment for Neurosurgical unit TH Jaffna; Value Rs.100Mn.
- Provision of new MRI Scanner for GH Badulla; Value Rs.150Mn.

Development Activities planned for 2014:

- Provision of new MRI Scanner for TH Anuradhapura; Value Rs.200Mn.
- Replacement of digital Angiography Machine for the X-ray department NHSL; Value Rs.50mn.
- Provision of CT Scanners for LRH; Value Rs.50Mn.
- Provision of BI plane angiography system for neuro trauma unit NHSL; Value rs.150Mn.
- Provision of CT Scanners for GH Kegalle and GH Moneragala; Value Rs.140Mn.
- Provision of CT Scanners by JICCA project; for TH Ragama, TH Kalubowila, GH Ratnapura, SBSCH Peradeniya, GH Hambantota and GH Kurunegala; Value Rs.420MN.
- Provision of Haemodialysis Machine by JICCA project; 10 Nos for NINDT Maligawatta, 5 Nos for GH Polonnaruwa, 10 Nos for GH Kandy, 10 nos for GH Anuradhapura, 8 nos for TH Karapitiya, 6 Nos for GH Kurunegala, 4 Nos for GH Ampara; Value Rs.80Mn.

5.4.3. National Drug Quality Assurance Laboratory

National Drug Quality Assurance Laboratory (NDQAL) provides the technical support needed to operate the Pharmaceutical Quality Assurance System in Sri Lanka by monitoring the compliance of drug products with respect to quality and safety by laboratory testing of samples at pre and post marketing stages and issuing recommendations based on findings.

The primary function of NDQAL is to conduct laboratory tests necessary to determine the compliance of drug products with safety and quality requirements. In the assessment of quality, the most important characteristics of the drug products considered are their appearance, identity, purity, potency, uniformity and bio-availability. Drug products are tested according to pharmacopoeial specifications or standards claimed by the manufacturers. Quality testing is carried out on samples taken at different points in the drug distribution system which includes government sector health institutions and private sector pharmacy outlets and other organizations.

Director of the NDQAL functions as an additional approved analyst under Cosmetic Devices and Drugs Act No 27 of 1980.

Other activities carried out by NDQAL are:

- Take part in Good Manufacturing Practice (GMP) inspections of pharmaceutical manufacturing facilities.
- Provide advice on pharmaceutical evaluation of registration documentation of the drug registration applications when required.
- Provide practical training for PGIM course in Chemical Pathology, and undergraduate courses of B Pharm., BSc Pharmacy, BSc Chemistry, BSc Biochemistry & Molecular biology and students following internal pharmacy courses.
- Carrying out of limited scale research on bio-equivalence and stability of pharmaceuticals.

Services provided by NDQAL during 2012

NDQAL analysed 665 samples, which includes 162 post marketing surveillance samples, 227 complaint samples, 152 registration samples and 124 other samples such as formal, informal, tender etc., .

NDQAL staff Participated in routine GMP inspections of pharmaceutical manufacturing facilities conducted by Cosmetics, Devices and Drugs Authority (CDDA).

Organized two practical training programs for intern pharmacists on 'Quality Assurance of Pharmaceuticals'

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

6.1 Education, Training & Research Unit

The Unit of the Deputy Director General – Education, Training and Research (DDG-ET&R) of Ministry of Health is the main focal point for coordinating, facilitating and regulating health manpower training and health research in Sri Lanka. Training programmes conducted under the direct coordination of this unit comprises of all basic and post basic training programmes for nursing, professions supplementary to medicine, paramedical and medical technology services training. Furthermore, the unit is responsible for facilitating all the in-service training including training of medical officers and special training programmes for all the other categories of staff. In addition, the unit coordinates with other training centres of government, non-governmental, and private sectors and also with international agencies.

As the Medical Research Institute (MRI) and National Institute of Health Sciences (NIHS) are under the ET & R unit, the research facilitation and coordination is also a major component of Education, Training and Research unit.

6.1.1 Basic Training

Basic training of all health personnel, except for medical officers are directly coordinated by the Education, Training and Research unit and the intake is determined by recruitment by the administrative sections of the Ministry of Health. The following intakes were recruited for training and outputs from the training schools were as follows during 2010, 2011 and 2012.

Table 6.1 : Basic Training Programmes

Category	Training Schools	Duration (Months)	Intake			Output		
			2010	2011	2012	2010	2011	2012
Nursing – 3 year basic Diploma training								
Nursing Officers	18	36	4070	-	2368	2640	1634	-
Professions Supplementary to Medicine – 2 year basic Diploma training								
Medical Laboratory Technologists	3	24	122	-	-	162	-	122
Pharmacists	2	24	153	176	-	101	-	180
Radiographers (Diagnostics/ Therapeutics)	1	24	42	-	-	86	-	42
Physiotherapists	1	24	56	-	-	76	-	60
Occupational Therapists	1	24	18	-	-	24	-	15
Para Medical Staff – 1 year Proficiency Certification to 2 year Diploma Training								
Electro Cardiographers (ECG)	1	12	-	38	-	-	-	-
Ophthalmic Technologists	1	24	-	51	-	-	-	-
Dental Therapists	1	24	-	54	-	-	-	-
Dental Technicians	1	24	1	1	3	6	-	-
Electro Encephalographers (EEG)	1	24	-	6	-	-	-	7
Public Health Inspectors	6	18	240	-	-	-	202	38
Public Health Midwifes	12	18	-	954	-	44		510
Public Health Laboratory Technicians	1	12	-	-	51	-	-	-
Technical Services – 1 – 2 year Proficiency Certification Training								
Dispensers	6	12	69	-	-	136	46	-
Orthotics and Prosthetics	1	24	-	20	-	-	-	-
Speech and Language Therapists	1	24	-	-	-	-	-	-
Audiology Technicians	1	24	-	22	-	-	-	-

Following activities to improve the basic training programmes in 2012.

1. Revision of curricula in relation to Audiology Technician, Entomological Assistant,Food and Drug Administration for Public Health Inspectors and Public Health Midwifery
2. Skills development training of trainers on computer and other technical skills
3. Training need assessments for in-service training
4. Provision of text books and infrastructure for the training centres

6.1.2 In Service Training

Addition to the basic training, following health personnel were trained through in-service training for the Year 2012.

Table 6.2 : In service training in 2012

Training Programme	Target Group	Total
Training of Trainers on Dengue Management	Special Grade Nursing Officers (Matron) / Nursing Sisters	32
Training of Trainers Life skills development	Tutors of Midwifery training unit	42
Life skills development	Field health staff of field training centers	35
Updating on Teaching Methodology in English	Principals and Tutors of Schools of Nursing	40
Dengue Management Training (at Infectious Diseases Hospital)	Nursing Officers	182
Ward Management and Supervision	Nursing Officers	14
Intensive Care Management	Nursing Officers	143
Psychiatry Training	Nursing Officers	68
Operating Theatre management	Nursing Officers	79
Colostomy Care (island wide)	Nursing Officers	60
Paediatric Care	Nursing Officers	84
Management Training	PSM Tutors	30
CT Scan Techniques	Radiographers	50
Management Training	Pharmacists	50
Microbiology Updating	Medical Laboratory Technologists	130
Food and Drug training	Public Health Inspectors	100
In Service Training Programme	Health Management Assistants	400
Tutor training for training of Attendants	Attendant training tutors	60
User awareness programmes (With HELLIS Programme)	for users of medical libraries (Medical Officers, Nurses and Other users)	600
In Service Training Programme	Estate Medical Assistants	50
In Service Training Programme	Health Assistants	150
Management Training Programmes	Attendants	30

6.1.3 Research

There are two main institutions of health research facilitation under the Education, Training and Research unit of Ministry of Health i.e. National Health Research Council and Medical Research Institute.

National Health Research Council

The Education, Training and Research unit is responsible for functioning in collaboration with the National Health Research Council (NHRC) to promote health research in Sri Lanka. There are representatives of six medical faculties of Sri Lanka, Sri Lanka Medical Association, Post Graduate Institute of Medicine and officials from Ministry of Health (Director General of Health Services, Deputy Director General – Education, Training and Research and 3 other Deputy Director Generals). Altogether there are 15 members.

Awarding of NHRC research grants is one of the major activities performed by the council. The research proposals submitted for funding are scrutinized for suitability by the NHRC and grants are made available for the approved proposals through the consolidated fund of the Ministry of Health. A total of 12 proposals were approved for 2012 with an allocation of Rs. 921,182.20.

Coordination of Research Activities

According to the Management Services Circular No. 44 and 45 which was introduced in 2011 (as per budget proposal), payment of research allowances for executive grade officers was initiated. A Research Sub Committee has been formulated in the Ministry of Health under the chairmanship of the Secretary of Health and three Directors as members, in order to facilitate this research initiative and research allowance payment process. Guidelines for submission of research proposal and guidelines for evaluation of research proposals by institutional Ethical Review Committees were prepared to further facilitate and streamline this process.

1. No. of Research Proposals submitted in 2012 were 330
2. No. of Research Proposals Approved for payment of allowance out of submitted proposals in 2012 were 198

6.2 Medical Research Institute

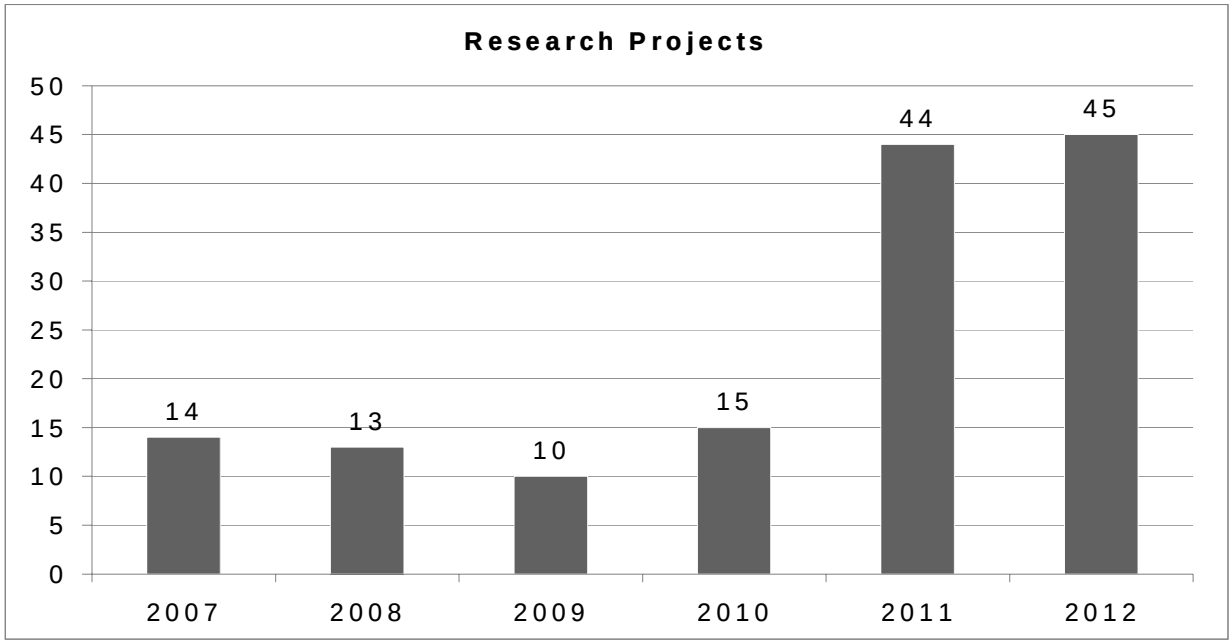
The Medical Research Institute (MRI) established in 1900, is the premier centre in the country for bio-medical and applied health laboratory investigations and related research activities.
MRI is a major service provider for all hospitals in Sri Lanka with special and specific diagnostic laboratory tests. It also functions as a National Laboratory for Japanese Encephalitis, Measles, Rubella and Influenza and as the regional reference laboratory for Poliomyelitis. In addition, the MRI is now the reference laboratory for Immunological investigations, national reference centre for platelet aggregation studies and carries out pre-registration evaluation of pharmaceuticals.

MRI conducts research in diversified areas in the fields of Virology, Bacteriology, Parasitology, Nutrition, Biochemistry, Histopathology, Haematology, Immunology, Entomology, Molecular Biology, Pharmacology, Mycology and Animal Studies. MRI supports scientists who perform ethical world-class medical research aimed at improving the health and well-being of the people.

Achievements of the Research & Ethics Committee of the MRI

The research capacity at MRI improved tremendously during the period of 2011 to 2012 compared to the previous years (Figure 01). One of the major contributory factors was the increased financing for research . The other factor was the improvement of competency of the researchers, achieved through the hands on training workshops in basic statistics, data analysis by SPSS software and project proposal writing. These three workshops had high level of participation which encouraged the researchers to write scientifically and ethically sound project proposals addressing their relevant research problems.

Fig 6.1 : Research Project conducted through MRI



During this period there was an emphasis on collaborative research. The collaborative universities are Colombo, Sri Jayewardenepura, Wayamba and Uva Wellassa. The Tea Research Institute and the manufacturers of coconut based products participated in animal and microbiological research respectively.

The RC&EC/MRI is the sole member representing the Ministry of Health at the Federation of Ethics & Research Committees of Sri Lanka (FERCSL).The Standard Operating Procedures (SOPs) of Ethics and Research Committee of MRI were prepared in accordance with the FERCSL guidelines. The SOPs were documented and implemented successfully to ensure the highest standards in ethical review process.

The short term goal of the RC&EC/MRI is to upgrade the quality and encourage the researchers to submit research on methodologies based on cohorts, case-controls and clinical trials. The medium term goal is to obtain the prestigious membership at the Federation of Ethics Review Committees of Asia Pacific region (FERCAP).
The MRI Research Day, which was held for two consecutive years in 2011 and 2012, served as a platform for scientific dialog on the research activities and also to disseminate the relevant information to the general public.

Several nationally important nutritional surveys including the “Landmark Analysis”, which was presented in 2012. Recommendations of Rabies and Vaccine Quality Control unit were instrumental in devising a new safer and low cost Rabies Post-Exposure Therapy regimen. . Various surveillance programs including respiratory viruses, measles, rubella, hepatitis, JE, gastroenteritis, dengue, polio, toxoplasmosis, toxocariasis, and filarisis were strengthened.

The automated drug analyser for the Pharmacology unit and the HPLC equipment for Haematology unit were the most significant investments made in new technology during 2012. As a result significant number of patients on immunosuppressant medication following organ transplantation and hematological disorders like Thalassaemia has benefitted.

The MRI launched several Health Informatics initiatives during the same period. An electronic Laboratory Information Management System was introduced to streamline the laboratory workflow and to ensure accurate and speedy delivery of investigation reports. The system is currently being piloted at several sections and ultimately all departments will be incorporated in to the system.

Table 6.3 : Investigations performed by different sections of the Medical Research Institute in 2012

Section	No of Investigations Performed
Biochemistry – General	13,805
Biochemistry –	20,332
Haematology	8,554
Immunology	7,166
Histopathology	11,041
Parasitology	5,390
Nutrition	19,100
Pharmacology	1,845
Rabies and Vaccine QC	2,528
Mycology	14,957
Bacteriology	52,924
Virology	30,036
Food and Water	16,559

Table 6.4 : Services Provided to Other Healthcare Institutions/Projects in 2012

Under the External Quality Assurance Programme

Section	Description	Total
QC - Bacteriology	Culture Maintenance	216
	Issues of STD cultures	260
Vaccine QC	Sterility tests (Batches)	3
	Safety Tests (Batches)	3
	Vaccine lot released	56
	Distilled Water (liters)	9,633
	Normal Saline (liters)	327
Media issued to hospitals	Plate Media	20,812
	Bottle Media	19,386
	Tube Media	45,948
	Media in Flasks	439
Rabies Section	Rabies Post-exposure clinic (No of Patients)	2,459
Animal Centre	Animal Blood Issues (ml)	4,092
	Animal Issues (Unused)	2,841
	Animal Issues (Used)	299
	Animal Feed Production (kg)	5,917
Entomology	No of Houses/Institutions Examined for Dengue Vector breeding places	4,844

6.3 National Institute of Health Sciences

The National Institute of Health Sciences (NIHS), the premier public health training institute in Sri Lanka commenced as the first public health unit of Asia in 1926 and developed over the years to cater the training needs of public health sector in Sri Lanka. The main function of the NIHS is to produce public health professionals of high calibre to successfully face the health challenges of the country and the region. In view of providing holistic teaching and skill development for public health professionals, two Medical Officer of Health areas function under the administration of NIHS.

Public Health Field Services

Public health field services are provided through Beruwala and Kaluthara Medical Officer of Health areas for an approximately 300,000 population. Most of the training programs offered by the NIHS include field based practical sessions and observatory visits. Staffs of the field services are bound to provide the practical skills and field based training for participants of the basic, post basic, in-service and international training programs offered by the institution.

Laboratory services

Laboratory services were further streamlined during the 2012 with implementation of standard operating procedures (SOPs) and with introduction of safety procedures in the laboratory management system. Service laboratory have analyzed 37,512 biological samples which included 11,450 urine samples and 5,421 blood samples for “culture and antibiotic sensitivity test”. The food chemistry laboratory has analyzed 3,030 samples in year 2012.

Research

An Ethics Review Committee was established to support research training activities, and to promote and foster a culture of research among the trainees and health professionals. During the year of 2012, NIHS staff had contributed to over 35 research publications and conference proceedings (e.g., research abstracts) on a diverse range of public health topics.

WHO Collaborating Centre for Public Health Workforce Development

Recognizing the quality of training programs offered by NIHS, the World Health Organization (WHO) had recognized NIHS as a WHO Collaborating Centre for Public Health Workforce Development. NIHS is the first training facility of the Ministry of Health recognized as a WHO collaborating centre (WHO CC). The WHO collaborating centre at NIHS will commence new training programs catering for the South East Asia region. The international training programs planned under the WHO CC include (1) ICD 10 and Health Information Management (2) Community Health Management (3) Research Methodology and (4) Orientation course on public health for primary care staff.

Detailed Tables

Table 1. Administrative Divisions and Local Government Bodies, 2012

Administrative Areas (Province/District)	Divisional Secretary Divisions	Grama Niladari Divisions	Local Government Bodies		
			Municipal Councils	Urban Councils	Pradeshiya Sabhas
Western Province					
Colombo	13	557	5	5	3
Gampaha	13	1,177	2	5	12
Kalutara	14	762	-	4	12
Central Province					
Kandy	20	1,187	1	4	17
Matale	11	545	2	-	11
Nuwara Eliya	5	491	1	2	5
Southern Province					
Galle	19	895	1	2	17
Matara	16	650	1	1	15
Hambantota	12	576	1	1	10
Northern Province					
Jaffna	15	435	1	3	13
Kilinochchi	4	95	-	-	3
Mannar	5	153	-	1	4
Vavuniya	4	102	-	1	4
Mullaitivu	6	136	-	-	4
Eastern Province					
Batticaloa	14	346	1	2	9
Ampara	20	503	2	1	17
Trincomalee	11	230	-	2	11
North-Western Province					
Kurunegala	30	1,610	1	1	19
Puttalam	16	548	-	2	10
North Central Province					
Anuradhapura	22	694	1	-	18
Polonnaruwa	7	295	-	-	7
Uva Province					
Badulla	15	567	2	1	15
Moneragala	11	319	-	-	10
Sabaragamuwa Province					
Ratnapura	17	575	1	2	14
Kegalle	11	573	-	1	11
Sri Lanka	331	14,021	23	41	271

Source : Department of Census and Statistics

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

Administrative Area (Province/District)	Land Area (Sq. Km) As at 1998[1]	Percentage Land Area	2012*			Average Annual Growth Rate % 1981 - 2012 [3]
			Population ('000) [2]	Percentage Distribution of Population	Population Density (Persons per Sq.Km)	
Sri Lanka	**62,705**	**100**	**20,271**	**100.0**	**323**	**1.0**
Western Province	**3,593**	**5.73**	**5,823**	**28.5**	**1,621**	
Colombo	676	1.08	2,310	11.4	3,417	1.0
Gampaha	1,341	2.14	2,295	11.3	1,711	1.7
Kalutara	1,576	2.51	1,218	6.0	773	1.2
Central Province	**5,575**	**8.89**	**2,559**	**12.5**	**459**	
Kandy	1,917	3.06	1,370	6.8	715	0.9
Matale	1,952	3.11	482	2.4	247	1.0
Nuwara Eliya	1,706	2.72	707	3.5	414	0.6
Southern Province	**5,383**	**8.58**	**2,466**	**12.1**	**458**	
Galle	1,617	2.58	1,059	5.2	655	0.9
Matara	1,270	2.03	810	4.0	637	0.7
Hambantota	2,496	3.98	597	2.9	239	1.1
Northern Province	**8,290**	**13.22**	**1,058**	**5.2**	**128**	
Jaffna	929	1.48	584	2.9	628	-0.7
Kilinochchi	1,205	1.92	113	0.6	94	0.7
Mannar	1,880	3.00	99	0.5	53	-0.2
Vavuniya	1,861	2.97	171	0.8	92	2.0
Mullaitivu	2,415	3.85	91	0.4	38	0.7
Eastern Province	**9,361**	**14.93**	**1,551**	**7.6**	**166**	
Batticaloa	2,610	4.16	525	2.6	201	1.5
Ampara	4,222	6.73	648	3.2	154	1.7
Trincomalee	2,529	4.03	378	1.9	150	1.3
North-Western Province	**7,506**	**11.97**	**2,371**	**11.6**	**316**	
Kurunegala	4,624	7.37	1,611	7.9	348	0.9
Puttalam	2,882	4.60	760	3.7	264	1.4
North Central Province	**9,741**	**15.53**	**1,260**	**6.2**	**129**	
Anuradhapura	6,664	10.63	856	4.2	129	1.3
Polonnaruwa	3,077	4.91	404	2.0	131	1.5
Uva Province	**8,335**	**13.29**	**1,263**	**6.2**	**152**	
Badulla	2,827	4.51	815	4.0	288	0.9
Moneragala	5,508	8.78	448	2.2	81	1.6
Sabaragamuwa Province	**4,921**	**7.85**	**1,920**	**9.5**	**390**	
Ratnapura	3,236	5.16	1,083	5.3	335	1.3
Kegalle	1,685	2.69	837	4.1	497	0.7

* Provisional

Source 1 : Survey General's Department
2 : Census of Population & Housing, 2012,Based on 5% sample
3 : Census of Population & Housing, 2012

Table 3. Population by Five Year Age Groups and Sex - 2001 and 2012

Age Group	Year 1981 [1] Total		Year 2001 [1]						Year 2012 * [2]					
			Total		Male		Female		Total		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number (000)	%	Number (000)	%	Number (000)	%
All ages	14,846,750	100.0	16,929,689	100.0	8,425,607	100.0	8,504,082	100.0	20,271	100.0	9,808	100.0	10,463	100.0
0 - 4	1,854,738	12.5	1,439,761	8.5	733,775	8.7	705,986	8.3	1,744	9.0	879	9.0	865	8.2
5 - 9	1,682,527	11.3	1,483,591	8.8	754,518	9.0	729,073	8.6	1,746	8.6	883	9.0	863	8.2
10 - 14	1,689,333	11.4	1,525,674	9.0	777,519	9.2	748,155	8.8	1,628	8.0	824	8.4	804	7.7
15 - 19	1,603,187	10.8	1,646,827	9.7	834,695	9.9	812,132	9.5	1,641	8.1	809	8.2	832	8.0
20 - 24	1,526,463	10.2	1,591,126	9.4	798,288	9.5	792,838	9.3	1,514	7.5	744	7.6	770	7.4
25 - 29	1,274,857	8.6	1,340,562	7.9	660,586	7.8	679,976	8.0	1,541	7.6	741	7.6	800	7.6
30 - 34	1,125,426	7.6	1,290,121	7.6	636,734	7.6	653,387	7.7	1,632	8.0	789	8.0	843	8.1
35 - 39	839,073	5.7	1,258,112	7.4	622,957	7.4	635,155	7.5	1,406	6.9	679	6.9	727	6.9
40 - 44	698,203	4.7	1,170,941	6.9	583,894	6.9	587,047	6.9	1,370	6.8	664	6.8	706	6.7
45 - 49	609,289	4.1	1,030,560	6.1	509,247	6.0	521,313	6.1	1,277	6.3	616	6.3	661	6.3
50 - 54	539,524	3.6	917,139	5.4	452,311	5.4	464,828	5.5	1,215	6.0	577	5.9	638	6.1
55 - 59	422,322	2.8	671,403	4.0	324,223	3.8	347,180	4.1	1,055	5.2	498	5.1	557	5.3
60 & above	981,808	6.6	1,563,872	9.2	736,860	8.7	827,012	9.7	2,502	12.3	1,105	11.3	1,397	13.4

* Provisional

Note : Year 2001 Population excludes the districts Jaffna, Mannar, Vavunia, Mullaitivu, Kilinochchi, Batticoloa & Trincomalee Districts.

Source : 1 Census of Population and Housing
2 Census of Population 2012 - Based on 5% sample

Table 4. Vital Statistics by District

District	Crude Birth Rate (CBR)		Crude Death Rate (CDR)		Maternal Mortality Rate, 2009 Per 100,000 Live Birth's	Infant Mortality Rate 2009	Neo-Natal Mortality Rate	
	2011*	2012 *	2011*	2012 *			2008	2009
	Per 1,000 Live Births					Per 1,000 Lve Births		
Colombo	21.2	15.7	8.2	6.7	20.7	15.1	8.5	8.4
Gampaha	12.5	14.4	5.2	5.6	10.8	4.6	3.1	3.2
Kalutara	14.8	15.4	6.0	6.3	6.0	5.6	2.6	4.1
Kandy	20.3	18.8	7.3	7.0	53.0	13.7	6.8	10.2
Matale	20.8	19.7	5.4	6.2	18.8	6.5	4.4	4.7
Nuwara Eliya	13.5	20.3	4.6	6.0	18.4	10.6	9.7	9.9
Galle	19.0	16.8	7.1	7.1	25.0	10.7	7.9	6.5
Matara	14.5	18.2	5.8	6.4	13.6	9.0	7.4	6.9
Hambantota	15.8	20.3	4.7	5.4	43.2	5.5	3.5	3.7
Jaffna	16.1	15.9	6.3	6.9	12.9	7.6	1.3	4.7
Kilinochchi	20.7	23.3	2.1	2.9	0.0	1.6	-	0.0
Mannar	14.1	19.9	3.3	3.4	21.9	35.8	0.9	0.8
Vavuniya	23.7	16.9	5.0	4.9	0.0	25.1	11.2	14.3
Mullaitivu	7.5	14.6	13.8	6.5	0.0	1.5	-	3.1
Batticaloa	17.7	18.4	5.1	5.4	9.5	17.4	9.3	14.1
Ampara	22.0	21.7	4.3	4.8	14.3	3.1	1.8	1.8
Trincomalee	23.8	22.2	3.7	3.8	35.6	4.5	3.8	2.7
Kurunegala	16.1	16.9	6.2	6.3	48.0	9.6	12.0	7.7
Puttalam	18.3	19.9	4.7	5.4	34.3	6.3	4.2	4.4
Anuradhapura	18.9	18.8	5.7	5.5	36.9	12.3	7.5	7.9
Polonnaruwa	18.1	16.5	4.4	4.7	0.0	7.8	10.7	5.3
Badulla	18.4	18.6	5.4	5.8	0.0	6.0	4.0	3.3
Moneragala	16.0	19.4	3.8	4.6	14.2	5.1	0.7	2.1
Ratnapura	18.7	17.9	5.1	6.0	4.7	6.9	4.5	5.1
Kegalle	12.6	16.7	5.7	6.5	8.9	6.3	2.5	4.6
Sri Lanka	**17.4**	**17.5**	**5.9**	**6.0**	**22.3**	**9.7**	**6.2**	**6.4**

* Provisional

Source : Registrar General's Department

Note : CBR and CDR of the year 2012 are based on usual residence data.
All other indicators are based on place of occurance data.

Table 5. Percentage Distribution of Households in Occupied Housing Units by Main Source of Drinking Water, 2012 *

Province / District	Total [1]	Protected Well Within Premises	Protected Well Outside Premises	Un-protected Well	Tube Well	Tap Within Unit [2]	Tap Within unit but Outside [2]	Tap Outside Premises [2]	Rural water Supply Project	River / Tank/ Stream/ Spring	Other
Sri Lanka	**100.0**	**31.3**	**14.6**	**4.0**	**3.4**	**21.4**	**6.6**	**3.0**	**9.5**	**4.8**	**1.3**
Western Province											
Colombo	100.0	21.2	2.0	0.2	0.3	64.8	4.5	2.6	3.5	0.4	0.6
Gampaha	100.0	51.1	7.1	2.8	5.4	21.3	3.7	3.1	4.5	0.0	0.9
Kalutara	100.0	45.2	15.0	5.8	3.2	20.3	2.5	1.2	5.2	1.2	0.4
Central Province											
Kandy	100.0	13.9	11.6	2.6	2.1	37.8	7.6	3.9	11.8	7.4	1.2
Matale	100.0	21.3	20.0	3.3	5.0	21.0	5.5	2.4	15.8	5.2	0.3
Nuwara Eliya	100.0	3.6	3.9	2.6	1.9	12.8	8.7	7.3	22.3	36.6	0.2
Southern Province											
Galle	100.0	45.6	15.5	6.2	1.1	19.8	5.1	2.4	2.3	1.7	0.4
Matara	100.0	31.8	12.4	6.4	0.6	22.7	8.8	1.2	8.9	6.8	0.3
Hambantota	100.0	12.0	7.5	1.7	2.5	21.1	28.5	4.5	18.3	2.0	1.9
North Western Province											
Jaffna	100.0	36.3	32.3	0.6	11.2	1.5	1.9	8.5	0.9	0.0	6.7
Kilinochchi	100.0	33.5	33.7	25.3	4.5	0.1	0.1	0.0	0.0	0.0	2.8
Mannar	100.0	22.9	26.1	2.0	7.7	6.3	11.4	8.4	0.1	0.0	15.1
Vavuniya	100.0	44.5	19.1	3.7	22.3	1.9	4.6	1.8	0.0	0.0	2.0
Mullativu	100.0	39.1	38.4	16.7	5.1	0.1	0.1	0.2	0.0	0.0	0.3
Eastern Province											
Batticaloa	100.0	56.8	21.5	1.4	9.6	2.4	4.4	0.8	0.9	1.5	0.6
Ampara	100.0	25.4	19.2	5.5	1.3	24.3	15.7	3.9	3.4	0.7	0.6
Trincomalee	100.0	28.4	21.8	3.9	1.4	16.1	16.6	4.2	3.0	0.3	4.3
North Western Province											
Kurunegala	100.0	52.8	24.1	5.2	1.9	4.1	1.1	0.9	8.5	0.9	0.5
Puttalam	100.0	31.1	16.4	1.4	16.0	9.6	6.4	2.7	8.9	0.0	7.1
North Central Province											
Anuradhapura	100.0	21.7	28.4	2.9	2.8	14.9	7.3	4.1	14.9	1.0	1.3
Polonnaruwa	100.0	25.0	21.9	7.5	3.0	9.0	9.5	2.3	19.0	1.9	0.9
Uva Province											
Badulla	100.0	13.1	10.2	5.9	0.6	13.2	6.8	3.8	22.3	23.0	0.9
Moneragala	100.0	21.0	17.0	5.3	3.5	13.0	13.5	4.0	16.4	5.1	1.2
Sabaragamuwa Province											
Ratnapura	100.0	16.5	13.6	5.9	1.8	10.6	9.3	4.1	24.8	12.3	1.1
Kegalle	100.0	31.6	20.4	8.8	0.2	11.3	4.3	2.1	9.3	11.1	0.8

* Provisional

[1] Percentage in total column might not be added to 100 due to rounding errors.

[2] Piped born water distributed through pipe lines by National Water Supply and Drainage board or the local governent institution.

Other includes Bouser, bottle water and other.

Census of Population and Housing, 2012

Population Census 2012, 5% sample

Table 6. Percentage Distribution of Households in occupied housing units by Type of Toilet Facility, 2012*

District	Total [1]	Type of toilet used					Not using a toilet
		Water Seal		Pour flush	Direct Pit	Other	
		Septic Tank	Sewer Tank				
	%	%	%	%	%	%	%
Sri Lanka	100.0	89.4	4.3	2.0	2.5	0.1	1.7
Western Province							
Colombo	100.0	80.7	16.6	1.0	1.1	0.5	0.1
Gampaha	100.0	91.4	4.5	2.3	1.7	0.0	0.1
Kalutara	100.0	95.7	2.6	0.8	0.6	0.0	0.3
Central Province							
Kandy	100.0	91.6	3.6	0.9	3.3	0.0	0.5
Matale	100.0	83.9	4.1	3.2	7.8	0.1	0.8
Nuwara Eliya	100.0	81.1	4.0	5.1	5.5	0.0	4.3
Southern Province							
Galle	100.0	95.0	2.5	1.0	1.2	0.0	0.4
Matara	100.0	95.4	2.4	0.8	1.2	0.0	0.1
Hambantota	100.0	93.5	1.0	1.1	4.2	0.0	0.4
Northern Province							
Jaffna	100.0	89.0	1.7	3.4	0.3	0.1	5.5
Kilinochchi	100.0	63.8	0.8	8.1	2.1	0.0	25.0
Mannar	100.0	88.7	2.9	1.3	0.5	0.1	6.7
Vavuniya	100.0	82.7	2.7	6.3	0.7	0.1	7.6
Mullativu	100.0	64.6	0.8	3.0	6.0	0.2	25.3
Eastern Province							
Batticaloa	100.0	81.4	1.3	3.5	0.8	0.0	13.0
Ampara	100.0	88.4	3.1	3.1	2.5	0.0	2.7
Trincomalee	100.0	88.0	2.9	3.6	2.6	0.1	2.8
North Western Province							
Kurunegala	100.0	94.4	1.1	1.4	2.0	0.0	1.0
Puttalam	100.0	92.1	2.4	2.4	0.3	0.0	2.9
North Central Province							
Anuradhapura	100.0	90.4	1.6	1.5	4.2	0.0	2.3
Polonnaruwa	100.0	87.4	2.3	1.9	4.8	0.1	3.4
Uva Province							
Badulla	100.0	89.7	2.9	2.0	4.7	0.1	0.7
Moneragala	100.0	85.3	3.1	1.5	8.2	0.0	1.7
Sabaragamuwa Province							
Ratnapura	100.0	90.3	3.4	1.9	4.1	0.0	0.5
Kegalle	100.0	90.5	1.3	4.9	2.4	0.2	0.8

* Provisional

[1] Percentage in total column might not be added to 100 due to rounding errors

Source : Census of Population and Housing, 2012

Based on the 5% sample

Table 7. Distribution of Government Medical Institutions and Beds[2] by Regional Director of Health Services Division, December 2012

RDHS Division	Teaching Hospital		Provincial General Hospital		District General Hospital		Base Hospital Type A		Base Hospital Type B		Divisional Hospital Type A		Divisional Hospital Type B		Divisional Hospital Type C		Primary Medical Care Unit and Meternity Homes		Other [1]		Total Hospitals		Beds per 1,000 Population	Central Dispensaries	MOH area
	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds	Ins	Beds			
Colombo	7	7,968		-		-	2	1,011	1	285	1	104	6	418	2	61		-	7	3,597	26	13,444	5.8	28	13
Gampaha	1	1,498		-	2	1,549	1	579	2	288	4	609	1	79	7	221		-	6	1,225	24	6,048	2.6	45	16
Kalutara		-		-	1	876	3	889	1	170	2	199	8	593	6	164		-		-	21	2,891	2.4	9	12
Kandy	3	3,474		-	1	454		-	2	493		-	14	1,031	33	1,048		-	7	122	60	6,622	4.8	28	24
Matale		-		-	1	774	1	299		-		-	4	258	14	373		-		-	20	1,704	3.5	15	12
Nuwera Eliya		-		-	1	428	1	106	1	160	3	326	7	527	13	355		-		-	26	1,902	2.7	22	14
Galle	2	2,131		-		-	2	766	1	112	1	110	8	685	10	248	2	17	2	NR	28	4,069	3.8	26	19
Matara		-		-	1	1,098		-	2	421	2	227	6	477	5	123		-		-	16	2,346	2.9	20	17
Hambantota		-		-	1	359	1	268	2	337		-	8	609	9	277		-	1	NR	22	1,850	3.1	14	12
Jaffna	1	1,311		-		-	2	466	2	283		-	4	319	19	464		-	1	NR	29	2,843	4.9	16	14
Kilinochchi		-		-	1	232		-	1	52		-	1	46	6	110		-		-	9	440	3.9	6	5
Mullaitivu		-		-	1	NR		-	1	NR	3	NR	2	NR	3	NR		-		-	10		0.0	8	5
Vavuniya		-		-	1	635		-	1	196		-		-	8	89		-		-	10	920	5.3	2	4
Mannar		-		-	1	356		-		-		-	5	379	5	96		-		-	11	831	8.4	5	5
Batticoloa	1	931		-		-		-	4	510		-	4	240	8	190	1	41		-	18	1,912	3.6	20	14
Ampara		-		-	1	586		-	2	244		-		-	7	240		-		-	10	1,070	4.8 [1]	16	7
Kalmunai		-		-		-	3	1,017	2	306		-	5	451	8	223	2	56		-	20	2,053		8	13
Trincomalee		-		-	1	505	1	256	2	256		-		-	12	428		-		-	16	1,445	3.8	17	11
Kurunegalee	1	1,835		-		-	1	592	3	756	7	801	13	1,013	21	533	1	10		-	47	5,540	3.4	56	26
Puttalama		-		-	1	581	1	375	1	377	2	250	4	255	11	268		-		-	20	2,106	2.8	27	11
Anuradhapura	1	1,500		-		-		-	3	416	5	496	10	654	21	713		-	1	15	41	3,794	4.4	22	20
Polonnaruwa		-		-	1	804		-	2	250	1	138	4	251	4	134		-		-	12	1,577	3.9	13	7
Badulla		-	1	1,375		-	2	694	1	122	2	179	6	444	30	594	2	22		-	44	3,430	4.2	22	16
Moneragala		-		-	1	392		-	3	361	1	99	5	337	8	225		-		-	18	1,414	3.1	10	11
Ratnapura		-	1	1,123		-	1	441	3	573	7	616	8	418	18	385		-		-	38	3,556	3.3	12	18
Kegalle	1	789		-		-		-	3	714	5	496	1	63	12	184	1	4	2	30	25	2,280	2.7	20	11
Total	18	21,437	2	2,498	17	9,629	22	7,759	46	7,682	46	4,650	134	9,547	300	7,746	9	150	27	4,989	621	76,087	3.8	487	337

[1] Included Kalmunai data

Source : Medical Statistics Unit

Note : Teaching Hospitals, Institute of Cancer, Mental and Dental hospitals are categorized under "Other Hospitals".

NR : Not Responded

Table 8. Beds by Speciality and Regional Director of Health Services Division, December 2012

RDHS Division	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 Unit	Plastic Surgery / Burns Unit	Rheumatology /Rehabilitation	Dental	Others [3]	Total
Colombo	579	2,200	1,616	1,661	1,208	46	14	861	1	1,574	285	96	153	150	511	58	926	195	134	25	12	1,139	13,444
Gampaha	226	1,382	819	665	921	3	534	-	43	229	14	44	13	154	237	2	36	-	-	262	29	435	6,048
Kalutara	430	626	445	518	496	-	-	-	-	43	-	-	3	-	26	14	-	-	-	-	-	290	2,891
Kandy	599	1,649	801	724	1,150	-	87	130	-	157	184	83	65	55	196	43	179	68	-	24	41	387	6,622
Matale	66	679	169	231	339	-	-	-	-	16	-	-	-	16	60	17	-	-	-	-	-	111	1,704
Nuwera Eliya	338	459	206	233	506	-	-	-	-	18	-	-	-	9	31	-	-	-	-	-	-	102	1,902
Galle	303	980	602	460	744	8	-	177	-	38	54	20	25	40	96	44	64	90	-	21	22	281	4,069
Matara	157	631	328	348	537	-	-	-	-	17	30	-	16	-	45	28	40	-	-	8	3	158	2,346
Hambantota	347	527	247	259	341	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	113	1,850
Jaffna	77	898	491	328	504	-	23	69	-	79	-	-	18	-	60	21	95	-	-	-	-	180	2,843
Kilinochchi	-	186	57	59	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	440
Mannar	81	306	64	59	204	-	-	-	-	20	-	-	-	-	35	-	-	-	-	-	-	62	831
Vavuniya	9	194	168	143	224	-	33	-	-	13	-	-	-	25	39	-	46	-	-	-	-	26	920
Batticaloa	139	519	321	303	306	-	10	16	-	31	-	-	5	29	41	14	52	-	-	-	-	126	1,912
Ampara	124	304	135	131	224	8	-	-	-	20	14	-	-	-	33	-	26	-	-	-	8	43	1,070
Kalmunai	117	517	295	412	460	-	-	-	-	17	-	-	1	-	32	-	-	-	-	12	-	190	2,053
Trincomalee	121	480	149	213	326	-	-	-	-	13	-	-	-	-	48	-	16	-	-	-	-	79	1,445
Kurunegala	762	1,634	527	649	899	2	-	103	-	45	44	25	16	29	109	56	120	56	-	52	41	371	5,540
Puttalam	145	636	300	244	476	-	18	-	-	-	-	-	-	-	49	7	33	-	-	-	-	198	2,106
Anuradhapura	565	1,117	322	386	610	-	-	69	-	48	56	56	50	-	31	24	67	16	-	-	-	377	3,794
Polonnaruwa	162	449	217	198	304	20	-	-	-	-	-	-	-	-	49	-	38	-	-	38	-	102	1,577
Badulla	321	882	534	403	654	-	-	104	-	36	49	-	29	48	56	25	58	38	-	26	22	145	3,430
Moneragala	129	479	162	240	288	-	-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	82	1,414
Ratnapura	319	1,055	503	476	753	-	16	19	-	24	19	-	19	22	72	32	58	-	-	-	22	147	3,556
Kegalle	244	615	369	319	509	-	-	-	-	21	-	-	-	33	42	-	-	-	-	-	-	128	2,280
Total	6,360	19,404	9,847	9,662	13,089	87	735	1,548	44	2,459	749	324	413	610	1,948	385	1,854	463	134	468	200	5,304	76,087

Includes:

Source : Medical Statistics Unit

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

[2] Beds in the premature baby units.

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

Table 9. Key Health Personnel, 1986 - 2012

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
1986	2,217	13.7	318	2.0	1,047	6.5	8,019	49.7	189	1.2	966	6.0	3,102	19.2	1,463	9.1
1988	2,316	14.0	355	2.1	1,100	6.6	8,317	50.1	154	0.9	977	5.9	3,209	19.3	1,531	9.2
1990[3]	2,440	15.5	317	2.0	1,074	6.8	8,957	57.1	140	0.9	886	5.6	3,321	21.2	1,638	10.4
1991	2,934	17.0	358	2.1	1,201	7.0	9,934	57.6	101	0.6	914	5.3	3,583	20.8	1,776	10.3
1992	3,345	19.2	381	2.2	1,253	7.2	11,214	64.4	113	0.6	846	5.0	4,108	23.6	2,025	11.6
1993	3,713	21.1	390	2.2	1,305	7.4	11,818	67.1	109	0.6	876	5.0	4,361	24.8	2,172	12.3
1994	4,047	22.7	387	2.2	1,357	7.6	13,060	73.1	117	0.7	928	5.2	4,400	24.6	2,214	12.4
1995	4,577	25.3	421	2.3	1,376	7.6	13,403	74.0	174	1.0	932	5.1	4,383	24.2	2,288	12.6
1996	5,117	27.9	462	2.5	1,397	7.6	13,933	79.1	189	1.0	915	5.0	4,352	23.8	2,393	13.1
1997	5,628	30.1	481	2.6	1,384	7.4	13,815	73.8	145	0.8	901	4.8	4,497	24.0	2,284	12.2
1998	6,427	34.2	521	2.8	1,340	7.1	14,448	77.0	183	1.0	888	4.7	4,578	24.4	2,410	12.8
1999	6,994	36.7	529	2.8	1,340	7.0	14,052	73.8	237	1.2	1,142	6.0	4,625	24.3	2,503	13.1
2000	7,963	41.1	637	3.3	1,349	7.0	14,716	76.0	270	1.4	1,486	7.7	4,798	24.8	2,596	13.4
2001	8,384	44.8	751	4.0	1,343	7.2	15,797	84.4	259	1.4	1,401	7.5	4,654	24.9	2,723	14.5
2002	9,290	48.9	867	4.6	1,326	7.0	16,517	86.9	310	1.6	1,470	7.7	4,819	25.4	2,794	14.7
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	8,874	45.6	915	4.7	1,218	6.3	18,654	95.8	315	1.6	1,397	7.2	4,524	23.2	2,668	13.7
2005	10,198	51.9	954	4.9	1,274	6.5	19,934	101.4	313	1.6	1,512	7.7	4,896	24.9	2,371	12.1
2006	10,279	51.7	1,181*	5.9	1,183	5.9	24,988	125.7	299	1.5	1,535	7.7	5,080	25.5	2,555	12.8
2007	11,023	55.1	1,314*	6.6	1,194	6.0	31,466	157.3	290	1.4	1,740	8.7	6,167	30.8	2,828	14.1
2008	12,479	61.7	858	4.2	1,134	5.6	30,063	148.7	270	1.3	1,475	7.3	5,331	26.4	3,016	14.9
2009	13,737	67.8	1,046	5.1	1,084	5.3	31,297	153.0	264	1.3	1,398	6.8	5,389	26.3	2,768	13.5
2010	14,668	71.0	1,139	5.5	1,107	5.4	35,367	171.2	380	1.8	1,436	7.0	5,477	26.5	2,971	14.4
2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2012	15,910	78.6	1,223	6.0	1,130	5.6	36,486	180.3	332	1.6	1,510	7.5	5,821	28.6	2,605	12.8

* Provisional

Source : Medical Statistics Unit

Rate per 100,000 Population

[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

N/A - Not Available (2011 Analysis is processing)

Note : All PGIM trainees were include in Dental Surgeons category in 2007 based on 2006 estimates which was not corrected. In 2008, this was revised by including PGIM trainees in Medical Officers Category. Therefore the Total Dental Surgeons category has reduced in 2008.

Table 10. Distribution of Health Personnel by Regional Director of Helath Services Division, December 2012

RDHS Division	Medical Officers																		Regional Dental Surgeons	Consultant Dental Surgeons	Hospital Dental Surgeons	P.G.I.M Trainees**	Dental Surgeons [3]
	Administrative Grade (Senior and Deputy Medical Officers)	Specialists (Curative care)	Hospital Medical Officers (D.M.O., S.H.O., H.O., MO in OPD, ect)	Medical Officers in RDHS/MOH/AMOH	School Medical Officers	Medical Officers (Malaria)	Medical Officers (Filaria)	Medical Officers (Venereal Diseases)	Medical Officers (Tuberculosis)	Epidemiologists	Medical Officers (Maternal and Child Health)	Judicial Medical Officers	Medical Officers (Blood Bank)	Internee Medical Officers	P.G.I.M. Trainees **	Other Medical Officers	Medical Officers [2]	Total Medical Officers [1]					
Colombo	83	320	2,649	37	5	0	5	15	0	2	2	20	378	250	383	142	3,888	4,291	2	27	207	7	243
Gampaha	11	159	939	50	0	0	1	3	0	0	0	4	23	135	32	12	1,199	1,369	2	3	77	1	83
Kalutara	11	61	466	27	0	0	1	2	2	2	2	2	21	57	1	43	626	698	2	4	52	1	59
Kandy	16	223	1,023	37	4	1	0	5	1	1	4	5	17	135	162	29	1,424	1,663	9	4	110	20	143
Matale	3	33	196	14	0	2	1	1	1	1	2	3	5	41	1	13	281	317	1	1	24	0	26
Nuwera Eliya	5	34	184	14	1	0	0	1	5	0	0	3	3	42	0	3	256	295	1	0	27	0	28
Galle	10	70	522	31	2	0	2	1	4	1	1	1	25	67	82	8	747	827	2	3	50	0	55
Matara	5	31	300	29	1	0	1	2	2	1	1	1	12	24	1	3	378	414	4	3	29	0	36
Hambantota	3	28	221	14	0	0	0	1	2	1	1	2	7	43	0	1	293	324	1	0	24	0	25
Jaffna	8	49	302	9	0	0	0	0	2	1	1	2	5	56	8	3	389	446	1	1	29	0	31
Mannar	3	12	56	4	0	1	0	0	2	1	1	0	1	0	0	0	66	81	0	1	2	0	3
Mullaitivu	0	0	47	3	0	0	0	0	0	0	0	1	2	0	0	0	53	53	0	0	3	0	3
Vavuniya	1	19	94	14	0	1	0	1	0	1	1	2	4	28	0	6	152	172	1	1	11	1	14
Kilinochchi	0	0	54	4	0	1	0	0	0	0	1	1	2	0	0	0	63	63	1	0	8	0	9
Batticoloa	6	30	190	13	0	1	0	0	1	1	1	0	9	55	0	9	280	316	1	0	23	1	25
Ampara	1	23	205	11	0	1	0	4	4	0	1	1	14	41	1	0	283	307	0	1	17	0	18
Kalmunai	7	19	211	12	0	1	0	1	2	0	1	2	8	12	0	8	258	284	1	0	21	0	22
Trincomalee	5	29	181	13	0	1	0	1	2	1	1	2	4	25	0	2	233	267	1	0	19	1	21
Kurunegala	8	69	617	50	0	0	1	3	0	2	4	5	5	54	6	16	763	840	4	4	77	6	91
Puttalam	3	21	258	24	0	1	0	2	2	0	18	2	5	54	0	5	371	395	2	3	36	0	41
Anuradhapura	3	31	350	31	0	0	0	3	0	0	0	1	1	0	0	7	393	427	4	3	41	0	48
Polonnaruwa	3	29	181	14	0	2	0	1	0	0	1	1	1	40	0	7	248	280	2	0	26	0	28
Badulla	5	46	366	20	0	2	0	2	0	1	3	3	13	52	0	4	466	517	3	0	49	2	54
Moneragala	4	18	150	16	0	1	0	1	1	1	1	1	3	32	0	26	233	255	2	0	23	0	25
Ratnapura	5	60	396	27	0	1	0	2	5	0	2	2	8	50	3	0	496	561	2	3	55	0	60
Kegalle	4	35	306	19	0	0	0	0	4	1	0	8	11	53	0	7	409	448	1	1	30	0	32
Total	213	1,449	10,464	537	13	17	12	52	42	19	50	75	587	1,346	680	354	14,248	15,910	50	63	1,070	40	1,223

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

[1] Total Medical Oficers

[2] Total Medical Officers, Exclude : Administrative and Specialists

[3] Total Dental Suegeons

Continued

Source : Medical Statistics Unit

Table 10. Distribution of Health Personnel by Regional Director of Healh Services Division, December 2012

RDHS Division	Registered/Assistant Medical Officers	Matrons	Ward Sisters	Principals/Sister Tutors	Nursing Officers	Supervising Public Health Nursing Sisters/Public Health Nursing Sisters	Pupil Nurses	Total Nurses	MRO	PPO	SSO	MRA	PPA	Total Medical Recording Officers	Pharmacists	Medical Laboratory Technologists	Radiographers	Physiotherapists	Occupational Therapists	School Dental Therapists	Dental Technician	Entomological Assistant
Colombo	160	50	315	81	7,790	46	1,161	9,443	7	14	0	9	42	72	344	504	208	138	32	69	22	23
Gampaha	112	11	92	38	2,260	34	439	2,874	3	0	0	7	29	39	109	92	36	50	18	35	1	0
Kalutara	59	11	72	1	1,296	26	0	1,406	1	2	0	10	21	34	45	56	16	7	2	26	1	3
Kandy	152	13	117	22	3,072	23	500	3,747	3	42	15	23	9	92	125	119	69	34	7	32	6	10
Matale	36	5	18	0	513	12	195	743	1	7	14	12	4	38	28	23	6	4	1	12	0	2
Nuwera Eliya	23	4	5	0	432	10	0	451	2	8	1	7	3	21	19	20	7	3	1	6	0	0
Galle	76	10	49	1	1,682	29	429	2,200	2	2	0	4	49	57	70	66	27	19	4	32	3	4
Matara	50	3	37	6	1,004	11	85	1,146	0	0	0	7	25	32	42	39	11	10	3	22	0	5
Hambantota	12	5	32	5	742	8	275	1,067	1	0	0	1	18	20	34	32	12	6	2	12	0	7
Jaffna	36	3	40	8	491	1	285	828	0	2	0	2	0	4	42	24	17	8	1	7	0	1
Mannar	6	1	6	0	109	1	0	117	0	0	0	0	22	22	7	7	2	2	0	0	0	1
Mullaitivu	0	0	1	0	37	0	0	38	0	0	0	1	6	7	4	2	2	0	0	0	0	1
Vavuniya	0	2	17	0	182	4	0	205	0	1	0	0	0	1	12	14	5	2	1	2	0	2
Kilinochchi	2	0	5	0	58	0	0	63	0	0	0	0	0	0	4	2	2	2	0	0	0	2
Batticoloa	22	10	40	8	506	14	205	783	0	8	0	1	16	25	33	28	13	8	3	2	0	0
Ampara	5	5	6	19	356	4	0	390	0	0	0	0	6	6	28	28	9	4	0	5	0	3
Kalmunai	18	3	10	1	497	6	0	517	0	11	0	3	4	18	31	31	12	3	0	2	0	3
Trincomalee	13	3	8	0	375	0	0	386	0	1	0	0	1	2	23	22	6	6	1	1	1	2
Kurunegala	113	17	102	45	2,026	33	604	2,827	5	1	0	26	46	78	81	85	25	15	0	42	3	1
Puttalam	30	5	40	0	554	8	0	607	1	0	0	0	17	18	33	39	8	5	0	9	1	3
Anuradhapura	36	5	34	17	1,061	6	354	1,477	1	0	0	2	16	19	45	50	19	9	2	10	2	0
Polonnaruwa	13	5	20	0	503	6	0	534	0	0	0	2	11	13	33	28	10	9	1	9	0	4
Badulla	41	13	32	18	1,064	14	229	1,370	0	4	1	14	26	45	54	52	23	14	3	13	1	4
Moneragala	9	2	12	0	411	10	0	435	0	0	0	17	16	33	24	23	9	4	0	10	0	4
Ratnapura	51	5	47	21	1,252	16	507	1,848	1	2	0	4	15	22	52	52	22	13	3	18	1	5
Kegalle	55	7	39	1	927	10	0	984	0	1	1	7	26	35	43	40	12	6	0	16	0	1
Total	1,130	198	1,196	292	29,200	332	5,268	36,486	28	106	32	159	428	753	1,365	1,478	588	381	85	392	42	91

Continued

Source : Medical Statistics Unit

Table 10. Distribution of Health Personnel by Regional Director of Health Services Division, December 2012

RDHS Division	Opthaimic Technician	Food and Drug Inspectors	Supervising Public Health Inspectors	Public Health Inspectors	Supervising Public Health Midwives.	Public Health Midwives	Hospital Midwives	ECG Recordists	EEG Recordists	Microscopists	Dispensers	Public Health Field Officers	Froeman	Photograph Technician	Audiology Technician	Workmen Technician	Orthapidic Technician	Cinema Technician	Assistant Technician	Attendants	Other Reported
Colombo	38	17	11	188	3	352	179	142	26	42	103	14	58	1	2	0	5	2	1	1,006	6,215
Gampaha	13	3	10	120	3	549	157	20	4	18	74	24	0	0	1	0	2	1	0	487	2,457
Kalutara	7	4	6	56	1	356	127	11	2	14	43	12	0	0	1	0	0	2	2	411	814
Kandy	9	3	13	86	12	470	224	22	6	10	85	12	0	0	3	0	0	0	0	736	3,969
Matale	4	1	2	41	9	177	58	5	0	9	43	13	0	0	0	0	0	0	0	161	600
Nuwera Eliya	3	1	2	32	6	176	95	4	1	2	43	1	0	0	0	0	0	0	0	239	937
Galle	9	2	4	72	8	300	92	18	3	2	61	7	0	0	1	0	0	0	0	282	2,004
Matara	5	2	10	61	13	276	140	9	2	13	45	15	0	0	1	0	0	0	0	303	1,194
Hambantota	2	1	8	50	8	196	106	8	0	8	36	20	4	0	0	0	0	1	0	215	1,028
Jaffna	1	1	14	49	12	143	85	0	1	4	55	15	1	0	0	0	0	0	0	473	920
Mannar	0	1	3	15	2	50	38	0	0	0	13	5	0	0	0	0	0	0	0	80	354
Mullaitivu	0	0	2	9	4	31	14	0	0	0	5	5	0	0	0	0	0	0	0	58	196
Vavuniya	2	1	4	17	3	55	32	2	0	0	14	7	0	0	0	0	0	0	0	85	499
Kilinochchi	0	1	6	13	9	83	17	0	0	1	16	7	0	0	0	0	0	0	0	53	331
Batticoloa	0	3	10	59	13	129	105	11	1	3	33	32	2	0	2	0	0	0	0	166	1,116
Ampara	3	1	4	33	9	86	44	8	1	2	22	14	0	0	0	0	0	0	0	117	801
Kalmunai	1	1	9	56	8	144	122	13	1	9	26	27	0	0	0	0	0	0	0	108	981
Trincomalee	4	0	10	41	9	125	75	4	0	5	27	25	0	0	0	0	0	0	0	225	716
Kurunegala	6	2	18	102	20	474	249	14	3	35	108	39	0	0	1	0	0	0	0	647	3,002
Puttalam	4	0	7	43	9	208	60	7	3	17	42	26	0	0	0	0	0	0	0	94	661
Anuradhapura	2	2	13	82	24	282	138	9	3	28	75	27	0	0	1	0	0	0	0	375	1,351
Polonnaruwa	3	1	6	33	5	116	50	7	0	9	24	11	0	0	0	0	0	0	0	155	737
Badulla	9	0	12	59	12	258	129	10	3	11	78	5	0	0	0	0	0	0	0	243	1,864
Moneragala	2	1	6	34	11	177	66	5	0	7	41	9	0	0	0	0	0	0	0	197	786
Ratnapura	9	2	14	84	10	333	136	9	1	18	53	8	0	0	0	0	0	0	0	383	1,750
Kegalle	4	2	12	75	8	275	67	54	4	8	46	14	0	0	0	0	0	0	0	247	1,172
Total	140	53	216	1,510	231	5,821	2,605	392	65	275	1,211	394	65	1	13	0	7	6	3	7,546	36,455

Source : Medical Statistics Unit

Table 11. Distribution of Specialists in Curative Care Services[1] by Regional Director of Health Services Divisions, December 2012

RDHS Division	General Physician	General Surgeon	Obstetricians & Gynaecologists	Cardiologist	Chest Physician	Thoracic Surgeons	Neurologist	Neuro Surgeons	Dermatologists	Rheumatologists	Pshychiatrists	Paediatricians	Peadiatric Surgeons	ENT Surgeons	Eye Surgeons	Orthopadic Surgeons	Plastic Surgeons	Genito Urinary Surgeons	Anaesthesiologists	Histo-Pathologists / Chemical Pathologists	Haematologists	Bacteriologists/Microbiologists	Biochemist	Oncologists / Radiotherapists	Oncology Surgeons	Radiologists	Venereologists	Mycologists	Public Health / Community Health	Specialist Dental Surgeons-Orthodontists	Specialist Dental Surgeons-	Others [2]
Colombo	50	39	38	16	0	4	9	4	12	6	16	37	4	9	17	10	7	4	48	27	8	14	6	11	4	27	2	0	12	5	12	58
Gampaha	23	13	11	2	4	2	2	0	4	5	9	18	0	3	6	2	0	1	9	9	5	3	0	0	0	6	0	0	5	2	2	14
Kalutara	6	4	6	1	1	0	1	0	2	1	2	7	0	2	3	1	0	0	4	3	2	1	0	0	0	2	2	0	0	1	1	4
Kandy	29	20	18	6	2	3	2	1	4	2	13	22	4	4	6	3	3	3	16	12	3	1	1	2	1	10	1	0	1	2	1	15
Matale	4	4	4	0	1	0	0	0	2	0	2	3	0	1	2	0	0	0	3	2	1	0	0	0	0	2	0	0	0	0	1	1
Nuwera Eliya	4	3	4	0	1	0	0	0	1	1	1	3	1	1	2	1	0	0	2	2	1	0	0	0	1	2	0	0	0	0	0	0
Galle	18	11	12	1	0	2	2	1	3	1	3	15	1	2	4	2	0	1	10	7	2	2	2	2	1	4	0	0	3	1	1	5
Matara	5	4	3	1	0	0	1	0	1	1	1	5	0	1	1	1	0	0	2	1	1	1	0	0	0	1	0	0	0	1	1	5
Hambantota	6	4	5	0	0	0	0	0	2	0	1	3	0	1	1	0	0	0	3	1	1	0	0	0	0	2	0	0	0	0	0	1
Jaffna	8	4	4	2	1	0	1	0	2	1	1	3	0	2	2	1	0	1	4	1	1	0	0	2	1	4	0	0	0	1	0	3
Kilinochchi	2	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Vavuniya	3	2	2	0	0	0	1	0	0	0	1	2	0	1	1	1	0	0	1	1	1	0	0	0	0	1	0	0	0	0	1	1
Mannar	2	2	2	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Batticoloa	5	3	3	1	0	0	1	0	1	0	0	2	0	1	1	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	1
Ampara	4	2	3	0	0	0	0	0	1	0	0	3	0	1	1	1	0	0	1	1	0	0	0	0	0	3	0	0	0	0	1	0
Kalmunai	6	5	4	0	0	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Trincomalee	6	5	5	0	0	0	0	0	2	0	1	3	0	1	2	1	0	0	2	1	1	0	0	0	0	2	0	0	0	0	0	1
Kurunegala	10	6	8	1	1	0	1	0	3	1	1	8	0	2	1	1	0	1	4	2	2	1	0	1	1	3	0	0	0	2	2	2
Puttalam	6	4	5	0	0	0	0	0	3	0	2	4	0	1	2	1	0	0	3	2	1	0	0	0	0	2	0	0	0	2	0	1
Anuradhapura	8	4	3	1	0	0	1	1	1	1	1	3	0	1	1	1	0	1	3	1	1	1	0	1	0	1	0	0	0	1	1	2
Polonnaruwa	4	2	3	1	0	0	0	0	1	1	1	3	0	1	1	1	0	0	2	1	1	1	0	0	0	1	0	0	0	0	1	3
Badulla	8	4	4	1	1	1	1	1	3	0	2	6	0	2	1	1	0	1	4	2	1	1	0	1	1	3	0	0	0	1	1	1
Moneragala	4	2	2	0	0	0	0	0	1	0	1	4	0	1	1	0	0	0	2	1	1	0	0	0	0	1	0	0	0	0	0	0
Ratnapura	7	6	6	1	0	0	1	0	2	1	2	7	0	2	2	1	0	1	4	2	1	1	0	1	1	2	0	0	0	1	1	5
Kegalle	6	4	4	0	1	0	0	0	2	0	1	5	0	2	2	1	0	0	3	1	1	0	0	0	0	1	0	0	0	0	1	1
Total	234	159	160	35	13	12	24	8	54	22	63	169	10	43	61	33	10	14	132	83	36	27	9	21	12	82	5	0	21	20	29	124

Includes:

Source : Medical Statistics Unit

[1] Specialists of the Faculties of Medicine working in Teaching Hospitals.

[2] Virologists, Consultant JMO's, Immunologists, Parasitalogists, Nepharalogists & Neonatalogists.

Table 12. National Expenditure, Health Expenditure and GNP, 2007 - 2012

Item	2007	2008	2009	2010	2011	2012
National Expenditure (Rs million)	885,952	996,126	1,747,064	1,751,113	1,961,053	2,192,234
Health Expenditure (Rs million)	63,464	68,604	67,448	80,027	82,179	89,291
Health Expenditure as a percent of National Expenditure	4.9	6.9	3.9	4.6	4.2	4.1
Per Capita Health Expenditure (Rs)	3,171	3,393	3,298	3,875	3,938	4,392
GNP(Rs billion)	3,540	4,312	4,769	5,530	6,472	7,434
Health Expenditure as a percent of GNP	1.79	1.59	1.41	1.45	1.26	1.20

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

Table 13. Summary of Health Expenditure and Source of Fund, 2007 - 2012

Item	2007	2008	2009	2010	2011	2012
Health Expenditure						
Recurrent Expenditure	54,737	57,956	57,953	67,213	69,801	74,184
Capital Expenditure	8,727	10,649	9,495	12,814	12,378	15,107
	63,464	68,605	67,448	80,027	82,179	89,291
Source of Fund						
Consolidated Fund	60,931	65,677	65,286	74,048	79,433	81,781
Foreign Aid	2,533	2,927	2,162	5,979	2,745	7,510
	63,464	68,604	67,448	80,027	82,178	89,291

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

Table 14. Summary of Health Expenditure by programme, 2012

Programme	Health Expenditure 2012		
	Ministry Of Health	Provincial Health	Total
Recurrent Expenditure			
01.Operational Activities	**51,530.22**		
01. Ministr's Office	79.52		
02. Ministry Administration and Establishment Services	854.13		
03. Medical Supply Division	16,974.13		
04. National Drugs Quality Control Unit	37.85		
06. Teaching Hospital Maintenance	15,600.92		
07. District General and Base Hospital Maintenance	10,587.63		
08 Special Hospitals and Treatment Units Maintenance	5,666.24		
09. Other Hospital Maintenance	774.02		
10. Co-operated Hospitals	955.78		
02. Development Activities	**6,328.72**		
11. Human Resources Development	4,378.49		
14. Health Promotion and Diseases Prevention	578.58		
16. National Nutrition Programme	1,189.05		
17. Medical Research	182.60		
Total	**57,858.94**	**16,325.00**	**74,183.94**
Capital Expenditure			
01.Operational Activities	**215.98**		
01. Ministr's Office	14.29		
02. Ministry Administration and Establishment Services	93.62		
03. Medical Supply Division	26.80		
10. Co-operated Hospitals	81.27		
02. Development Activities	**13,431.10**		
11. Human Resources Development	68.68		
12. Relief and Reconstruction in Tsunami Affected Areas	15.86		
13. Hospital Development Projects	11,754.60		
14. Health Promotion and Diseases Prevention	597.57		
15. Control Of Communicable and Non Communicable diseases	927.08		
16. National Nutrition Programme	22.05		
17. Medical Research	45.26		
Total	**13,647.08**	**1,460.00**	**15,107.08**
Total Health Expenditure			
01.Operational Activities	**51,746.20**		
01. Minister's Office	93.81		
02. Ministry Administration and Establishment Services	947.75		
03. Medical Supply Division	17,000.93		
04. National Drugs Quality Control Unit	37.85		
06. Teaching Hospital Maintenance	15,600.92		
07. District General and Base Hospital Maintenance	10,587.63		
08. Special Hospitals and Treatment Units Maintenance	5,666.24		
09. Other Hospital Maintenance	774.02		
10. Co-operated Hospitals	1,037.05		
02. Development Activities	**19,759.82**		
11. Human Resources Development	4,447.17		
12. Relief and Reconstruction in Tsunami Affected Areas	15.86		
13. Hospital Development Projects	11,754.60		
14. Health Promotion and Diseases Prevention	1,176.15		
15. Control Of Communicable and Non Communicable D	927.08		
16. National Nutrition Programme	1,211.10		
17. Medical Research	227.86		
Total	**71,506.02**	**17,785.00**	**89,291.02**

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

Table 15. Indoor Morbidity and Mortality Statistics by Broad Disease Groups, 2012

	Disease Group	Total*	Live Discharges (%)									Deaths
			Sex		Age Group							
			Male	Female	under 1	1-4	5-16	17-49	50-69	70+	Not Known	
1	Intestinal infectious diseases (A00-A09)	129,360	48.7	51.3	10.6	24.4	17.0	25.3	14.7	7.9	0.1	50
2	Tuberculosis (A15-A18)	7,929	70.9	29.1	0.3	0.9	3.0	41.7	41.8	11.8	0.4	306
3	Other bacterial diseases (A20-A49)	15,842	68.0	32.0	16.1	8.0	8.6	41.0	20.6	5.5	0.2	2,774
4	Infections with sexual mode of transmission (A50-A64)	543	46.8	53.2	1.1	2.8	7.2	65.6	10.3	4.8	8.3	-
5	Viral diseases (A80-B34 , P35.0)	318,090	54.7	45.3	4.9	13.8	19.3	43.6	13.9	4.5	0.0	241
6	Malaria (B50-B54)	124	66.9	33.1	0.8	1.6	16.9	56.5	20.2	4.0	0.0	-
7	Helminthiases (B76,B77,B79,B80)	238	53.4	46.6	12.2	34.9	33.2	14.3	4.6	0.8	0.0	-
8	Other infectious and parastic diseases	8,536	52.3	47.7	4.4	13.0	18.1	40.6	18.2	5.3	0.4	3
9	Neoplasms (C00-D48)	95,729	44.1	55.9	0.3	2.4	4.4	29.7	49.6	13.4	0.1	4,519
10	Iron dificiency anaemias (D50)	5,702	37.7	62.3	0.8	4.1	10.4	36.3	30.1	18.1	0.1	6
11	Haem. con. and other diseases of blood and ... (D51-D89)	22,522	47.8	52.2	2.3	9.1	24.6	31.1	19.9	12.8	0.1	100
12	Diabetes mellitus (E10-E14)	78,900	45.4	54.6	0.0	0.1	1.1	26.9	53.8	17.9	0.2	675
13	Malnutrition and vitamin deficiencies (E40-E46,E50-E56)	1,547	47.9	52.1	1.2	6.5	8.5	29.5	38.6	15.5	0.2	10
14	Oth eno, nutr and metabo... (E00-E07,E15-E34,E58-E89)	24,916	33.9	66.1	1.4	2.0	5.4	40.7	34.5	14.8	1.2	120
15	Mental and behavioural disorders (F00-F99)	45,380	57.0	43.0	0.0	0.2	3.6	64.4	26.0	5.4	0.4	-
16	Diseases of the nervous system (G00-G98)	66,941	50.7	49.3	2.7	6.0	12.3	43.5	25.2	10.0	0.2	590
17	Diseases of the eye and adnexa (H00 - H59)	141,879	49.4	50.6	0.9	2.7	6.6	22.7	42.9	24.2	0.1	-
18	Dis of the ear.. (H60-H61,H65-H74,H80-H83,H90-H95)	37,577	49.0	51.0	4.5	13.1	19.7	36.5	19.3	6.8	0.1	-
19	Rheum. fever and rheum. heart dis. (I00-I02,I05-I09)	3,402	37.1	62.9	-	1.0	13.6	40.8	31.8	12.2	0.5	55
20	Hypertensive diseases (I10-I15)	98,869	41.7	58.3	-	0.0	0.0	20.2	48.1	31.3	0.4	524
21	Ischaemic heart disease (I20-I25)	100,611	55.2	44.8	-	0.0	0.2	20.0	52.5	27.1	0.2	5,619
22	Other heart diseases (I26-I51)	38,634	52.1	47.9	0.3	0.3	1.2	23.2	44.2	30.6	0.2	3,515
23	Cerebroavascular disease (I60-I69)	38,209	60.0	40.0	0.1	0.1	0.4	12.3	45.8	41.0	0.4	3,418
24	Other diseases of the circulatory system (I70-I84)	40,059	62.1	37.9	0.1	0.5	0.8	42.6	42.5	13.3	0.3	161
25	Influenza (J10-J11)	1,560	48.9	51.1	7.6	15.8	19.4	32.1	16.3	8.8	0.0	7
26	Pneumonia (J12-J18)	23,679	54.7	45.3	11.1	16.4	12.9	22.0	24.3	13.2	0.1	2,233
27	Other dise. of the upper respir. tract (J00-J06,J30-J39)	127,489	51.4	48.6	10.6	22.3	20.0	27.3	13.4	6.2	0.2	48
28	Diseases of the resp. system exclu... (J20-J22, J40-J98)	435,298	53.0	47.0	8.5	14.3	14.2	22.0	25.1	15.7	0.2	2,830
29	Diseases of teeth and supporting structure (K00-K014)	16,640	55.7	44.3	0.9	10.2	21.9	40.8	20.3	5.7	0.2	-
30	Diseases of the gastrointestional tract (K20-K92)	275,949	54.2	45.8	0.9	3.2	10.6	47.2	27.6	10.3	0.1	2,111
31	Diseases of skin ad subcutaneous tissue (L00-L08,L10-L98)	197,183	57.3	42.7	2.0	7.3	11.3	38.5	29.5	11.3	0.1	24
32	Disorders of the musculoskeletal system (M00-M99)	160,524	52.4	47.6	0.2	1.1	8.0	45.8	32.3	12.4	0.2	54
33	Diseases of the urinary system (N00-N39)	203,770	55.6	44.4	1.8	4.3	7.6	46.0	27.9	12.2	0.1	2,456
34	Diseases of breast (N60-N64)	11,287	10.8	89.2	1.1	1.2	4.0	69.3	19.8	4.5	0.0	1
35	Diseases of the male genital organs (N40-N50)	21,320	100.0	0.0	1.0	8.0	13.7	32.8	26.1	18.3	0.1	3
36	Disor. of female genito-urinary sys. (N70-N98, N99.2, N99.3)	84,460	-	100.0	0.1	0.3	2.2	72.7	20.9	3.8	-	8
37	Abortions (O00-O08)	51,229	-	100.0	-	-	0.6	99.4	-	-	-	-
38	False labour and those admitted... (O47)	10,018	-	100.0	-	-	0.8	99.2	-	-	-	-
39	Other obstetric conditions	262,349	-	100.0	-	-	0.4	99.6	-	-	-	47
40	Single sponteaneous dilivery (O80)	224,944	-	100.0	-	-	0.3	99.7	-	-	-	-
41	Slow fetal growth, fetal malnutrition and... (P05-P07)	7,182	51.7	48.3	100.0	-	-	-	-	-	-	696
42	Other conditions originating in the perinatal period	31,753	53.1	46.9	100.0	-	-	-	-	-	-	768
43	Congenital malformations deformations... (Q00-Q99)	11,344	56.6	43.4	33.3	66.7	-	-	-	-	-	537
44	Signs, symptoms and abnormal clinical findings (R00-R99)	467,557	49.7	50.3	3.6	7.9	12.4	41.3	24.1	10.5	0.1	1,754
45	Traumatic injuries (S00-T19, W54)	880,394	66.1	33.9	0.8	7.2	17.3	50.5	18.2	5.7	0.2	1,472
46	Burns and corrosion (T20-T32)	15,788	56.4	43.6	2.8	22.8	17.0	40.9	12.5	4.0	0.1	281
47	Toxic effects of pesticides (T60.0,T60.1-T60.9)	23,478	60.0	40.0	0.4	3.6	10.5	71.2	11.8	2.4	0.2	606
48	Snake bites (T63.0)	41,538	60.1	39.9	0.4	3.1	12.4	55.3	24.0	4.7	0.2	76
49	Tox. effe. of ot. sub. oth tha.. (T36-T59,T61-T62,T63.1-T65)	60,915	46.1	53.9	1.0	8.2	16.1	61.8	10.4	2.2	0.2	283
50	Effects of unspecified external causes... (T33-T35,T66-T79)	46,367	54.1	45.9	1.8	7.5	18.7	46.3	19.4	6.2	0.1	85
51	Complications of surgical and medical care... (T80-T88)	8,080	53.0	47.0	3.2	7.9	12.6	42.1	25.4	8.8	0.1	14
52	Sequelae of injuries, poisoning and of other... (T90-T98)	4,128	61.6	38.4	1.7	5.5	11.6	50.1	23.2	7.8	0.1	12
53	Persons encountering health services.... (Z00-Z13,Z40-Z54)	445,827	51.4	48.6	4.0	6.5	11.9	41.1	25.3	11.1	0.1	25
54	Sterilizations (Z30.2)	13,101	17.4	82.6	-	-	-	94.6	5.4	-	-	-
55	Undiagnosed/Uncoded (245)	353,739	52.9	47.1	3.3	5.1	9.1	44.7	27.5	10.2	0.2	3,072
	Total	5,840,429	48.6	51.4	3.4	6.8	10.9	45.9	23.0	9.8	0.1	42,189

* Total = (Number of Live Discharges + Deaths)

Source : Medical Statistics Unit

Table 16. Trends in Hospital Morbidity and Mortality by Broad Disease Groups, 2004 - 2012

	Disease Group by International Classification of Diseases (10th Revision)	Cases per 100,000 population (Morbidity)								Cases per 100,000 population (Mortality)							
		2004	2005	2006	2007	2008	2009	2010	2012	2004	2005	2006	2007	2008	2009	2010	2012
1	Certain infectious and parasitic diseases	2,094.2	1,693.8	2,153.6	2,034.8	2,477.8	2,976.1	2,693.2	2,364.5	12.8	13.3	11.5	12.3	13.7	15.5	17.2	16.6
2	Neoplasms	301.7	282.2	289.7	329.0	359.2	368.8	403.2	470.9	15.8	14.0	16.3	17.5	17.2	18.5	21.5	22.2
3	Diseases of the blood & blood- forming organs & certain disorders involving the immune mechanism	75.6	83.6	84.7	95.7	97.2	113.4	124.6	138.8	0.5	0.4	0.5	0.3	0.4	0.5	0.6	0.5
4	Endocrine, nutritional and metabolic diseases	328.1	348.7	377.5	401.6	394.8	455.3	465.1	518.3	3.1	4.0	3.4	3.2	3.3	4.0	4.0	4.0
5	Mental and behavioural disorders	199.8	215.7	211.1	201.6	199.8	195.2	213.7	223.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Diseases of the nervous system	249.3	250.2	274.7	293.3	290.0	308.4	313.8	329.3	2.3	2.4	2.7	2.7	2.6	3.2	3.0	2.9
7	Diseases of the eye and adnexa	385.3	418.6	458.1	512.0	580.7	648.4	646.7	697.9	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0
8	Diseases of the ear and mastoid process	92.5	96.5	108.9	129.4	141.2	161.9	168.9	184.9	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0
9	Diseases of the circulatory system	1,188.2	1,236.0	1,266.6	1,364.6	1,382.9	1,436.7	1,490.1	1,573.1	52.4	52.6	55.6	59.9	59.0	60.6	63.1	65.4
10	Diseases of the respiratory system	2,243.3	2,139.2	2,536.2	2,399.0	2,745.5	2,910.3	2,873.7	2,892.7	18.8	20.2	18.7	18.5	25.0	21.9	24.1	25.2
11	Diseases of the digestive system	1,062.4	1,080.5	1,132.5	1,188.1	1,190.2	1,295.6	1,375.5	1,439.3	15.6	14.3	11.3	12.1	12.4	12.3	12.0	10.4
12	Diseases of the skin and subcutaneous tissue	597.5	591.7	664.7	730.5	725.6	874.4	901.7	970.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
13	Diseases of the musculoskeletal system and connective tissue	574.0	585.2	604.8	614.4	643.0	689.3	708.3	789.7	0.2	0.6	0.6	0.2	0.2	0.3	0.2	0.3
14	Diseases of the genitourinary system	1,185.0	1,155.4	1,254.8	1,325.8	1,273.8	1,411.0	1,506.8	1,578.3	6.6	6.5	7.8	9.1	9.1	10.7	11.1	12.1
15	Pregnancy, childbirth and the puerperium [1]	3,726.0	3,689.4	4,241.8	4,521.3	4,316.0	4,528.6	4,613.9	5,299.6	4.2	3.5	0.9	1.4	1.5	1.1	1.0	0.9
16	Certain conditions originating in the perinatal period [2,3]	9,514.7	8,630.2	-	-	-	-	-	9,188.4	444.2	417.3	-	-	-	-	-	222.2
17	Congenital malformations, deformations and chromosomal abnormalities	56.6	59.8	59.9	63.9	64.1	58.5	61.9	55.8	2.5	2.4	2.7	2.8	3.0	2.9	3.1	2.6
18	Symptoms,signs and abnormal clinical and laboratory findings not elsewhere classified	1,320.7	1,317.9	1,545.5	1,633.4	1,827.6	2,180.2	2,143.7	2,300.1	8.9	9.0	7.7	9.1	8.3	10.5	9.7	8.6
19	Injury, poisoning and certain other consequences of external causes	3,361.5	3,460.6	3,809.0	4,090.0	4,200.6	4,585.4	4,832.9	5,316.3	17.0	19.6	17.4	17.1	14.8	17.2	15.2	13.9

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

[2] Per 100,000 infant population.

[3] Not calculated for the year 2006 - 2010 since infant population was not available.

Source: Medical Statistics Unit

Table 17. Trends in Hospitalization and Hospital Deaths of Selected Diseases, 2003 - 2012

Disease and ICD Code		Number of Hospitalization per 100,000 Population									Number of Deaths per 100,000 Population								
		2003	2004	2005	2006	2007	2008	2009	2010	2012	2003	2004	2005	2006	2007	2008	2009	2010	2012
Intestinal infectious diseases	(A00-A09)	622.5	668.5	670.7	692.9	706.8	627.5	791.6	732.4	634.4	0.6	0.9	2.2	0.4	0.4	0.4	0.5	0.4	0.2
Tuberculosis	(A15-A19)	42.2	58.0	43.1	37.1	35.2	34.9	38.3	48.7	39.0	1.8	3.3	1.7	1.4	1.4	1.4	1.4	2.2	1.5
Diphtheria	(A36)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Whooping cough	(A37)	0.8	-	-	0.7	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-
Septicaemia	(A40, A41)	16.0	16.7	18.2	20.1	20.3	23.7	27.1	28.2	33.6	4.9	5.9	5.9	7.1	8.5	9.0	10.2	11.5	12.6
Rabies	(A82)	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1
Measles	(B05)	1.3	0.7	0.7	0.5	0.7	0.7	0.8	0.7	0.4	-	-	-	-	-	-	-	-	-
Viral hepatitis	(B15-B19)	23.8	19.2	18.5	20.1	33.1	15.2	45.3	14.5	15.9	0.1	0.1	-	0.1	-	-	-	-	-
Malaria	(B50-B54)	68.4	44.8	24.4	11.4	5.2	3.1	5.2	2.9	0.6	0.1	0.1	-	-	-	-	-	-	-
Helminthiasis	(B76, B77, B79, B80)	6.6	7.1	4.2	2.3	1.5	2.0	2.4	1.1	1.2	-	-	-	-	-	-	-	-	-
Diabetes mellitus	(E10-E14)	231.1	246.8	265.2	296.8	307.3	296.7	343.9	357.2	388.1	2.9	2.5	3.4	3.0	2.7	2.9	3.5	3.3	3.3
Nutritional deficiencies	(E40-E46, E50-E56)	10.9	8.8	11.7	6.9	7.2	7.9	9.1	6.5	7.6	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.0
Anaemias	(D50-D64)	67.5	62.5	69.6	68.7	74.5	77.2	87.8	96.6	105.6	0.4	0.5	0.3	0.4	0.2	0.3	0.4	0.4	0.3
Hypertensive disease	(I10-I15)	444.1	417.2	429.1	480.4	469.8	466.4	478.5	476.9	486.4	2.9	2.7	3.6	3.0	2.9	2.8	2.6	3.4	2.6
Ischaemic heart disease	(I20-I25)	341.7	336.4	353.9	399.9	427.1	423.0	450.4	478.2	494.9	18.8	19.2	19.1	20.7	22.7	22.1	23.7	24.8	27.6
Asthma	(J45)	921.4	832.1	817.3	910.4	893.5	970.2	973.8	948.2	928.0	3.6	4.3	4.3	3.8	3.6	4.1	3.3	3.7	3.1
Diseases of the liver	(K70-K76)	126.9	119.8	106.5	85.8	87.3	86.2	84.3	85.1	77.5	14.0	13.5	11.6	9.5	10.3	10.5	10.1	9.8	8.3
Abortions[1]	(O00-O08)	777.0	809.1	734.9	841.7	859.4	870.5	878.0	836.1	959.3	0.1	0.2	0.4	0.1	0.1	0.1	0.1	-	-

[1] Rate per 100,000 females of the reproductive age group

Source: Medical Statistics Unit

Table 18. Leading Causes of Hospitalization, 2012

Rank Order	ICD Code (10th Revision)	Causes of Hospitalization	Number of Cases	Proportionate Morbidity	Rate per 100,000 Population.
1	S00-T19	Traumatic injuries	811,725	17.0	3,993.1
2	R00-R99	Symptoms, signs and abnormal clinical and laboratory findings	467,557	9.8	2,300.1
3	J20-J22, J40-J98	Diseases of the respiratory system,excluding diseases of upper respiratory tract	435,298	9.1	2,141.4
4	A80-B34	Viral diseases	318,083	6.7	1,564.8
5	K20-K92	Diseases of the gastrointestinal tract	275,949	5.8	1,357.5
6	O10-O46, O48-O75,O81-O99, Z35	Direct and indirect obstetric causes	231,768	4.9	1,140.1
7	N00-N39	Diseases of the urinary system	203,770	4.3	1,002.4
8	L00-L99	Diseases of the skin and subcutaneous tissue	197,183	4.1	970.0
9	M00-M99	Diseases of the musculoskelital system and connective tissue	160,524	3.4	789.7
10	H00-H59	Disease of the eye and adnexa	141,879	3.0	697.9
11	A00-A09	Intestinal infectious disease	129,360	2.7	636.4
12	J00-J06, J30-J39	Disease of the upper respiratory tract	127,489	2.7	627.2
	A00-T98, Z35 Z00-Z13, Z30.2 Z40-Z54,W54	All causes [1]	4,775,320	100.0	23,491.3

1 Analysed discharges only

Source: Medical Statistics Unit

Excludes :

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

Table 19. Leading Causes of Hospital Deaths, 2012

Rank Order	ICD Code (10th Revision)	Causes of Death	Number of Deaths	Proportionate Mortality	Rate Per 100,000 Population
1	I20 - I25	Ischaemic heart disease	5,619	14.4	27.6
2	C00 - D48	Neoplasms[1]	4,519	11.6	22.2
3	I26 - I51	Pulmonary heart disease and diseases of the pulmonary circulation	3,515	9.0	17.3
4	I60 - I69	Cerebrovascular disease	3,418	8.7	16.8
5	J20 - J22, J40 - J98	Diseases of the respiratory system, excluding diseases of the upper respiratory tract	2,830	7.2	13.9
6	A20 - A49	Zoonotic and other bacterial diseases	2,774	7.1	13.6
7	N00 - N39	Diseases of the urinary system	2,456	6.3	12.1
8	J12 - J18	Pneumonia	2,233	5.7	11.0
9	K20 - K92	Diseases of the gastrointestinal tract	2,111	5.4	10.4
10	R00 - R99	Symptoms, signs and abnormal clinical and laboratory findings	1,754	4.5	8.6
11	S00 - T19	Traumatic injuries	1,449	3.7	7.1
	A00-T98, Z00-Z13, Z35 Z40-Z54, W54	All causes [2]	39,092	100.0	192.3

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

2 Analysed deaths only

Source: Medical Statistics Unit

Table 20. Leading Causes of Hospitalization, 2001 - 2012

Disease and ICD (10th Revision) code		2012		2010		2009		2008		2007		2006		2005		2004		2003		2002 [1]		2001	
		Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Traumatic injuries	(S00-T19)	1	17.0	1	16.2	1	15.6	1	15.6	1	16.1	1	17.0	1	16.2	1	16.5	1	16.7	1	14.5	1	13.4
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	2	9.8	2	9.5	2	9.8	3	9.1	3	8.7	3	8.4	3	7.7	3	8.0	3	7.6	4	6.3	3	5.5
Diseases of the respiratory system excluding diseases of upper the respiratory tract, pneumonia, and influenza	(J20-J22, J40 J98)	3	9.1	3	9.4	3	9.6	2	10.3	2	9.7	2	10.4	2	9.3	2	10.0	2	10.8	2	9.7	2	8.1
Viral diseases	(A80-B34)	4	6.7	4	7.9	4	9.1	4	8.5	4	6.4	4	7.3	5	5.0	4	7.5	4	6.3	3	6.4	5	4.6
Diseases of the gastro-intestinal tract	(K20-K92)	5	5.8	5	5.7	5	5.4	5	5.6	5	5.9	5	5.9	4	5.9	5	6.0	5	6.3	5	5.6	4	5.0
Direct and indirect obstetric causes [2]	(O10-O46, O48-O75, O81-O99, Z35)	6	4.9	6	4.7	6	4.6	6	4.8	6	5.4	6	5.1	6	4.7	6	4.9	6	4.7	6	4.0	7	3.3
Diseases of the urinary system	(N00-N39)	7	4.3	8	4.0	8	3.8	7	3.7	7	4.0	7	3.9	7	4.0	7	4.1	7	4.1	8	3.8	8	3.2
Diseases of the skin and subcutaneous tissue	(L00-L99)	8	4.1	7	4.0	7	3.9	10	3.1	8	3.9	9	3.6	9	3.4	9	3.6	10	3.5	10	3.1	10	2.7
Diseases of the musculoskeletal system and connective tissue	(M00-M99)	9	3.4	10	3.2	10	3.1	9	3.2	10	3.3	10	3.3	10	3.4	10	3.5	9	3.6	9	3.3	9	2.9
Diseases of the eye and adnexa	(H00-H59)	10	3.0	11	2.9	12	2.9																
Intestinal infectious diseases	(A00-A09)	11	2.7	9	3.3	9	3.6	8	3.6	9	3.7	8	3.8	8	3.9	8	4.0	8	3.8	7	3.9	6	4.0
Diseases of the upper respiratory tract	(J00-J06, J30 J39)	12	2.6	12	2.8	11	3.0	11	2.8	11	2.5	11	2.6										

Excludes:

Medical Statistics Unit

[1] Kilinochchi District

[2] Single spontaneous delivery, false labour and those admitted and discharged before delivery.

Table 21. Leading Causes of Hospital Deaths, 2004 - 2012

Disease and ICD (10th Revision)	Code	2012		2010		2009		2008		2007		2006		2005		2004	
		Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Ischaemic heart disease	(I20-I25)	1	14.4	1	12.8	1	12.8	1	12.5	1	13.1	1	12.6	1	11.4	1	11.6
Neoplasms[1]	(C00-D48)	2	11.6	2	11.1	3	9.5	3	9.8	2	10.1	3	9.9	4	8.3	2	9.5
Pulmonary heart disease and diseases of the pulmonary circulation	(I26-I51)	3	9.0	3	8.7	2	10.0	2	10.0	3	10.1	2	10.0	2	15.4	5	8.4
Cerebrovascular disease	(I60-I69)	4	8.7	4	8.7	4	8.4	4	8.7	4	9.2	4	8.9	5	7.7	4	8.9
Diseases of the respiratory system, excluding diseases of upper respiratory tract	(J20-J22), (J40-J98)	5	7.2	5	7.0	5	6.7	5	8.0	6	6.5	6	6.9	6	7.3	6	6.8
Zoonotic and other bacterial diseases	(A20-A49)	6	7.1	6	6.6	7	6.3	7	6.2	7	5.6	7	4.9	10	4.2	9	4.1
Diseases of the urinary system	(N00-N39)	7	6.3	8	5.7	8	5.7	9	5.1	9	5.2	8	4.7				
Pneumonia	(J12-J18)	8	5.7	9	5.2	10	4.9	8	5.9	11	4.0	10	4.4	9	4.3	8	4.3
Diseases of the gastro-intestinal tract	(K20-K92)	9	5.4	7	6.2	6	6.6	6	7.0	5	7.0	5	6.9	3	8.5	3	9.4
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	10	4.5	10	5.0	9	5.7	10	4.7	8	5.3	9	4.7	7	5.3	7	5.3
Traumatic injuries	(S00-T19)	11	3.7	11	3.7	11	4.6	11	3.7	10	4.0	12	3.8	8	5		
Disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition	(P05-P07)	12	1.7	12	2.2	13	1.6	13	1.8	13	2.2	13	2.3				
Toxic effects of pesticides	(T60)	13	1.5	13	1.9	12	2.4	12	2.6	12	3.3	11	3.8			10	4

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

Source: Medical Statistics Unit

Table 22. Leading Causes of Hospitalization by District, 2012[1]

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	Batticoloa	Ampara [2]	Trincomalee	Kurunegale	Puttralam	Anuradhapura	Polonnaruwa	Badulla	Moneragale	Ratnapura	Kegalle
Traumatic injuries	(S00-T19)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	2	3	2	3	2	2	4	2	2	3	2	2	2	3	4	1	3	8	2	3	3	2	3	3	5	4
Diseases of the respiratory system excluding diseases of the upper the respiratory tract, pneumonia and influenza	(J20-J22, J40-J98)	3	5	4	2	3	3	2	3	3	2	3	3	3	2	2	4	2	2	3	2	2	3	2	2	3	2
Viral diseases	(A80-B34)	4	2	3	4	4	6	6	4	4	5	8	10	5	5	5	8	6	9	4	4	5	4	6	4	2	3
Diseases of the gastrointestinal tract	(K20-K92)	5	8	5	5	5	5	5	6	6	4	7	7	4	6	3	3	4	3	5	6	6	6	4	5	4	5
Direct and indirect obstetric causes	(Z35,O10-O46,O48-O75,O81-O99)	6	7	7	6	6	7	3	7	5	8	9	8	7	4	16	5	5	6	6	5	4	5	5	7	9	6
Diseases of the urinary system	(N00-N39)	7	6	8	8	7	9	12	10	11	7	6	5	10	8	8	6	7	5	8	8	7	7	8	6	7	8
Diseases of the skin and subcutaneous tissue	(L00-L99)	8	9	6	7	11	10	8	5	7	6	5	6	11	7	7	10	8	4	9	10	9	8	9	11	6	7
Diseases of the musculoskeletal system and connective tissue	(M00-M99)	9	11	10	10	9	12	11	9	8	10	4	9	12	11	11	7	11	7	7	13	11	9	7	9	10	9
Diseases of the eye and adnexa	(H00-H59)	10	10	9	12	8	4	15	11	9	14	10	4	14	13	14	15	13	14	14	7	15	11	11	13	8	13
Intestinal infectious diseases	(A00-A09)	11	13	12	11	13	11	7	12	12	9	13	12	6	9	9	12	9	10	10	9	10	10	12	8	11	11
Diseases of the upper respiratory tract	(J00-J06,J30-J39)	12	14	11	9	12	8	9	13	10	12	12	11	9	10	13	11	12	12	11	11	8	12	10	12	12	10

[1] Excludes:
Single spontaneous delivery, false labour and those admitted and discharged before delivery.
Persons encounting health services for examination, investigation and for specific procedures of health care.

[2] Includes Kalmunai RDHS Division.

Source: Medical Statistics Unit

Table 23. Leading Causes of Hospital Deaths by District, 2012

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	Batticoloa	Ampara [2]	Trincomalee	Kurunegale	Puttralam	Anuradhapura	Polonnaruwa	Badulla	Moneragale	Ratnapura	Kegalle
Ischaemic heart diseases	(I20-I25)	1	2	1	1	1	1	1	1	1	1	4	2	1	8	1	7	1	2	1	1	2	2	1	1	1	3
Neoplasms [1]	(C00-D48)	2	1	5	11	3	6	6	2	10	11	2	10	6	5	2	5	10	10	5	11	3	8	4	15	6	7
Pulmonary heart disease and diseases of the pulmonary circulation	(I26-I51)	3	4	2	3	6	2	2	8	4	4	5	8	2	2	4	1	2	4	4	3	7	6	3	6	2	2
Cerebrovascular disease	(I60-I69)	4	6	4	5	2	4	4	3	5	3	6	3	3	3	10	10	4	8	2	6	6	4	7	8	3	1
Diseases of the respiratory system, excluding diseases of upper respiratory tract, pneumonia and influenza	(J20-J22, J40-J98)	5	7	6	8	5	3	3	7	3	2	8	9	9	9	11	3	3	3	3	8	9	5	6	3	4	5
Zoonotic and other bacterial diseases	(A20-A49)	6	3	10	4	10	14	7	5	2	6	3	4	7	12	13	12	8	9	8	4	4	3	8	5	5	4
Diseases of the urinary system	(N00-N39)	7	5	11	9	9	9	11	11	9	9	7	1	5	6	5	8	5	1	6	7	1	1	2	2	9	11
Pneumonia	(J12-J18)	8	9	7	6	7	7	5	4	7	5	10	5	4	13	14	11	6	12	9	5	5	10	5	4	7	6
Diseases of gastrointestinal tract	(K20-K92)	9	8	3	7	8	8	9	9	6	10	9	7	16	1	12	14	15	5	7	2	11	11	11	10	8	8
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	10	11	12	2	4	12	8	10	8	13	1	11	12	10	15	6	14	20	16	9	8	12	10	7	15	10
Traumatic injuries	(S00-T19)	11	10	8	12	11	5	17	6	16	15	12	13	10	7	3	9	7	17	11	13	10	9	9	11	10	9
Conditions originating in the perinatal period, excluding disorders related to short gestatio birth weight, slow fetal growth and fetal malnutrition	(P00-P04, P08-P96)	12	12	16	14	14	10	10	13	11	14	15	6	17	11	16	2	9	18	10	10	14	14	14	13	13	20
Slow fetal growth, fetal malnutrition and...	(P05-P07)	13	15	14	10	12	15	15	17	12	18	11	18	13	14	17	4	11	14	12	12	12	13	15	14	12	13
Diabetes mellitus	(E10-E14)	14	13	9	21	15	16	16	12	14	8	16	19	11	17	7	15	18	11	14	15	15	15	13	17	18	12
Toxic effects of pesticides	(T60)	15	18	15	13	16	11	12	15	13	7	14	12	8	4	6	20	13	21	13	17	13	7	12	9	11	16

Includes

Source: Medical Statistics Unit

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

[2] Kalmunai RDHS Division

Table 24. Cases and Deaths of Poisonning and Case Fatality Rate[1] by Regional Director of Health Services Division - 2012

District	Poisoning by drugs, medicaments and biological substances		Toxic effects of Pesticides				Toxic effects of other substances mainly non medicinal		Total				Case Faterlity Rate
			Organophosphate and carbamate insecticides		Other pesticides				No.		Rate per 100,000 population		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	
Colombo	2,661	9	412	18	298	24	2,081	16	5,452	67	235.4	2.9	1.23
Gampaha	3,488	12	585	32	178	5	1,398	15	5,649	64	245.6	2.8	1.13
Kalutara	1,394	1	244	10	198	2	1,144	5	2,980	18	244.3	1.5	0.60
Kandy	2,803	10	881	35	376	16	1,952	16	6,012	77	437.2	5.6	1.28
Matale	647	5	666	16	212	7	922	1	2,447	29	505.6	6.0	1.19
Nuwera Eliya	774	0	965	13	145	1	1,997	0	3,881	14	546.6	2.0	0.36
Galle	1,669	9	174	18	243	16	1,390	20	3,476	63	327.6	5.9	1.81
Matara	1,047	6	107	6	267	8	1,256	3	2,677	23	329.7	2.8	0.86
Hambantota	1,212	5	704	14	827	15	433	2	3,176	36	530.2	6.0	1.13
Jaffna	715	3	747	14	90	1	2,472	8	4,024	26	687.9	4.4	0.65
Kilinochchi	139	0	153	5	592	1	105	0	989	6	875.2	5.3	0.61
Mullaitivu	132	1	123	2	17	0	93	0	365	3	396.7	3.3	0.82
Vavuniya	212	0	254	12	104	0	708	0	1,278	12	743.0	7.0	0.94
Mannar	70	0	120	5	177	0	222	0	589	5	594.9	5.1	0.85
Batticoloa	958	5	372	3	226	0	998	2	2,554	10	484.6	1.9	0.39
Ampara[2]	1,093	2	506	8	358	12	725	1	2,682	23	412.0	3.5	0.86
Trincomalee	859	3	222	2	187	0	662	0	1,930	5	507.9	1.3	0.26
Kurunegala	3,428	10	2,510	67	756	10	2,372	27	9,066	114	561.0	7.1	1.26
Puttalam	1,369	4	496	12	199	2	1,451	14	3,515	32	460.7	4.2	0.91
Anuradhapura	2,187	1	1,524	36	716	6	1,439	1	5,866	44	682.9	5.1	0.75
Polonnaruwa	965	2	783	41	356	6	578	3	2,682	52	663.9	12.9	1.94
Badulla	1,178	5	1,072	36	191	1	1,711	15	4,152	57	509.4	7.0	1.37
Moneragala	780	4	805	25	143	0	394	5	2,122	34	471.6	7.6	1.60
Ratnapura	1,601	10	931	24	322	12	907	13	3,761	59	346.3	5.4	1.57
Kegalle	1,037	2	274	5	64	2	804	7	2,179	16	259.7	1.9	0.73
Sri Lanka	32,418	109	15,630	459	7,242	147	28,214	174	83,504	889	410.8	4.4	1.06

Includes :

Source : Medical Statistics Unit

[1] Deaths per 100 cases

[2] Kalmunai RDHS Division

Table 25. Distribution of Patients with Mental Disorders by Regional Director of Health Services Division, 2012

RDHS Division	Dementia (F01, F03)		Mental and Behavioral Disorders				Schizophrenia, Schizotypal and Delusional Disorders (F20-F29)		Mood Disorders (F30-F39)		Neurotic, Stress-Related Somatoform Disorders (F40-F48)		Mental Retardation Related Disorders (F70-F79)		Behavioral and Emotional Disorders Usually in Childhood and Adolescence (F90-F98)		Other and Unspecified Mental Disorders (F04-F09, F50-F69, F80-F89, F99)		Total	
			Due to use of Alcohol (F10)		Due to Other Psychoactive Substance Use (F11-F19)															
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Colombo	249	-	468	-	114	-	3,757	-	2,758	-	266	-	71	-	150	-	771	-	8,604	-
Gampaha	96	-	757	-	120	-	1,343	-	1,350	-	166	-	104	-	24	-	718	-	4,678	-
Kalutara	43	-	577	-	56	-	345	-	349	-	75	-	3	-	23	-	147	-	1,618	-
Kandy	105	-	1,042	-	51	-	593	-	2,634	-	298	-	71	-	39	-	393	-	5,226	-
Matale	5	-	209	-	7	-	207	-	405	-	70	-	6	-	15	-	133	-	1,057	-
Nuwera Eliya	11	-	168	-	32	-	177	-	311	-	74	-	8	-	11	-	246	-	1,038	-
Galle	44	-	420	-	7	-	1,256	-	781	-	27	-	24	-	6	-	190	-	2,755	-
Matara	12	-	461	-	96	-	149	-	427	-	82	-	2	-	2	-	192	-	1,423	-
Hambantota	6	-	118	-	53	-	147	-	49	-	9	-	1	-	3	-	280	-	666	-
Jaffna	53	-	203	-	17	-	1,055	-	426	-	208	-	8	-	5	-	315	-	2,290	-
Kilinochchi	-	-	4	-	9	-	44	-	60	-	2	-	6	-	1	-	18	-	144	-
Mullaitive	-	-	8	-	-	-	32	-	14	-	7	-	1	-	-	-	31	-	93	-
Vavuniya	19	-	47	-	1	-	272	-	213	-	78	-	23	-	3	-	26	-	682	-
Mannar	1	-	20	-	16	-	30	-	39	-	1	-	-	-	2	-	18	-	127	-
Batticoloa	5	-	510	-	15	-	119	-	158	-	131	-	31	-	30	-	103	-	1,102	-
Ampara	14	-	25	-	55	-	141	-	49	-	132	-	2	-	1	-	35	-	454	-
Kalmunai	6	-	66	-	24	-	231	-	125	-	56	-	9	-	47	-	47	-	611	-
Trincomalee	-	-	30	-	48	-	84	-	106	-	38	-	53	-	34	-	134	-	527	-
Kurunegala	109	-	879	-	182	-	913	-	1,668	-	73	-	2	-	42	-	384	-	4,252	-
Puttalam	7	-	153	-	77	-	61	-	151	-	35	-	-	-	33	-	69	-	586	-
Anuradhapura	68	-	254	-	59	-	355	-	427	-	40	-	21	-	4	-	632	-	1,860	-
Polonnaruwa	14	-	45	-	25	-	60	-	140	-	32	-	20	-	29	-	264	-	629	-
Badulla	247	-	211	-	242	-	694	-	340	-	54	-	5	-	16	-	510	-	2,319	-
Moneragala	5	-	108	-	65	-	111	-	109	-	26	-	-	-	-	-	123	-	547	-
Ratnapura	38	-	228	-	62	-	459	-	193	-	24	-	-	-	15	-	105	-	1,124	-
Kegalle	7	-	380	-	16	-	189	-	224	-	75	-	2	-	50	-	25	-	968	-
Sri Lanka	1,164	-	7,391	-	1,449	-	12,824	-	13,506	-	2,079	-	473	-	585	-	5,909	-	45,380	-

Source :Medical Statistics Unit

Table 26. Case Fatality Rate [1] for Selected Diseases, 2007 - 2012

Disease	ICD Code	2007			2008			2009			2010			2012		
		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	(A01)	3,595	3	0.1	2,909	2	0.1	4,381	7	0.2	3,599	2	0.1	2,349	5	0.2
Tetanus	(A34, A35)	57	8	14.0	70	4	5.7	39	10	25.6	29	8	27.6	91	5	5.5
Shigellosis	(A03)	6,195	4	0.1	3,381	2	0.1	3,396	2	0.1	3,338	3	0.1	2,833	1	0.0
Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight	(P05-P07)	7,686	759	9.9	7,790	636	8.2	6,962	609	8.7	7,350	877	11.9	7,182	696	9.7
Measles	(B05)	132	1	0.8	149	1	0.7	162	-	-	147	-	-	80	-	-
Whooping cough	(A37)	-	-	-	-	-	-	-	-	-	-	-	-	95	-	-
Viral hepatitis	(B15-B19)	6,611	10	0.2	3,066	2	0.1	9,257	8	0.1	2,989	8	0.3	3,228	9	0.3
Malaria	(B50-B54)	1,032	1	0.1	634	2	0.3	1,060	1	0.1	595	-	-	124	-	-
Tetanus neonatorum	(A33)	3	-	-	1	-	-	-	-	-	1	-	-	-	-	-
Diseases of the liver	(K70-K76)	17,447	2,054	11.8	17,419	2,116	12.1	17,245	2,074	12.0	17,582	2,015	11.5	12,760	1,681	13.2
Septicaemia	(A40, A41)	4,067	1,693	41.6	4,799	1,818	37.9	5,540	2,090	37.7	5,817	2,364	40.6	6,829	2,569	37.6
Snake bites	(T63.0)	39,321	91	0.2	38,381	58	0.2	39,813	86	0.2	42,234	88	0.2	41,538	76	0.2
Hypertensive diseases	(I10-I15)	93,985	583	0.6	94,296	565	0.6	97,857	541	0.6	98,485	705	0.7	98,869	524	0.5
Ischaemic heart disease	(J20-J25)	85,455	4,536	5.3	85,511	4,466	5.2	92,107	4,856	5.3	98,755	5,122	5.2	100,611	5,619	5.6
Pneumonia	(J12, J18)	18,708	1,380	7.4	22,515	2,121	9.4	22,713	1,850	8.1	23,875	2,099	8.8	23,679	2,233	9.4
Asthma	(J45, J46)	178,777	721	0.4	196,151	830	0.4	199,139	676	0.3	195,825	772	0.4	188,654	623	0.3
Bactrial meningitis	(G00, G03)	3,409	121	3.5	3,281	125	3.8	4,771	158	3.3	4,569	122	2.7	3,311	120	3.6

[1] Deaths per 100 Cases

Source: Medical Statistics Unit

Table 27. Inpatients Treated and Hospital Deaths by Type of Institutions and Districts, 2012

District	Teaching Hospital		Provincial General Hospital		District General Hospital		Base Hospital Type A		Base Hospital Type B		Divisional Hospital Type A		Divisional Hospital Type B		Divisional Hospital Type C		Other Hospitals with Indoor Patients		Primary Medical Care Unit and Maternity Homes	Total		Inpatients per 1,000 population	Hospital Deaths per 100 cases
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Cases	Deaths		
Colombo	570,610	7,392	-	-	-	-	143,852	749	15,334	61	7,116	10	40,700	88	5,013	8	103,869	2,078	-	886,494	10,386	383	1.2
Gampaha	128,402	1,377	-	-	188,267	1,507	64,697	579	22,229	63	39,469	106	6,498	9	25,779	52	23,439	231	-	498,780	3,924	217	0.8
Kalutara	-	-	-	-	83,727	335	105,768	816	7,014	4	14,838	34	44,716	49	11,287	11	-	-	-	267,350	1,249	219	0.5
Kandy	255,987	3,413	-	-	37,045	387	-	-	43,810	319	-	-	66,366	209	68,189	92	3,690	5	-	475,087	4,425	346	0.9
Matale	-	-	-	-	67,612	431	49,089	316	-	-	-		17,650	40	24,448	41	-	-	-	158,799	828	328	0.5
Nuwera Eliya	-	-	-	-	40,385	402	14,595	97	15,913	46	11,518	23	28,045	51	36,629	97	-	-	-	147,085	716	207	0.5
Galle	160,334	2,090	-	-	-	-	75,823	429	6,839	27	2,839	7	41,511	80	24,652	26	-	-	-	311,998	2,659	294	0.9
Matara	-	-	-	-	104,947	475	-	-	33,563	82	18,247	24	39,315	85	7,053	10	-	-	-	203,125	676	250	0.3
Hambantota	-	-	-	-	52,636	256	36,945	204	20,700	77	-	-	46,882	74	22,108	1	-	-	-	179,271	612	299	0.3
Jaffna	123,533	1,414	-	-	-	-	27,382	92	13,719	26	-	-	18,908	36	5,275	12	156	-	-	188,973	1,580	323	0.8
Kilinochchi	-	-	-	-	26,265	71	-	-	2,276	-	-		1,191	-	2,461	1	-	-	-	32,193	72	285	0.2
Mullaitivu	-	-	-	-	12,716	17	-	-	-	-	11,729	7	-	-	255	0	-	-	-	24,700	24	268	0.1
Vavuniya	-	-	-	-	51,549	345	-	-	4,275	9	-	-	-	-	921	6	-	-	-	56,745	360	330	0.6
Mannar	-	-	-	-	9,157	92	-	-	-	-	-	-	7,562	3	0	0	-	-	-	16,719	95	169	0.6
Batticoloa	77,222	480	-	-	-	-	-	-	41,660	67	-	-	10,803	4	12,846	6	-	-	2,557	145,088	557	275	0.4
Ampara	-	-	-	-	48,086	336	70,119	307	47,294	95	-	-	16,340	11	26,253	20	-	-	-	208,092	769	320	0.4
Trincomalee	-	-	-	-	32,963	201	17,794	60	26,395	70	-	-	-	-	22,991	123	-	-	-	100,143	454	264	0.5
Kurunegala	168,542	2,455	-	-	-	-	57,589	524	71,307	372	56,046	126	70,821	128	40,883	45	-	-	-	465,188	3,650	288	0.8
Puttalam	-	-	-	-	52,415	588	43,497	317	28,720	136	16,934	32	9,870	14	15,027	12	-	-	-	166,463	1,099	218	0.7
Anuradhapura	116,823	1,604	-	-	-	-	-	-	38,078	137	38,180	87	52,342	77	50,699	65	565	-	-	296,687	1,970	345	0.7
Polonnaruwa	-	-	-	-	80,339	659	-	-	22,127	100	8,761	17	23,412	4	9,572	17	-	-	-	144,211	797	357	0.6
Badulla	-	-	93,093	931	-	-	72,815	658	13,682	74	17,810	42	18,907	43	41,620	34	-	-	3,052	260,979	1,782	320	0.7
Moneragala	-	-	-	-	49,821	370	-	-	28,266	88	8,940	5	28,325	45	27,182	33	-	-	-	142,534	541	317	0.4
Ratnapura	-	-	113,478	1,197	-	-	41,301	141	47,679	417	43,923	109	19,106	16	16,121	26	-	-	-	281,608	1,906	259	0.7
Kegalle	66,210	541	-	-	-	-	-	-	67,700	446	37,368	61	3,301	6	7,526	4	12	-	-	182,117	1,058	217	0.6
Sri Lanka	1,667,663	20,766	206,571	2,128	937,930	6,472	821,266	5,289	618,580	2,716	333,718	690	612,571	1,072	504,790	742	131,731	2,314	5,609	5,840,429	42,189	287	0.7

Source : Medical Statistics Unit

Table 28. Outpatient Attendance by District and Type of Institution, 2012

District	Teaching Hospital	Provincial General Hospital	District General Hospital	Base Hospitals (Type A)	Base Hospitals (Type B)	Divisional Hospitals (Type A)	Divisional Hospitals (Type B)	Divisional Hospitals (Type C)	Primary Medical Care Unit and Maternity Homes	Other Hospitals with IMMR [1]	Other Hospitals without IMMR	Primary Medical Care Unit	Total	Attendance per 1000 Population
Colombo	2,505,512	-	-	572,281	221,287	127,951	692,366	150,519	-	844,570	-	410,929	5,525,415	2,385.8
Gampaha	611,159	-	606,952	254,736	240,161	556,037	87,982	445,657	-	239,753	-	638,952	3,681,389	1,600.6
Kalutara	-	-	332,543	633,887	62,767	141,030	596,077	295,003	-	-	25,053	208,142	2,294,502	1,880.7
Kandy	851,602	-	309,858	-	299,797	-	931,844	1,046,215	-	183,510	-	381,046	4,003,872	2,911.9
Matale	-	-	342,828	176,903	-	-	257,134	417,450	-	-	-	284,071	1,478,386	3,054.5
Nuwera Eliya	-	-	195,607	84,435	149,578	124,690	308,091	333,208	-	-	-	290,356	1,485,965	2,092.9
Galle	410,694	-	-	334,296	70,842	64,255	522,915	468,773	-	73,483	-	502,060	2,447,318	2,306.6
Matara	-	-	542,565	-	210,417	168,053	441,015	215,495	-	-	-	495,765	2,073,310	2,553.3
Hambantota	-	-	243,498	137,160	232,392	-	602,593	358,016	-	-	-	248,326	1,821,985	3,041.7
Jaffna	293,744	-	-	222,996	174,256	-	265,245	396,270	-	-	-	198,801	1,551,312	2,651.8
Kilinochchi	-	-	183,781	-	34,405	-	24,678	110,490	-	-	-	7,903	361,257	3,197.0
Mullaitivu	-	-	104,069	-	29,124	118,922	26,536	20,525	-	-	-		299,176	3,251.9
Vavuniya	-	-	259,727	-	56,353	-		147,950	-	-	17,233	33,339	514,602	2,991.9
Mannar	-	-	137,219	-	-	-	116,285	105,972	-	-	-	11,229	370,705	3,744.5
Batticoloa	236,653	-	-	-	455,346	-	166,753	328,364	-	-	-	296,787	1,483,903	2,815.8
Ampara	-	-	218,298	487,227	420,799	-	282,316	515,436	53,063	-	3,063	308,478	2,288,680	3,515.6
Trincomalee	-	-	115,754	131,352	256,481	-	-	308,808	-	-	-	305,130	1,117,525	2,940.9
Kurunegala	558,836	-	-	180,916	418,750	589,243	896,393	694,898	-	-	-	667,499	4,006,535	2,479.3
Puttalam	-	-	210,077	154,952	137,316	202,410	196,158	338,133	-	-	1,647	342,558	1,583,251	2,075.0
Anuradhapura	210,631	-	-	-	314,168	439,275	589,317	644,218	-	15,673	-	327,743	2,541,025	2,958.1
Polonnaruwa	-	-	291,212	-	227,388	97,619	281,252	191,343	-	-	-	152,023	1,240,837	3,071.4
Badulla	-	276,858	-	361,034	141,369	227,608	310,997	847,041	-	-	-	343,964	2,508,871	3,078.4
Moneragale	-	-	184,746	-	355,507	104,978	368,195	400,219	-	-	-	123,183	1,536,828	3,415.2
Ratnapura	-	337,247	-	171,237	453,258	519,073	337,430	441,338	-	-	-	169,159	2,428,742	2,236.4
Kegalle	367,390	-	-	-	435,623	420,158	65,475	290,918	-	18,261	16,254	371,991	1,986,070	2,367.2
Total	6,046,221	614,105	4,278,734	3,903,412	5,397,384	3,901,302	8,367,047	9,512,259	53,063	1,375,250	63,250	7,119,434	50,631,461	2,490.7

Includes

[1] Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Spurce : Medical Statistics Unit

Table 29. Out Patient attendance by RDHS Division, 2012

RDHS	Quarter				Total Visits
	First	Second	Third	Forth	
Colombo	1,416,404	1,363,253	1,367,009	1,378,749	5,525,415
Gampaha	974,545	916,675	893,870	896,299	3,681,389
Kalutara	597,635	565,384	561,000	570,483	2,294,502
Kandy	1,032,481	984,963	985,887	1,000,541	4,003,872
Matale	406,532	351,297	359,082	361,475	1,478,386
Nuwera Eliya	381,127	368,772	367,939	368,127	1,485,965
Galle	630,910	600,198	593,411	622,799	2,447,318
Matara	542,763	489,998	509,251	531,298	2,073,310
Hambantota	490,221	426,787	423,332	481,645	1,821,985
Jaffna	395,165	356,505	363,556	436,086	1,551,312
Kilinochchi	90,897	83,419	82,092	104,849	361,257
Mullaitivu	71,345	71,072	69,311	87,448	299,176
Vavuniya	138,804	127,700	116,764	131,334	514,602
Mannar	99,367	81,923	85,799	103,616	370,705
Batticoloa	394,819	357,098	351,217	380,769	1,483,903
Ampara	235,928	214,030	215,560	230,888	896,406
Kalmunai	372,013	340,178	330,358	349,725	1,392,274
Trincomalee	305,696	270,144	255,499	286,186	1,117,525
Kurunegala	1,043,519	986,231	963,143	1,013,642	4,006,535
Puttalam	407,567	376,525	389,437	409,722	1,583,251
Anuradhapura	681,827	601,839	586,894	670,465	2,541,025
Polonnaruwa	331,940	294,491	298,176	316,230	1,240,837
Badulla	636,173	615,899	617,316	639,483	2,508,871
Moneragale	399,866	376,372	358,473	402,117	1,536,828
Ratnapura	626,717	587,117	586,602	628,306	2,428,742
Kegalle	495,387	494,679	498,020	497,984	1,986,070
Grand Total	13,199,648	12,302,549	12,228,998	12,900,266	50,631,461

Source :Medical Statistics Unit

Table 30. Out Patient Department (OPD) visits by Type of hospital, 2012

Hospital Type	Quarter				Total Visits
	First	Second	Third	Forth	
Teaching Hospitals	1,547,064	1,500,808	1,497,483	1,500,866	6,046,221
Provincial General Hospitals	160,448	159,231	152,412	142,014	614,105
District General Hospitals	1,079,209	1,038,764	1,074,050	1,086,711	4,278,734
Base Hospitals- Type A	1,014,756	960,791	951,679	976,186	3,903,412
Base Hospitals- Type B	1,405,661	1,315,343	1,290,585	1,385,795	5,397,384
Divisional Hospitals - Type A	1,003,434	953,760	935,003	1,009,105	3,901,302
Divisional Hospitals - Type B	2,190,917	2,031,041	2,003,927	2,141,162	8,367,047
Divisional Hospitals - Type C	2,484,668	2,292,163	2,270,898	2,464,530	9,512,259
Primary Medical Care Unit & Maternity Homes	13,537	12,430	12,762	14,334	53,063
Other with IMMR [1]	359,713	332,318	337,367	345,852	1,375,250
Other without IMMR	16,260	15,057	15,928	16,005	63,250
Primary Medical Care Unit	1,923,981	1,690,843	1,686,904	1,817,706	7,119,434
Total Visits	13,199,648	12,302,549	12,228,998	12,900,266	50,631,461

Includes

[1] Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Source: Medical Statistics Unit.

Table 31. Clinic Visits by quarter, by RDHS division, 2012

RDHS	Quarter 1		Quarter 2		Quarter 3		Quarter 4		TOTAL	
	First Visit	Total Visits	First Visit	Total Visits	First Visit	Total Visits	First Visit	Total Visits	First Visit	Total Visits
Colombo	205,129	834,086	201,635	853,527	219,279	934,814	205,685	921,913	831,728	3,544,340
Gampaha	145,065	499,465	159,253	487,834	160,494	525,989	158,287	510,155	623,099	2,023,443
Kalutara	73,073	236,637	61,137	210,949	73,454	231,068	77,365	236,877	285,029	915,531
Kandy	119,665	562,188	115,492	532,565	124,148	554,782	116,239	554,146	475,544	2,203,681
Matale	32,186	149,890	27,661	145,543	29,080	142,483	28,375	142,661	117,302	580,577
Nuwera Eliya	30,941	129,063	33,997	134,140	36,557	134,824	32,668	138,177	134,163	536,204
Galle	78,220	225,865	78,501	218,807	89,117	249,580	89,443	245,917	335,281	940,169
Matara	66,687	168,361	60,778	161,612	69,584	180,426	66,444	174,775	263,493	685,174
Hambantota	29,514	118,102	28,834	112,268	31,076	110,654	32,830	117,497	122,254	458,521
Jaffna	44,654	248,532	40,792	246,931	41,534	260,425	41,870	268,699	168,850	1,024,587
Kilinochchi	9,248	25,021	10,103	25,534	9,078	26,243	8,365	25,817	36,794	102,615
Mullaitivu	5,842	14,077	6,527	14,951	6,170	15,867	5,574	15,430	24,113	60,325
Vavuniya	17,770	56,119	19,970	58,645	17,590	57,998	17,890	57,102	73,220	229,864
Mannar	8,397	32,967	8,395	32,736	9,194	33,223	9,046	33,612	35,032	132,538
Batticoloa	30,282	98,294	33,427	99,109	29,704	94,034	18,670	85,642	112,083	377,079
Ampara	35,023	81,329	24,378	77,427	27,404	80,854	26,876	83,026	113,681	322,636
Kalmunai	22,007	87,412	24,815	93,711	25,626	96,807	35,362	103,005	107,810	380,935
Trincomalee	23,378	79,461	22,925	78,509	21,100	79,084	19,363	76,815	86,766	313,869
Kurunegala	102,516	424,145	97,137	401,431	111,314	435,873	96,065	409,028	407,032	1,670,477
Puttalam	49,638	167,228	44,731	160,482	46,187	164,981	41,509	147,332	182,065	640,023
Anuradhapura	56,636	215,635	46,437	204,311	52,780	209,502	46,205	211,218	202,058	840,666
Polonnaruwa	39,616	108,373	34,165	106,508	37,378	113,598	33,785	115,773	144,944	444,252
Badulla	60,115	267,672	73,294	277,017	72,714	280,775	65,975	271,385	272,098	1,096,849
Moneragale	38,560	101,300	36,021	99,166	37,623	102,347	37,579	102,648	149,783	405,461
Ratnapura	75,914	254,753	71,329	243,702	76,170	257,080	75,633	249,884	299,046	1,005,419
Kegalle	47,370	195,868	53,137	197,953	54,136	199,043	58,800	194,819	213,443	787,683
Total	1,447,446	5,381,843	1,414,871	5,275,368	1,508,491	5,572,354	1,445,903	5,493,353	5,816,711	21,722,918

Medical Statistics Unit

Table 32. Clinic Visits by quarter, by Type of Hospitals, 2012

Type	Quarter 1		Quarter 2		Quarter 3		Quarter 4		TOTAL	
	First Visit	Total Visits	First Visit	Total Visits	First Visit	Total Visits	First Visit	Total Visits	First Visit	Total Visits
Teaching Hospitals	366,683	1,636,774	336,479	1,606,320	366,722	1,731,236	337,382	1,670,653	1,407,266	6,644,983
Provincial General Hospitals	41,315	193,060	39,860	190,695	44,487	196,036	43,273	189,865	168,935	769,656
District General Hospitals	251,042	738,992	244,731	727,002	258,860	760,289	249,936	766,306	1,004,569	2,992,589
Base Hospitals-Type A	168,333	525,258	164,116	514,605	176,869	548,076	186,869	553,512	696,187	2,141,451
Base Hospitals-Type B	127,745	464,026	122,732	448,907	136,117	465,855	130,981	474,777	517,575	1,853,565
Divisional Hospitals-Type A	71,568	274,393	66,704	271,064	83,549	292,498	80,519	283,815	302,340	1,121,770
Divisional Hospitals-Type B	151,976	519,967	153,749	506,238	154,821	532,250	142,838	519,620	603,384	2,078,075
Divisional Hospitals-Type C	130,452	507,105	151,093	505,179	140,166	508,998	130,648	503,199	552,359	2,024,481
Primary Medical Care Unit & Maternity Homes	355	2,331	154	1,836	1,816	6,005	174	2,019	2,499	12,191
Other Hospitals & Clinics [1]	35,295	155,105	37,125	164,258	45,463	181,765	42,544	172,540	160,427	673,668
Primary Medical Care Unit	102,682	364,832	98,128	339,264	99,621	349,346	100,739	357,047	401,170	1,410,489
Grand Total	1,447,446	5,381,843	1,414,871	5,275,368	1,508,491	5,572,354	1,445,903	5,493,353	5,816,711	21,722,918

Includes

[1] Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Source: Medical Statistics Unit.

Table 33. Utilization of Medical Institutions by Regional Director of Health Services Division, 2012

RDHS Division	Teaching Hospitals			Provincial General Hospitals			District General Hospitals			Base Hospitals Type A			Base Hospitals Type B		
	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate
Colombo	3.56	70.91	71.77							1.57	161.92	70.81	2.93	56.02	45.83
Gampaha	2.94	96.83	79.94				1.84	136.25	69.84	1.95	119.51	64.96	1.31	106.65	38.75
Kalutara							2.51	167.58	118.06	1.80	132.97	66.78	1.93	38.77	20.78
Kandy	3.91	82.85	92.53				2.59	129.93	94.76				2.12	119.44	70.51
Matale							2.33	91.76	60.15	1.97	8.11	4.43			
Nuwera Eliya							2.75	108.57	83.99	2.36	130.99	119.18			
Galle	2.64	89.10	66.53							2.20	114.51	70.13	2.36	70.49	46.50
Matara							2.83	100.14	79.21				2.47	136.45	95.05
Hambantota							2.38	95.88	63.57	2.12	118.28	99.62	1.51	93.78	39.18
Jaffna	2.87	94.84	76.59							2.58	70.27	50.81	2.14	56.47	33.54
Kilinochchi							2.45	132.43	91.18				1.97	87.07	48.09
Mullaitivu							3.51	125.45	117.32	1.36	54.74	20.74			
Vavuniya							2.11	105.53	65.33				2.42	28.10	19.14
Mannar							7.21	51.47	103.69						
Batticoloa	2.20	112.25	70.10										2.27	89.52	57.77
Ampara							2.59	95.17	69.38				2.13	115.31	68.51
Kalmunai										2.33	74.11	48.33	1.96	67.12	36.71
Trincomalee							0.96	172.15	46.17	1.90	82.82	43.70	1.55	111.26	48.07
Kurunegala	2.99	98.77	83.26							2.00	102.19	57.37	2.38	104.50	69.70
Puttalam							2.15	114.27	68.80	1.83	104.71	68.47	2.41	97.05	65.43
Anuradhapura	3.80	64.90	69.99										1.55	141.83	61.22
Polonnaruwa							2.14	115.51	69.16				1.57	102.56	44.81
Badulla				3.24	68.69	63.61				2.71	105.80	80.50	1.90	122.61	64.89
Moneragala							2.42	142.16	96.37				1.86	91.69	47.67
Ratnapura				2.67	110.55	82.94				2.59	140.61	117.17	2.21	132.30	81.32
Kegalle	2.78	98.28	76.97										2.39	111.26	75.13
Average	3.25	82.71	76.17	2.93	86.88	72.01	2.38	116.94	78.00	2.05	63.81	36.47	2.10	99.62	58.42

Continued

Source : Medical Statistics Unit

Table 33. Utilization of Medical Institutions by Regional Director of Health Services Division, 2012

RDHS Division	Divisional Hospitals Type A			Divisional Hospitals Type B			Divisional Hospitals Type C			Primary Medical Care Units & Maternity Homes			Other Hospitals		
	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate	Duration of Stay	Bed Turnover Rate	Occupancy Rate
Colombo	1.59	89.33	39.73	1.19	101.45	33.50	1.30	112.95	40.60				6.85	42.53	86.62
Gampaha	2.34	70.90	46.51	1.37	103.34	39.26	1.47	160.24	85.47				9.04	21.68	59.45
Kalutara	1.47	75.68	30.90	1.39	94.67	36.47	1.35	72.84	27.17						
Kandy				1.88	81.18	42.39	1.73	77.87	37.39				7.53	23.39	53.76
Matale				1.47	71.39	29.12	2.34	39.46	25.58						
NuweraEliya	2.53	35.53	25.29	2.02	71.17	40.07	1.46	99.25	40.23						
Galle	1.69	28.85	13.54	1.88	75.25	39.22	0.94	124.22	32.04						
Matara	2.93	91.89	79.61	2.76	95.83	73.46	1.72	61.90	29.57						
Hambantota				1.22	117.79	39.82	1.00	100.44	27.75						
Jaffna				2.98	67.48	56.16	2.23	26.08	16.03				7.43	8.60	19.48
Kilinochchi				5.27	26.72	39.02	5.48	53.74	81.04						
Mullaitivu															
Vavuniya							2.30	40.62	25.52						
Mannar				2.28	70.49	44.44									
Batticoloa				1.86	63.71	33.31	2.44	53.02	41.33	1.48	196.58	88.23			
Ampara							1.11	81.35	25.09						
Kalmunai				2.38	44.42	29.64	1.62	69.60	31.44						
Trincomalee							1.64	80.92	36.69						
Kurunegala	1.42	72.82	28.75	1.52	41.55	17.57	1.62	87.05	38.84						
Puttalam	1.53	74.82	31.81	1.41	62.52	24.26	0.73	73.64	14.79						
Anuradhapur	1.24	124.11	42.47	1.63	107.72	48.94	1.62	96.52	43.24				7.21	40.49	85.90
Polonnaruwa	1.98	67.72	37.43	1.10	106.66	32.61	2.36	95.69	62.76						
Badulla	1.60	97.90	43.76	1.94	52.88	28.67	1.50	74.08	30.79	1.37	119.25	45.55			
Moneragala	2.03	87.73	50.03	1.26	85.48	29.71	1.09	154.17	46.56						
Ratnapura	1.63	92.00	41.75	1.09	72.69	21.96	1.71	60.63	28.73						
Kegalle	1.71	96.59	45.96	1.62	58.16	26.04	1.22	81.61	27.45				77.52	0.65	116.49
Average	1.73	81.96	39.65	1.71	73.59	34.85	1.57	80.16	34.84	1.42	155.75	61.55	7.30	35.45	77.37

Source : Medical Statistics Unit

Table 34. Average Duration of Stay (days) in Selected Types of Hospitals, 2002 - 2012

Type of Hospital	2002	2003	2004	2005	2006	2007	2008	2009	2010	2012
National Hospital, Colombo	5.3	5.0	4.8	4.4	4.4	4.3	4.3	4.2	4.0	3.9
Teaching Hospitals					3.6	3.6	3.5	3.4	3.3	3.1
Provincial Hospitals[1,2]	4.0	4.0	3.9	4.2	3.1	3.3	3.2	3.1	2.6	
Base Hospitals[3]	3.0	3.2	3.0	3.0	2.4	2.3	2.2	2.1	2.1	
District Hospitals	2.3	2.3	2.3	2.2	1.9	2.0	2.1	2.1	1.8	
Peripheral Units	2.1	2.2	2.2	2.0	1.9	2.0	1.9	1.9	1.6	
Rural Hospitals[4]	2.1	2.0	2.1	1.9	1.8	1.9	1.9	2.2	1.6	
Provincial General Hospitals										2.9
District General Hospitals										2.4
Base Hospitals Type A										2.0
Base Hospitals Type B										2.1
Divisional Hospitals Type A										1.7
Divisional Hospitals Type B										1.7
Divisional Hospitals Type C										1.6
Children's Hospital	3.2	3.3	3.0	3.1	2.9	3.3	3.2	3.0	2.8	2.8
Eye Hospital	5.7	6.7	8.0	7.3	3.8	3.3	3.8	4.4	3.6	4.0
Cancer Hospital	8.8	9.3	8.9	10.0	8.3	8.2	7.0	7.0	7.0	5.9
Mental Hospitals	63.8	67.5	54.6	62.8	30.2	60.0	65.9	60.2	27.7	28.7
Chest Hospitals	N/A	N/A	25.0	8.7	14.4	N/A	12.5	10.5	14.7	12.3
Maternity Hospitals	4.7	4.1	4.5	5.5	5.7	3.6	3.3	3.4	3.6	3.5
Maternity Homes	2.9	2.4	2.4	2.2	3.1	2.6	1.4	1.6	1.6	1.4
Leprosy Hospitals					73.3	77.0	87.9	75.0	88.1	84.4
Rehabilitation Hospitals					24.5	30.0	26.1	26.9	26.5	24.0

[1] Includes Teaching Hospitals upto 2005 For the year 2009

[2] Includes Provincial General Hospitals and General Hospitals.

[3] Includes District Base Hospitals.

[4] Includes Estate Hospitals.

Source : Medical Statistics Unit

Table 35. Registered Births and Hospital Births 1965 - 2012

Year	Registered Live Births	Live Births in Government Hospitals	% of Live Births in Government Hospitals
1965	369,437	230,986	62.5
1970	367,901	243,844	66.3
1975	375,857	251,039	66.8
1980	418,373	316,394	75.6
1985	389,599	292,970	75.2
1990 [1]	294,120	241,390	82.1
1991 [1]	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 [2]	330,963	287,514	86.9
1997 [2]	325,017	284,955	87.7
1998	322,672	287,514	88.2
1999	328,725	300,866	91.3
2000	347,749	314,352	93.9
2001	358,583	325,813	92.0
2002	363,549	307,272	84.5
2003	363,343	316,465	87.1
2004	360,220	336,642	93.5
2005	370,424	341,539	92.2
2006	371,264	353,361	95.2
2007	380,069	356,852	93.9
2008	379,912	352,523	92.8
2009	376,843	339,437	90.1
2010	364,565	334,137	91.7
2011	363,415	N/A	N/A
2012	355,900	340,800	95.6

Source: Medical Statistics Unit

[1] Excludes Northern and Eastern Provinces

[2] Excludes Kilinochchi and Mullaitivu Districts

Table 36. Live Births, Maternal Deaths, Still Births and Low Birth Weight Babies in Government Hospitals by Districts, 2012

District	In Government Hospitals During 2012						
	Live Births	Maternal Deaths		Still Births		Low Births [4]	
		No	Rate [1]	No.	Rate [2]	No.	Rate [3]
Colombo	43,953	13	29.6	371	8.4	7,373	16.8
Gampaha	24,854	6	24.1	163	6.5	3,802	15.3
Kalutara	16,161	0	0.0	117	7.2	2,109	13.0
Kandy	27,722	22	79.4	247	8.8	4,862	17.5
Matale	10,195	3	29.4	70	6.8	1,498	14.7
Nuwera Eliya	11,338	1	8.8	111	9.7	3,243	28.6
Galle	18,401	3	16.3	112	6.0	2,235	12.1
Matara	13,233	2	15.1	91	6.8	2,269	17.1
Hambantota	9,878	0	0.0	66	6.6	1,069	10.8
Jaffna	8,487	7	82.5	96	11.2	1,150	13.6
Mannar	1,808	0	0.0	8	4.4	206	11.4
Mullaitivu	925	0	0.0	3	3.2	127	13.7
Vavuniya	3,655	0	0.0	30	8.1	352	9.6
Kilinochchi	2,487	0	0.0	17	6.8	297	11.9
Batticoloa	9,110	5	54.9	69	7.5	1,499	16.5
Ampara [5]	13,220	3	22.7	55	4.1	1,834	13.9
Trincomalee	7,369	2	27.1	44	5.9	1,140	15.5
Kurunegala	25,633	6	23.4	161	6.2	4,013	15.7
Puttalam	14,585	0	0.0	68	4.6	1,507	10.3
Anuradhapura	16,060	2	12.5	102	6.3	2,728	17.0
Polonnaruwa	7,489	2	26.7	39	5.2	1,388	18.5
Badulla	16,698	7	41.9	90	5.4	3,615	21.6
Moneragala	6,828	2	29.3	36	5.2	1,454	21.3
Ratnapura	20,238	4	19.8	179	8.8	3,779	18.7
Kegalle	10,473	2	19.1	43	4.1	2,008	19.2
Sri Lanka	340,800	92	27.0	2,388	7.0	55,557	16.3

[1] Per 100,000 live births.

[2] Per 1,000 total births.

[3] Per 100 live births.

[4] Birth weight less than 2500 grams.

[5] Includes Kalmunai RDHS Division

Medical Statistics Unit

Table 37. Performance of Dental Sergeons by District, 2012

District	Extraction				D.A.A. Treated	Infection	Leukoplakia	Oral Carcinoma	Restoration				Scaling	Minor Surgery	Prevention Community	Total Visits
	Deciduous.	Pernanent Caries.	Permanent Peridodontal	Other					Temporary	Amalgam	Composite	Advanced Conservation				
Colombo	5,756	55,438	11,790	1,113	12,347	599	35	8	60,258	24,915	18,712	17,162	15,208	1,686	2,794	273,777
Gampaha	8,128	61,737	18,756	1,454	6,052	726	55	14	35,973	23,892	14,157	3,057	8,643	1,711	4,258	217,462
Kalutra	6,028	40,587	9,833	799	6,642	861	51	18	25,453	11,042	6,978	382	4,702	916	794	142,431
Kandy	3,570	41,879	11,374	1,070	8,953	660	20	27	26,715	13,898	13,044	3,033	8,915	1,876	7,057	141,672
Matale	3,540	19,830	6,049	405	4,560	137	10	6	10,384	7,455	3,210	1,552	2,513	1,013	66	65,893
Nuwera Eliya	1,477	18,340	3,649	463	2,468	310	16	8	7,908	6,690	4,726	699	2,808	463	176	55,252
Galle	2,911	38,632	7,148	882	1,859	207	43	64	17,538	8,586	5,963	1,154	3,403	1,182	1,375	109,672
Matara	1,879	26,726	5,595	3,458	2,851	234	68	29	16,226	7,859	5,962	2,040	6,884	889	1,077	101,065
Hambantota	2,073	19,880	4,796	895	2,062	313	2	6	9,001	4,840	3,694	646	2,142	588	428	67,674
Jaffna	2,890	23,880	6,164	1,665	9,507	304	59	24	9,433	3,653	3,353	2,181	3,109	974	781	93,905
Kilinochchi	2,121	11,140	1,749	-	4	2	-	-	3,671	4,139	3,565	381	1,466	611	-	15,113
Mannar	1,775	6,087	2,996	2,872	48	87	6	12	1,026	167	359	539	541	172	-	16,898
Vavuniya	487	6,591	153	2	55	52	13	2	1,613	244	887	1,163	1,001	237	1,234	32,269
Mullaitivu	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Batticoloa	4,281	15,829	2,616	1,942	824	345	18	123	826	816	1,768	886	365	492	1,596	43,090
Ampara	5,630	21,441	4,763	303	1,492	201	13	10	5,612	2,713	5,396	1,623	1,765	499	1,180	67,812
Trincomale	3,483	21,986	6,374	1,258	3,152	235	24	12	2,476	1,753	3,531	1,347	1,984	651	106	51,838
Kurunegala	5,921	52,665	17,093	1,683	7,936	1,339	108	37	26,393	18,754	11,844	2,893	11,047	2,716	9,077	175,608
Puttalam	2,414	18,706	3,501	163	1,803	271	5	3	4,380	3,961	3,841	935	1,757	528	753	53,102
Anuradhapura	3,709	22,521	5,150	2,227	2,043	668	25	5	5,878	3,717	3,939	1,870	3,501	763	3,807	78,106
Pollanurawa	463	4,377	36	1,194	80	15	4	-	2,016	928	749	114	941	164	-	12,667
Badulla	6,052	30,018	7,234	1,199	15,866	437	84	56	15,124	9,629	9,285	1,869	6,156	2,226	836	119,784
Monaragale	2,874	14,615	3,895	78	5,541	386	67	11	10,235	5,885	5,370	968	5,524	1,178	113	70,135
Ratnapura	3,426	33,250	7,015	354	5,411	716	91	26	25,263	7,717	9,020	2,525	4,023	941	2,418	120,239
Kegalle	2,141	24,059	7,108	568	6,484	456	25	3	9,988	8,458	6,893	1,430	5,645	1,280	-	91,469
Sri Lanka	83,029	630,214	154,837	26,047	108,040	9,561	842	504	333,390	181,711	146,246	50,449	104,043	23,756	39,926	2,216,933

Based on the consolidated statistics submitted by the Regional Dental Surgeons and Monthly Dental Returns. *Source : Medical Statistics Unit*
NR = Not Responded

Annexture

Health Education Bureau

Media Communication , Publicity and Life Skills Development Units - Functions Completed During 2012

Annexure 1 - Media Seminars

	Activity	No of Programes	Participants / Targets
1	Media Seminar on World Leprosy day 2012	1	Media Personnel - 128
2	Media Seminar on World Glaucoma day 2012	1	Media Personnel - 142
3	Media Seminar on World Tuberculosis Day 2012	1	Media Personnel - 128
4	Media Seminar on World Health Day 2012	1	Media Personnel - 148
5	Media Seminar on World Malaria Day 2012	1	Media Personnel - 88
6	Media Seminar on Respiratory Diseases / Asthma Day	1	Media Personnel - 80
7	Media Seminar on Tobacco control	1	Media Personnel - 72
8	Media Seminar on National Immunization Week	1	Media Personnel - 137
9	Media Seminar on National Nutrition Month 2012	1	Media Personnel -140
10	Media seminar on Cancer control	1	Media Personnel - 87
11	Media seminar on Oral Cancer control	1	Media Personnel - 203
12	Media Seminar on World Breast Feeding Day 2012	1	Media Personnel - 105
13	Media Seminar on World Sight Day 2012	1	Media Personnel - 98
14	Media Seminar on Prevention of Teenage Pregnancies	1	Media Personnel - 90
15	Media seminar on National Mental Health Day - 2012	1	Media Personnel - 121
16	Media Seminar on Suicide Prevention Day - 2012	1	Media Personnel - 130
17	Media Seminar on World Rabies Day - 2012	1	Media Personnel - 140
18	Media Seminar on World Heart Day - 2012	1	Media Personnel - 120
19	Media Seminar on Global Hand Washing Day - 2012	1	Media Personnel - 130
20	Media co-ordination for the Launch of National Breast Cancer prevention month	1	Media Personnel - 120
21	Media seminar on World Radiology Day 2012	1	Media Personnel - 110
22	Media co ordination for Health Fest – Healthy Life style Fair	1	General Public - 2000
23	Media co-ordination for Inauguration of National Injury Prevention Programe -2012	1	Professionals and Media - 250
24	Finalization Workshop for Policy of the Health of Disables -BMICH	1	Health professionals
25	World Children's Day programe 2012 - Life skills building activities – Narahenpita school	1	Students 500
26	Supportive role and Media co-ordination for Inauguration of National Injury Prevention Programe -2012 to 2015	1	Professionals ,Media, SL Police

27	Health Fest Life Style promotion fair – Vihara maha devi park	1	General Public 4000
28	National Oral health day 2012 – Muwa suwa abhiman-Media Co-ordination and facilitation - SLFI	1	Health staff / Journalists
29	Media Cordination and activities of Launch of NCD policy	1	Media and other Professionals 250
30	Media Coordination and activities for Launch of Health week 2012	1	Media / SL Police
31	Health Education activities in front of the Railway station on Healthy Life styles	1	General Public -Thousands of passengers
32	Launch of the National Nutrition Month – Media co ordination	18.06.2013	Professionals/Health & other multi-sartorial staff
33	National Mental Health Forum – 2012 , SLFI	1	Professionals/Health staff - 350
34	Launch of National Breast Cancer prevention month and HE videos	1	Professionals/Health staff/ Journalists

Annexure 2 – Exhibitions - Health Education and Promotion activities

1	Suwa Udaana Mobile Health camp HE and Promotion Kollonnawa.	1	School children/General Public - 2000
2	Suwa Udaana Ambepussa National School, HE and Promotion.	1	School children/General Public - 1500
3	Deyata Kirula 2012 – Health Ministry stall – Co-ordination / Health Education and	12 Days	General public
4	Suwa Udaana Rathnapula Weralupa Keththarama M. Vidyalaya HE and	2	Students/General Public - 4000
5	Suwa Udaana – Kegalle district HE and Promotion	2	General Public -2000
6	Suwa Udaana Mobile Health camp HE and Promo at Keenawala Chaithaaramaya	1	General Public -2000
7	Suwa Udaana Mobile Health camp HE and Promo at Mathara Pasgoda M Vidyalaya	1	Students/General Public - 4000
8	Suwa Udaana Mobile Health camp HE and Promo at Akuressa	1	Gen Public 2000
9	Suwa Udaana Mobile Health camp HE and Promo at Kegalle Siriniwasa Maha	1	Students ,Teachers/ General Public -3000
10	Suwa Udaana Mobile Health camp HE and Promo at Keadugannawa Ganethenna	1	Students ,Teachers/ General Public -2000
11	Suwa Udaana Mobile Health camp HE and Promo at Beliathta Maha Pirivena	1	General Public -2500
12	Suwa Udaana Mobile Health camp HE and Promo at Hanthana Dharmarama Maha	1	Estate sector Families - 200
13	Mobile Health camp HE and Health Promotion initiative at Kadugannawa	1	Students ,Teachers/ General Public -2000
14	Suwa Udaana Galigamuwa Arandara Vidyalaya Health Education and Promotion	1	Students ,Teachers/ General Public -3400
15	Suwa Udaana Kegalla Alapalawa M Vidyalaya Health Education and Promotion	1	Students ,Teachers/ General Public -4000
16	Suwa Udaana Dambana Kanitu Vidyalaya , Mahiyangana Health Education and	1	Students ,Teachers/ General Public -1000
17	Suwa Udaana Kobbaewala Keerthirathna M vidyalaya , Kegalle , Health Education and	2	Students ,Teachers/ General Public -3000
18	Arogya Health Development Exhibition 2012- BMICH Health Education,	2	Foreign investors, General public

19	"ENCO 2012" Exhibition – Life Skills Promotional Activities	05 days	General public and Students - 8000
20	Suwa Udaana mobile Health camp at Lankapura Pollonnaruwa	1	General Public - 4000
21	Suwa Udaana mobile Health camp at Lankapura Pollonnaruwa	1	General Public -1000
22	Suwa Udaana mobile Health camp at Siripura Salasumgama temple	1	General Public - 2000
23	Suwa Udaana mobile Health camp at Thanthirimale- HE and promotion	1	Elders and General Public - 6000
24	Exhibition for Children at Hambanthota commemorating World Children's day	1	Parents and children - 3000
25	Suwa Udana mobile screening and life style modification programme at Katharagama	1	General Public - 2000
26	Suwa Udana mobile screening and Health Promotion programme at Hingurala Kanda	1	Parents and children - 3000
27	Suwa Udana mobile screening and Health Promotion programme at Namal Oya	1	Students General public

Annexure 3 - Media Workplace Screening , HE and Promotion "Weda Bimata Suwasawiyak"

1	Health promotion Programme for the families around Meethotamulla area	2	Villagers, Slum Dwellers - 300
2	Health promotion Programme for the families around Kollonnawa maternity	1	Villagers, Slum Dwellers - 450
3	Work place health screening and Health promotion programme in Swarnavahini –	2	Journalists /Staff 400
4	Work place health screening and Health promotion programme Fishing Barbour at	1	Fishermen and Families 1000
5	Independence Television Network (ITN) screening and workplace health	1	Journalists /Staff
6	NCD screening and workplace health promotion Moratuwa	1	Garment staff 1000
7	at Associated News Papers Company of Sri lanka (Lake House)	09.05.2013 10.05.2013	Journalists /Staff
8	NCD screening and workplace health promotion at SLBC	1	Journalists /Staff
9	Special Eye screening and HE sessions at National Eye Hospital	1	Journalists /Staff
10	Rathmalana Factory workers HE and promotion	1	Garment/ Factory workers 1000
11	NCD screening and workplace health promotion at Rupavahini	1	Journalists /Staff

Annexure 4 - Conduction or Co-ordination of the TV / Radio Programmes

1	Series of Radio Programmes on Food Safety - SLBC	18	Countrywide General Public
2	Series of Radio Programmes on current Health Issues – Ran Fm	8	Countrywide General Public
3	Series of TV Programmes Swarnavahini - Eyesight / Glaucoma/ Healthy life styles	12	Countrywide General Public
4	ITN every Tuesday 11.00 am to 11.30 "Suwa Saayanaya"	Throughout year 2012	CCP,Pediatricians Surgeons
5	SLBC daily Health messages	"	All the specialist
6	"Wayamba Handa" daily Health messages	"	All the specialist
7	All Health national Day issues	"	To all the channels
8	Rupavahini "Nuga Sevana" Weekly Friday	"	Special health Issues
9	Swarnawahini "Heta Rata"	"	Special health Issues
10	AR tv	"	Special health progs
11	Lak handa	"	Special health progs
12	Swadeshiya channel SLBC	"	Special health Issues
13	English National Svces	"	Special health Issues
14	Tendral Tamil Svs	"	Special health Issues
15	Shakth tv	"	CCP / All specialists/MO

Annexure 5 - Adolescent Work Symposiums – Life Skills Devp.

1	Life skills promotion symposium for World Children's day	1	560 Adolescents
2	Adolescent health and Life skills development programs at Visaka Maha	3	Students - 200
3	Life skill development programme at Bibiladeniya Maha Vid – Kurunegala	2	Students - 400
4	Life skills Building Activity Sessions with School health Unit Narahenpita	2	Marginally resourced School Children from Colombo - 800
5	Life skill development programme Hingurala Kanda Vidyalaya Avissawella	1	Students 500
6	Life skills Building programme at National School -Embilipitiya	1	Students 200
7	Life skills Building programme at Gankanda Maha Vidyalaya - Pelmadulla	1	Students 400

Annexure 6 - Capacity Building in Communication Skills and Life Skills

1	Life Skills building programmes for youth leaders - SLFI	6	Youth Services officers Youth leaders
2	"ENCO 2012" Exhibition – Life Skills Promotional Activities	5	General public and Students
3	Life Skills Building sessions for Post Basic Trainee Nurses	8	Nurses - 400
4	Capacity building of Life Skills , Medical Under Graduates – Kothalawala Defenses University.	4	Medical Students - 140
5	Communication Skills for NCD prevention –Nirogi Lanka	8	HE Nursing Staff - 430
6	Programme for Navy Officers on Healthy life styles and Life Skills at NAVY head quarters	3	Navy officers- 300
7	Workshop on communication for Dental Therapists	3	SDTs - 79
8	Programme for Presidential Security Division officers on Healthy life styles and Life Skills at Presidents House	3	Security officers - 150
9	Master Teacher Training Programme on Life Skills at Kurunegala District	2	Teachers - 280
10	School Dental Therapists and the staff of MOH Minuwangoda	1	MOH Staff /40 Dental Therapists
11	Life Skills and Communication Training for Youth Leaders -Mattakkuliya	1	Youth community leaders
12	Communication Training for clinical staff at CSTH - Kalubowila	4	Nursing Officers CSTH 500
13	Life Skills and Communication Training for School Dental Therapists – Kurunegala District	1	SDTs
14	Life Skills and Communication Training for School Dental Therapists – Uva Province	1	SDTs
15	Life Skills and Communication Training for Pre School teachers in kurunegala District	6	Pre school teachers 400
16	Community medicine lectures on Life Skills for -Medical Graduates USJP, Karapitiya, UKDU -Post Graduates of Com med MSc and MD	Done throughout the year	Medical Post graduates
17	Capacity building at ADIC for peer leaders Petah area	01	Youth Peer Leaders 200
18	TOT at CSTH for community leaders on communication	01	Community Leaders 200
19	TOT for the Community leaders of urban slum dwellers, Col 12	01	Youth Leaders 400
20	TOT for the Community leaders of urban slum dwellers, Col	01	Youth Leaders 200
21	Life skills for the staff of dental institution, Maharagama	01	Staff of DI
22	Life Skills and Communication Training for School Dental Therapists – North Western Province	01	SDT 80
23	Communication Training for the MO / MO HE NCDs - SLFI	03	MO -3 30